



Developing curriculums and
Educational subjects Center



General Directory for Developing
the subject of Computer &
Information Technology.

Information & communication Technology

The Project of Designing Web Sites

Student Book



**Second Secondary,
Second Term 2018/2019**

Information & communication Technology

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Student Book

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Introduction

-The continuous quick development in the Information Technology & communications field on the educational process requires developing types to cope with such continuous technological development.

-This forced us to adopt new educational entries that aims to achieve goals , philosophy and vision which the computer subject and Information Technology document guarantees, it reflects criteria and indicators of the subject to the second secondary which has been prepared in the frame of the scope sequence matrix on different stages and classes.

The curriculum aims to developing self-learning skills , electronic , cooperative , and thinking skills and its all types , this through students cooperation in doing projects for designing and creating active website (Photographic Terms Dictionary)

The idea of the project relies on creating a model form to be followed as a program to design its pages, by using Web Expression application and the HTML code. It includes data bases that have been created by using Mysql program.

-These data basis are used by prepared codes, and have been written by php programing language an open source language, you can copy and use it for creating the website pages, besides understanding and developing any code you would like to do it.

-Also the book includes photos of the applications interface of the project to clarify all the steps, to simplify the concepts to the learners, this through activities and exercises that are in the workbook.

- Finally this book is concerned with developing the skills of varied thinking, everyday skills and the special skills by using Information technology and communications to learners, through doing projects they can get chances to use what

They study in their practical life.

Good Luck

Team Work



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The aims of the Information Technology & communications of the second general secondary.

- Know some processes and special concepts about the basics of computer system Databases, programming language, creating web pages and securing web pages.
- Know some concepts and basic processes with the applications of information technology and communications.
- Get some of the safe thinking sides "humanitarian, ethical and social" the security of information that is used through information technology and communications?
- Using the tools of technological Production (HTML&PHP&SQL....) in supporting and developing learning.
- Using the technological communication tools in exchanging the content with communication, cooperation with others to support learning.
- Using tools and technological resources in dealing with information and electronic data, processing, evaluating and writing reports about the results.



Unit 4

Dealing with the Website Data



At the end of the unit the student will be able to:

- 1- Creating searching for term page
- 2- Explaining PHP code which is concerned with creating search for term page.
- 3- Follow the steps of searching for term in the data base.
- 4- Creating deleting term page.
- 5- Know the parts of PHP code which is concerned with executing deleting term page.
- 6- Executing deleting term process from data base.
- 7- Creating the page of editing the data of a term by using PHP& HTML code.
- 8- Executing the process of editing the data of a term in the data base.
- 9-conclude the steps of creating help page.
- 10- Cooperate with classmates in executing the unit activities.






Introduction

Dear student:

We have finished 2 stages of the project, the first & the final vision; in it we specify the website pages and creating some of them. We already have created some pages; the following table describes briefly the website pages, and what we have executed.

Num	The page name	Its purpose	Description	Page planner
1	Main page Index php { has been created }	Activate the hyperlinks that could move from one page to another	It represents the beginning of the page that appears to the user the time it uploads From it we can move to the other pages.	
2	The connection page to the data base.connection .php {It has been created }	Achieving connection with the data base. It is called before dealing with the data.	This page doesn't appear in front of the user, it's separated to have only a a line of a code that achieve this connection with the data base , at the beginning of the page instead of repeating the connection code with the whole data base.	PHP code .For the connection to the database
3	The header page header. php.{It has been created }	Showing the photo <i>banner</i> and the hyperlinks that takes us to all the pages, it is called at the beginning of every page.	This page contains stable parts that we need to show in all the website pages. So it has been split in an independent page . it is called through writing a one line code at the beginning of each page	

Follow on The web site pages and what has been executed:

Num	Page name	Its purpose	Description	Page planner
4	Add term page { Add_term.php {it has been created}	Inserting term & all its data in terms table in the data base.	An independent page in it a code to call header " header.php & another code to call connection page so we could add a new record to the data base	
5	Search for a term. Search_term.php. {it hasn't been created}	Searching for a term in terms table in the data base.	An independent page in it a code to call header " header.php & another code to call connection page so we could search for a term in the data base	
6	Page of editing term Edit_term. Php. {it hasn't been created}	Editing the data of a term in the terms table in the data base.	When editing a term, we choose the term we want to edit then we edit it and then save it.	
7	Page of deleting term Del_term.php. {it hasn't been created}	Deleting data of a term in terms table In the data base.	We could delete the term that has been chosen.	
8	Help.page. {it hasn't been created}	Show information about the website & what follows.	Usually we find in most of the web pages "About us" in it some information about the headquarter the site belongs to and the way of communicating with it like phone numbers, emails on the social networks.	

Notice:

The name of data base: dbdictionary

Name of the data Table: **Terms**

It includes 5 fields as in the following table:

Table: Terms				
#	Name	Type	Length values	Index
1	Id	Integer	5	Primary
2	Term	VarChar	50	
3	Trans	VarChar	50	
4	Defe	VarChar	220	
5	Picture	VarChar	30	

Remember:

We insert (adding) data to the website through adding term page in the first term.

We will create the rest of the website pages which enables us to deal with the data of the website. (Search- delete- edit) And so help page.

First Subject:

Search for term page

Search_term.php



Learning outcomes:-

At the end of the subject the student will be able to:

1. Explain the looping statement (DO-while –while –for)
2. Design the interface of search for term page.
3. Explain the HTML code of the search for term page.
4. Add the parts of php code in the right place inside the code page.
5. Add PHP code to include header & connection pages.
6. Cooperate with friends in writing php code for searching for a term.
7. Execute the search for term process.

Before creating search for term process we should shed the light on:

- The looping concept.
- Some statement of looping in php language

We need in some programs to repeat a certain code many times or repeating it to a certain limit and this is what we will use when writing PHP code of the following pages.



Search for term page



edit term page.



Where

- We need repeating a certain code which could deal with the table records, this term should be in the record & it is the same term which we search for or edit.
- Before, in the preparatory stage you had studied & learnt its main structure. PHP language affords looping statement like

(For - While – do... While)

Here are some examples of using the looping statement by PHP code.

Here is an explanation for using the looping statement through simple examples:

A- While statement

Some examples on the usage of while

Example: 1

Writing code by printing numbers 1:100 by php language.

```
(1) <?PHP
(2) $x = 1;
(3)     While ($x <= 100)
(4)     {
(5)         Echo ($x);
(6)         Echo ("<Br>");
(7)         $x ++;
(8)     }
(9) ?>
```

The explanation of the code

- 1) The beginning of php code.
- 2) Variable starts with 1 value.
- 3-Executing all the instructions in looping statement which appears between 2 brackets { } as long as the condition is right, as long as the variable \$x less than or equal 100.
- 4-The beginning of looping statement.
- 5-Printing the variable value.
- 6-Moving to a new line (executing HTML code inside php code).
- 7-Increasing the numerical or variable with value 1.
- 8-The end of the looping statement
- 9-The end of PHP code.

Study the previous code, discuss it with your classmates and teacher.



From the previous code we notice:

- ◀ The difference between this code and what you have studied before is the syntax of PHP language.
- ◀ To what extent the abbreviation and simplicity in printing numbers from 1:100 which means while statement , the repeating of printing as long as the condition is (the value of the variable is less than or equal 100) true

Printing the result of the total of 2 numbers by using PHP language

```
<?php
    $x = 1; // بداية العدد
    $total = 0; // مكان لحساب فيه المجموع
    while( $x <= 100 )
    {
        $total = $total + $x;
        $x++;
    }
    echo " الناتج هو ";
    echo "<br>";
    echo $total;
?>
```

Study the opposite code

- ◀ Discuss with your classmates and your teacher.
- ◀ Specify the difference between this code and the previous code. Example 1 guides you.

Compare between this code with what had you studied in the preparatory stage.

Figure {1} PHP code for using looping statement while

Remember:

// sign means that what follows, it is a notice and shouldn't be executed.

2- For statement:

It could be used in executing example 2.

Example:3

Printing numbers from 1:100 as follows

```
(1) <?PHP
(2) For ($x = 1; $x <= 100; $x ++ )
(3)     {
(4)         Echo ($x);
(5)         Echo ("<Br>");
(6)     }
(7) ?>
```

The explanation of the code

- 1) The beginning of code php.
 - 2) For statement and it contains three (arguments)
 - ◀ \$x = 1 :
The beginning of the variable \$x with value 1
 - ◀ \$x <= 100 :
On condition is tested less than or equal 100 where repetition stops if the value of the variable \$x is more than 100.
 - ◀ \$x ++ :
Increasing the variable value \$x by 1
- (3) , (4) , (5) , (6) The printing instructions which is repeated as long as the condition if For statement is true

As we can use Do..... While statement to execute the previous example is printing the numbers from 1 to 100 as follows:

```
(1) <?PHP
(2) $x = 1;
(3)   Do
(4)   {
(5)     Echo ($x . "<Br>");
(6)     $x ++;
(7)   }
(8)   While ($x < = 100);
(9) ?>
```

Explanation of the code

- 1) The start of the code php.
- 2) A variable we have in it the start of the numbers with 1 value.
- 3) Statements execute what follows.
- 4) The start of repetition statement.
- 5) Printing the variable and moving to the next line.
- 6) Increasing the variable with the value 1.
- 7) The end of the looping statement.
- 8) It's a must to stop repeating, if the variable value increased more than 100.
- 9) Ending the code.



After you have studied the 3 looping statements:

- (1) While
- (2) For
- (3) Do ... While

Discuss with your classmates and teacher the difference of usage of each of them.

The following table explains how every statement works:

The looping statement	Explanation
While { }	It is used to execute unknown or un limited number of repetitions and these repetitions can be executed only on one condition at first, testing the condition and be sure the result is true. the following repetitions will be executed and this repetition continues as long as this condition is true. -if the condition is false the repetition can't be executed Example: searching in data base and searching the internet.
Do { } while	Is used in executing an unlimited or unknown number of repetitions , and you start in executing a repetitive circle once before testing the condition if it is true , then it is repeated and the instructions are executed in the circle , the result becomes false then the repetition stops and going out from the circle. Example { printing the primary value of the variable }
For { }	It is used to execute an unknown or unlimited number of repetitions. It works the same way as while statement. Example (printing the email address of the ministry website 10 times).

After we have mentioned the looping statements and how to write them by PHP language we start creating search for term page, it is as follows:




Figure (2) the suggested layout of search for term page.


The steps for creating search for term page

(1) Designing the interface of search term page.

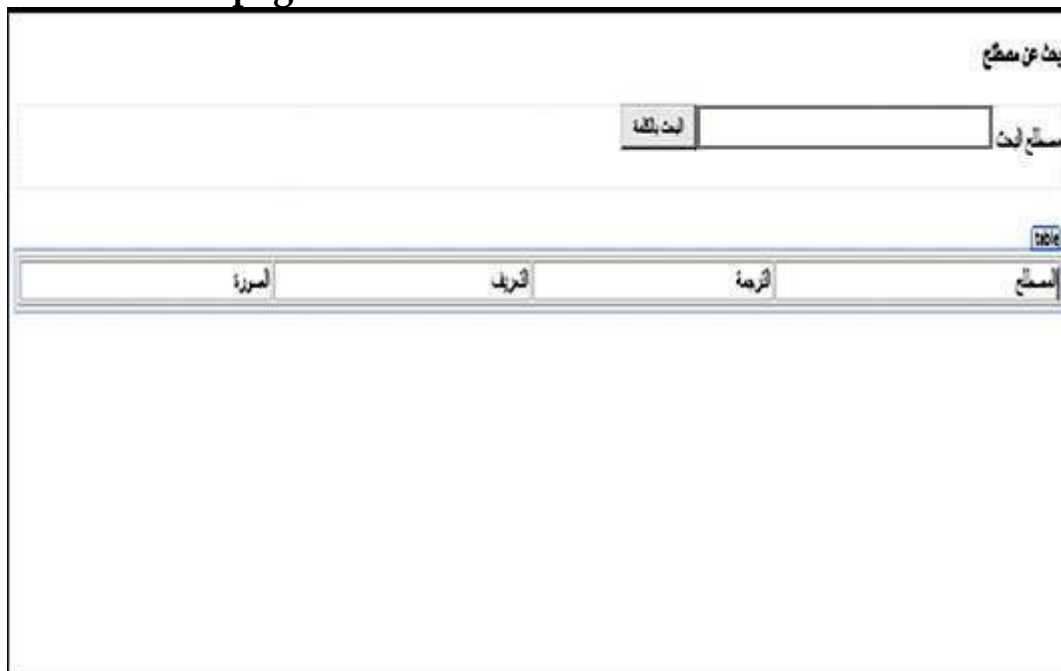
The purpose of creating this page, searching for term in the database as it is one of the terms that are inserted in the terms table in the dbdictionary this by using select statement.

 Cooperate with your classmates to use what they had studied in the programs of editing and processing pictures, this to have a vision of designing the interface of search for term page.



 Show your design to your teacher and your classmates then discuss it with them and you can use the suggested vision in the project.

The following figure shows the suggested vision of designing a search for term page.



المصطلح	التعريف	المصدر

Figure (3) a suggested design to an interface of a search for term page.

Study the suggested vision in figure (3) discuss your notes and Suggestions with your classmates and your teacher.

From the previous screen you will observe the following:

- The web page title is "search for term".
- A Form has been inserted from toolbox window, where it contains the control elements in search page.
- The label "the search term" and next to it the textbox where we insert the term that we need to search for.
- The order button 'search by word' and who is responsible for executing php code, which is about search for term process in the data base.
- Insert a table where in it appears only grade one. In it titles and the columns headers in which the search results appears, through adding a row to every term in it shows its data.
- we can use some of the applications of creating web pages like expression web by writing text and inserting the controlling tools from toolbox window in design mode { as you had learned when creating adding term page in the first term }the image of the search term becomes as:



Figure (4) showing search for term page on the browser screen

Remember:

In expression web ' program, you could know the code of creating table (which is inserted in Design mode).

This is by selecting the table then showing HTML code, which is generated by pressing on code button and it is :

```
<table style='width: 100%' border="1">
  <tr>
    <td> المصطلح </td>
    <td> الترجمة </td>
    <td> التعريف </td>
    <td> الصورة </td>
  </tr>
</table>
```

Showing table its width is 100% wide, the frame and it's the thickness which it surrounds.

For declaring (tr) about the row.

For declaring [td] about columns where in every one of it contains the title of the field and switching it off </td>.



Discuss with your classmates and teacher the previous code

Notice:

- ✦ Writing HTML code isn't the aim, as it is written automatically the time we insert any controlling element but we focus on some instructions to write php code in the right place.
- ✦ The rows of the table will be completed through extra php code at the end of tag of the table when performing the search results & it is according to the number of records which matches with the search condition.. عليها شرط البحث.

(2) Write PHP code:

On loading search page on the browser, you can show the search results for a term by a term number (code) or term name on the database. Then enter the term or the term number we want to search for. In this case the browser won't show the term data, when we click the botton (search by word / search botton). Then, you will find that there is no reponse or data to be displayed becausae there is no link between controls on the browser with the content of database. Therefore, we need to:

display the image banner and the tiltle of the web pages at the top of the window, through adding PHD code related to including the page "header" in the position refeered to in (1) on the previous sccreen by the following cade.

```
<?php  
include("header.php");  
?>
```

- Including the page of connection to database.
- Typing the PHP code related to term search in the database using its name or number which we entered in the browser page, then displaying its data on the page. Later, in detail ,we will handle abbreviated PHP code, which searches for term data and display it in one line on the browser window without formatting (so as to abbreviate the code) based on the term code(number). In the professional detailed code, we display the search result on the browser in an organized manner in a table based on the term name showing deficiencies in the abbreviated code.

Now we show the full HTML code of the search page and showing the place of writing PHP codes.

```

1 <html dir="rtl">
2   <head>
3     <meta content="text/html; charset=utf-8" http-equiv="Content-Type" >
4     <title>بحث عن مصطلح</title>
5   </head>
6 <body>
7
8   <p class="style1"><span lang="ar-eg"><strong>بحث عن مصطلح</strong></span></p>
9   <form method="post" action="search_term.php">
10  <div >
11    مصطلح البحث
12    <input name="txt_search" type="text" style="width: 332px; height: 25px;" >
13    <input name="submit1" type="submit" value="البحث بالكلمة" style="height: 26px;" >&nbsp;<br><br>
14  </form>
15  <br>
16  <table style='width: 100%' border="1">
17  <tr>
18    <td>المصطلح </td>
19    <td>الترجمة </td>
20    <td>التعريف </td>
21    <td>الصورة </td>
22  </tr>
23
24 </table>
25 </div>
26 </body>
27 </html>

```

Add PHP code number 1

Add PHP code number 2

Figure (5) HTML code which is about search for term page.



Study the previous code, discuss your teacher and classmates on the specified places for writing the PHD code and necessary modifications to deal with the abbreviated code.

(A): the abbreviated PHP code:

The final purpose of PHD code is to search for a term in the database file through "search for term" page that was previously designed through the term code or number. You can learn about the codes of terms through opening database table " terms" and using the codes in searching for a term to simplify PHD code making sure it functions well and simply. The following abbreviated code achieves this purpose

```
<?php
    include("header.php");
    include("connection.php");
    if(isset($_POST['submit1']))
    {
        $code=$_POST['code_search'];
        mysql_query("SET NAMES 'utf8'");
        mysql_query("select * from terms where id=$code");
        while($row=mysql_fetch_array($query))
        {
            $term=$row['term'];
            $trans=$row['trans'];
            $defe=$row['defe'];
            $picture=$row['picture'];
            echo("$term $trans $defe
                <input name='pic' type='image' src='$picture' width='80' height='80' />
            "); } } ?>
```

In the previous abbreviated code, we notice the following:

- Including header.php
- Including the page of connection to database "connection.php"

We will explain the code through the following:

Explaining the code:

Code	Expalnation
<code><?php</code>	The start of PHD code
<code>if (isset(\$_POST['submit1']))</code>	Varify clicking the submit botton. Test the clicking of search botton. Then, the code between bracket () is excuted.
<code>\$code=\$_POST['code_sear ch'];</code>	Assign the value the weaa enterd in text box to the variable \$code.
<code>mysql_query("SET NAMES 'utf8'");</code>	Using the mysql_query function to deal with the data on browser in Arabic coreectly and not in the shape of?????
<code>mysql_query("select * from terms where id=\$code");</code>	We use mysql_query function to excute query for the search for the record No stored in the variable \$code with its equivalent in the variable code "id" in the database table.

<pre>while(\$row=mysql_fetch_array(\$query))</pre>	<p>The function of recalling records of database table: Using repetitive loop "while" to execute the code between bracket { } in terms of the record No so that the first data record is recalled from the variable \$query which represent the output of excuting the query in function mysql_fetch_array. Then, the next record is moved to and put in the variable \$row that represents a sequence of elements. Each row is put inside \$row. Each one of the elements in reached inside a variable as follows in the following four variables. Repitition stops when there is no database record in the variable \$row.</p>
--	--

<pre> \$term=\$row['term']; \$trans=\$row['trans']; \$defe=\$row['defe']; \$picture=\$row['picture'] ; </pre>	<p>Through the equivalent assign sentence the values related to, the record in the four variables (\$term – \$trans – \$defe – \$picture) which resulted from the query.</p> <p>For example: the value of the الحقل {term} in the record stored inside the variable \$row المصفوفة for the variable \$term. And so on with the rest of the variables.</p>
<pre> echo("\$term \$trans \$defe <input name='pic' type='image' src='\$picture' width='80' height='80' /> "); </pre>	<p>The content of the four variables is <u>printed / typed</u> on one line on the browser screen</p> <p>Through typing HTML code inside PHP with the command echo(" ");</p>

}	Closing the bracket } means returning to the repetitive loop "while" to repeat this till we finish all the records in the output of the query.
} ?>	Closmeans closing "If" statement at the beginning of the PHP code. Then the end of the code.

On executing the previous code, search will be done in "terms" table in the database for the record that holds the code searched for, but we may find some limitations in the abbreviated code which will be handled **تغطيتها** in the code (b) more professionally, some of the limitations are:

1. Searching for a term in the code requires knowing the codes of terms or opening database table and reading **الإطلاع** the codes of terms, but this method is not practical. Therefore, it's better to search by term or by part of the term name instead of the term code.
2. If the user clicked the button "search" and doesn't enter the term code, all the terms or records are displayed in the database table "terms", so the user should verify that he entered the term code. Then he will be given a message showing that he has to enter the term code as it was not already entered.

3. It is noticed that the abbreviated code displays the term database "serach result" in an improper way. So, the data that will be displayed should be organized in in a table, or example.
4. Search results are not displayed in an organized way. Therefore, they should be displayed in an ascending or descending way as shown in the most accurate codes.
5. Controlling the picture properties of each term so that you can decide its width and length with a limited value

(B) Writing php code.

Code No. 1 (Add in the Shown place in figure 5)

The purpose of it as you have learned in creating the page of inserting term in the first school term is including php code to header page and also including the contact with the data base in connection page at the first part of Body:

```
<?php
    include("header.php");
    include("connection.php");
?>
```

Figure (6) php code it's about including Header and connection pages

Code No. 2 (it's added in the shown place in figure 5)

The purpose of it, is searching in the terms table in the data base for a certain term where it is shown in the table { notice adding this code before closing the table (</table >)which is concerned with the search process after inserting the term we need to search for then pressing on the button (complete search)

In the following figure php code which is concerned with searching for a term and perform it in a table

```

<?php
    if(isset($_POST['submit1']))
    {
        $txt_search=$_POST['txt_search'];

        //-----
        $sql="select * from terms where term like '%$txt_search%' ORDER BY term ASC";
        $query=mysql_query($sql);
        $num=mysql_num_rows($query);
        while($row=mysql_fetch_array($query))
        {
            $term=$row['term'];
            $trans=$row['trans'];
            $defe=$row['defe'];
            $picture=$row['picture'];
            echo("
                <tr>
                    <td>$term</td>
                    <td>$trans</td>
                    <td>$defe</td>
                    <td><input name='pic' type='image' src='$picture' width='80' height='80' /></td>
                </tr>
            ");
        }
    }
?>

```

Figure (7) php code that's about searching for term.

Explanation of the code:

Explanation	Code
	<code><?php</code>
Be sure of pressing on submit button, test pressing on "search by word button"	<code>if (isset(\$_POST['submit1'])) {</code>
It picked the term or the value that it has been inserted in the text box on the browser and put it in the variable \$text_search.	<code>\$txt_search=\$_POST['txt_search'];</code>
Using mysql_query to deal with data on the browser screen in Arabic correctly and it won't be shown in question marks like?????????.	<code>mysql_query("SET NAMES 'utf8');</code>
<p>Executing the query (save the result of the query in the variable.</p> <p>-Using select statement in searching for all the fields of the data table by using "like" parameter and also the sign "%" before and after the variable which contains the value that we look for %text_search % to show the data that contains the complete word or part of it.</p> <p>-We use ORDERBY term. ASC, to arrange its show according to the field in ascending order, and select statement is stored inside \$sql variable.</p>	<code>\$sql="select * from terms where term like '%\$txt_search%' ORDER BY term ASC";</code>

<p>Using Mysql _query</p> <p>Using this function in executing the query and putting the result in variable \$query.</p> <p>-Notice: it's possible to write select statement directly inside double quotation instead of variable \$ sql.</p>	<p>\$query=mysql_query(\$sql) ;</p>
---	--

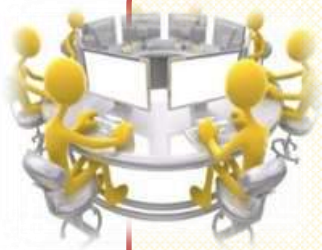
Follow on explaining the code:

Explanation	Code
<p>The Query for calling data tables records</p> <p>Using the repetition statement While to execute the code between two brackets { } according to the number of records that will exist in query</p> <p>Where it asks for the first record from variable \$query which represents executing the query</p> <p>The mysql_fetch_array & moving directly to the next record & put in \$ rows which represents The matrix of elements & then put every stage inside \$ rows {array} and we get every element inside a variable as in the following 4 variables , repetition stops when there's no data record in variable \$ row</p>	<pre>while (\$row=mysql_fetch_array(\$query)) {</pre>

<p>Through the opposite assignment statement the record special values are stored in the 4 variables {\$picture-\$defe-\$trans-}_which results from query</p> <p>For example; the field value is specialized in [term] in the record \$row to the variable \$term and it is the same for all the rest.</p>	<pre>\$term=\$row['term']; \$trans=\$row['trans']; \$defe=\$row['defe']; \$picture=\$row['picture'];</pre>
--	--

Follow on explaining the code:

Explanation	Code
<p>The result of the 4 variables are printed in a new row inside the previous table that is designed on the web browser screen.</p> <p>By writing HTML code inside PHP language by the order ; echo (" ");</p>	<pre>echo("<tr> <td>\$term</td> <td>\$trans</td> <td>\$defe</td> <td> <input name='pic' type='image' src= 'picture' width='80' height='80' /> </td> </tr> ");</pre>
<p>Closing the bracket { means going back to While statement to repeat all the previous steps till finishing all the records in the result query \$query</p>	<pre>}</pre>
<p>Closing the last bracket {means closing if statement in the beginning of php code then at the end of the code.</p>	<pre>} ?></pre>



Activity 1

Create search for term page

Search_term_php

Under your teacher supervision

In your activity & exercises book p: 8

(3) Open search for term page in the web browser to be sure of the right precise execution:

When we show search and insert word or term page like “super computer” through the address: localhost/dictionary/search.php:



Figure (8) showing search for term page on the web browser:

By pressing on “search word” php code could be executed and the result is shown in a table on the browser page as in the following.



Figure {9} open search for term page on the web browser.

Exercise1



Suggesting design for a search for term page

Search_term.php

In the activity & exercises book page 12

Second Subject
Delete term page

Del_term.php



Learning outcomes:

At the end of the subject the student will be able to:

- 1- Cooperate with his classmates to have a vision of the interface of delete term page.
- 2- Create delete term page in designing pattern by HTML code through Expression Web program.
- 3- Use php code to include the two pages Header & connection.
- 4- Explain PHPcode that's about delete term.
- 5- Execute the process of deletion to a certain term.

Now my dear student dealing with data bases includes {addition –search-deletion-changing} after we have finished designing and searching for term process through search page, you can cooperate with your classmates to design and execute delete term page.

Set a vision for delete term page.

My dear student, as it is planned in the project pages, we need to create delete term page Del_term.php.

Exercise (2)



Cooperate with your group to use what you have studied in treating and editing pictures programs to set a vision of a design for the page.

Then discuss with your classmates and teacher your work in your activity and exercises book, page: 14.

Discuss with your classmates and teacher for the suggested vision




Figure (10) the suggested vision of a delete term page on the web browser.

The steps of creating delete term page Del_term.php:

(1) Designing the interface of delete term page.

The purpose of creating this page is delete term inside the data base among the other terms that has been inserted in the data base table **dbdictionary**.

 Cooperate with your classmates to use what have you studied before of designing pages programs like Expression web, which is for designing the interface of delete term page.



 By pressing on “split’ button, you can show the page and the code which has been existed for creating it:

```
1 <html dir="rtl">
2 <head>
3 <meta content="text/html; charset=utf-8" http-equiv="Content-Type">
4 <title>حذف مصطلح </title>
5 </head>
6 <body>
7
8 <form method="post" action="Del_Term.php">
9 <h1>حذف مصطلح </h1>
10
11 <table style="width: 100%">
12 <tr>
13
14 <td>المصطلح </td>
15 <td>الترجمة </td>
16 <td>التعريف </td>
17 <td>الصورة </td>
18 <td>الخصائص </td>
19 </tr>
20
21 </table>
22
23 </form>
24 </body>
25 </html>
```

Add PHP code No.1

Add PHP code No. 2

Add PHP code No. 3

Add PHP code No. 4



Figure (11) HTML code which is concerned with delete term page.

Study HTML code as shown in the previous figure specify its parts and try to conclude the job of every part; discuss with your classmates and teacher the result that you have got:

After studying the previous code, you will notice the following:

- ↔ the code doesn't contain any new instructions , it was explained before, Revise it with your classmates and teacher
- ↔ The numbers on the screen refers to 4 certain places which are for inserting PHP code it is for treating and executing the deletion process from the database table.

You can also use the above in the design of the following page to delete the term to be used with the short code:



The following is an explanation of the code:

(B) Writing PHP code:

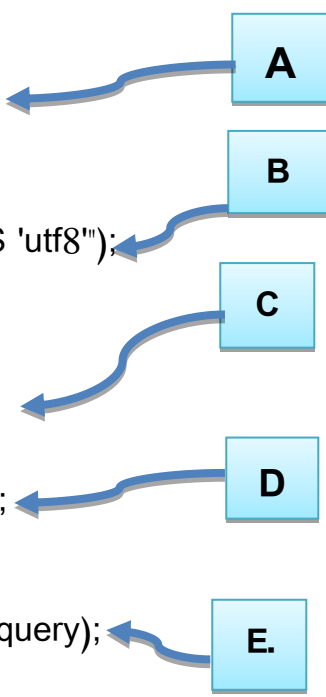
In the following figure an explanation for the 4 parts of the code which will be added in its places in Figure (11) , the first part:it is shown as the following :

Part 1:

```

<?php
include("header.php");
include("connection.php");
mysql_query("SET NAMES 'utf8'");
$sql="select * from terms";
$query=mysql_query($sql);
$num=mysql_num_rows($query);
?>

```



Study the previous code

& discuss with your classmates and teacher the job of this part.

No:	The code	Its explanation
A	Start php code, -including Header & connection pages with the data base of the page.	<?php include("header.php"); include("connection.php");
B	Dealing with the data in Arabic.	mysql_query("SET NAMES 'utf8'");
C	Specialize Select statement as a chain to the variable \$SQL.	\$sql="select * from terms";

D	By using <code>mysql_query</code> , we execute query and put it inside the variable <code>\$query</code> (all the records of table terms)	<code>\$query=mysql_query(\$sql);</code>
E	Specialize number of records by using <code>mysql_num_query</code> to the variable <code>\$num</code> at the end of code PHP.	<code>\$num=mysql_num_rows(\$query);</code> <code>?></code>

Part 2:

Refers to it number (2) in Figure 11 as in the following:

showing the number of terms (number of records) on the website page.

```
<?php
    echo ("<h1> عدد المصطلحات $num </h1>");
?>
```

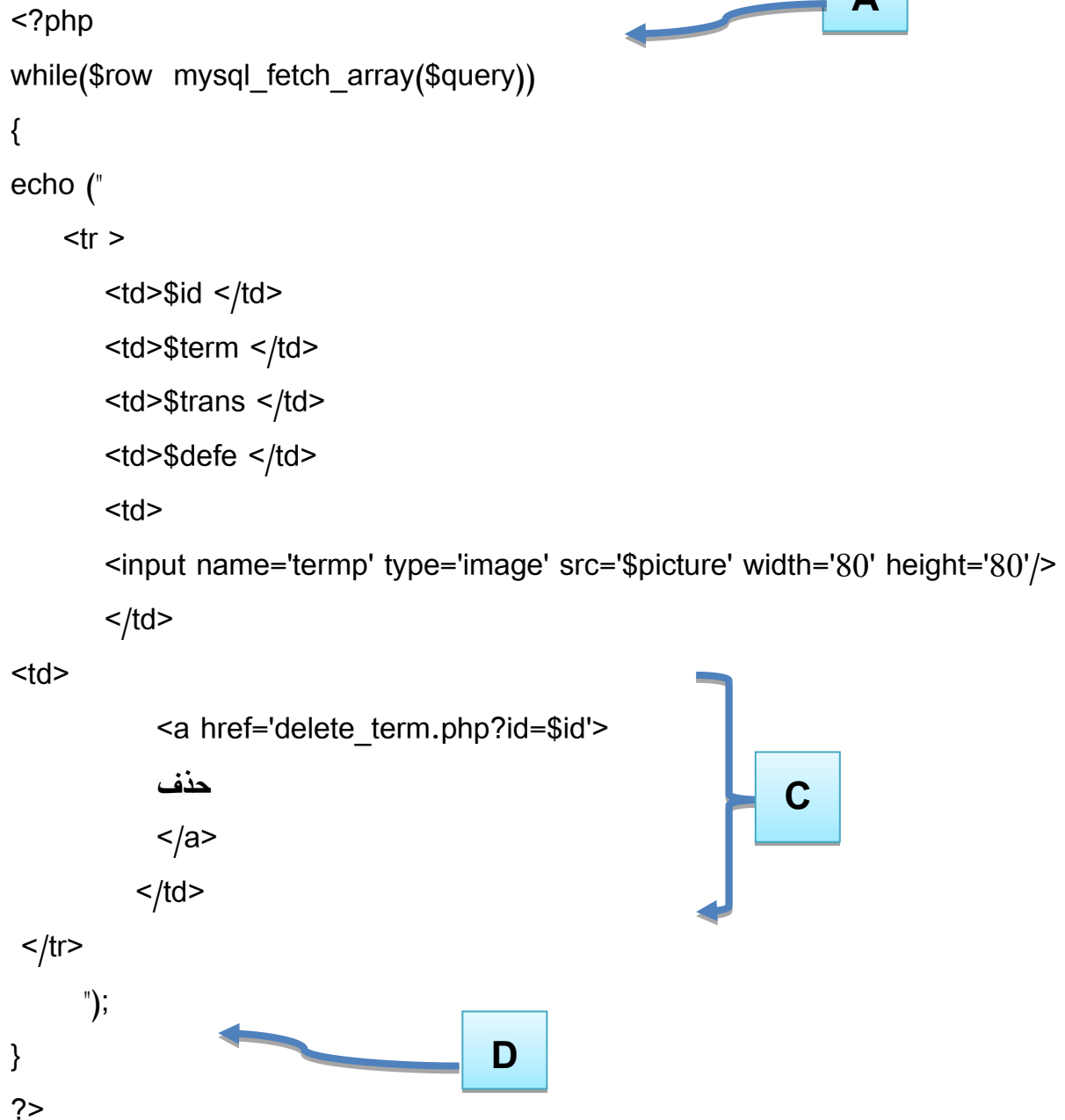


Study the code, discuss with your classmates and teacher

Part 3:

Refers to it number (3) in the figure (11) study the code with your classmates and teacher.


```
<?php
while($row = mysql_fetch_array($query))
{
echo ("
    <tr >
        <td>$id </td>
        <td>$term </td>
        <td>$trans </td>
        <td>$defe </td>
        <td>
            <input name='termp' type='image' src='$picture' width='80' height='80' />
        </td>
    </tr>
        <td>
            <a href='delete_term.php?id=$id'>
                حذف
            </a>
        </td>
    </tr>
    ");
}
?>
```



The diagram includes four blue boxes with arrows pointing to specific parts of the code:

- A**: Points to the `while($row = mysql_fetch_array($query))` loop.
- B**: A vertical bracket on the right side of the code block, spanning from the top of the code to the bottom.
- C**: Points to the ` حذف ` link within the table row.
- D**: Points to the closing tag `");` of the while loop.

Study the previous code, discuss with your classmates and teacher the job of this part

No:	Explanation	Code
A	Start of While statement	<pre><?php while(\$row mysql_fetch_array(\$query)) {</pre>
B	<p>The purpose of this code is showing all the records of the database table 'terms'</p> <p>As explained before.</p>	<pre>echo (" <tr > <td>\$id </td> <td>\$term </td> <td>\$trans </td> <td>\$defe </td> <td> <input name='termp' type='image' src='\$picture' h='80' height='80'/> </td></pre> 
C	Creating a hyperlink on the word "delete" which appears at the end of the row which is concerned with the term, delete term page is called when pressing on it, this by ID which contains the number of the record we meant to delete it	<pre><td> حذف </td> </tr> "');</pre>
D	Closing the repeating circle While , closing the code	<pre>} ?></pre>

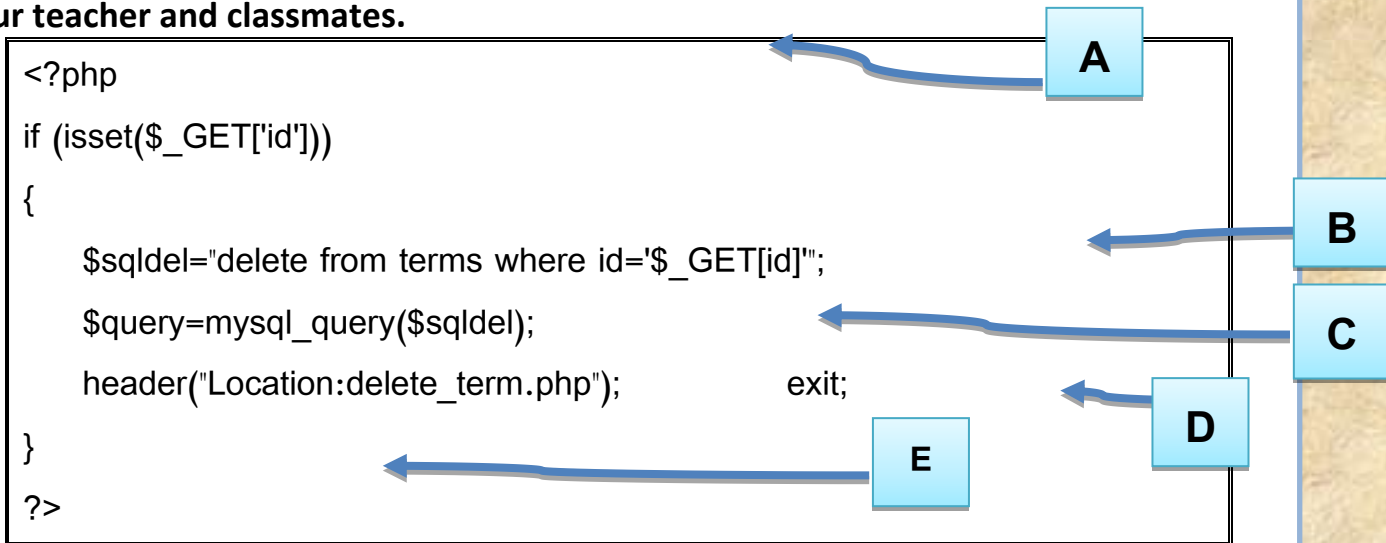
Part 4:

Where number 4 refers to it in figure {11 } study the code and discuss it with your teacher and classmates.

```

<?php
if (isset($_GET['id']))
{
    $sqlDel="delete from terms where id='".$_GET[id]";
    $query=mysql_query($sqlDel);
    header("Location:delete_term.php");
    exit;
}
?>

```



Study the previous code, and then discuss it with your teacher and classmates in the job of this part:

No:	Explanation	Code
A	The Start of the code.	<code><?php</code>
	When pressing on the" delete" hyperlink, the delete page appears and we get the record we meant to delete -The function result becomes :iss'(\$_GET['id] Equal : true So we execute the following instructions.	<code>if (isset(\$_GET['id']))</code>
B	Start of instructions.	<code>{</code>
C	Save delete statement which is concerned with deleting the record in variable \$sqlDel.	<code>\$sqlDel="delete from terms id='".\$_GET[id]"; where</code>

D	<p>Executing the previous delete statement , where the result will be true or false in variable \$query</p> <p>Note:</p> <p style="text-align: center;">We could write delete statement directly inside double quotation " " instead of variable \$sqldel.</p>	<pre style="color: red;">\$query=mysql_query(\$sqldel);</pre>
E	<p>Redirecting pages {reloading} the deletion page to show records after executing the deletion</p>	<pre style="color: red;">header("Location:delete_term.php"); exit;</pre>
F	<p>The end of (if) statement ,the end of the code</p>	<pre style="color: red;">} ?></pre>

(3) Loading and showing the deletion page of a term in the browser window:

When loading the deletion page of a certain term, at first we show the terms and their data as in the following screen through the address `localhost/dictionary/del_term.php`



Figure (12) showing deletion term page.

After that we select the term we want to delete

We choose the record we want to delete in deletion term page then press on delete button in front of the selected record (it could be the first record) then it is deleted and the internet browser screen appears as the following:

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Figure (13) showing records after deleting term from the internet browser window.

We have to be sure of deleting record from the database:

And to be sure of deleting certain record (term data) from data base, we open the database in a new tab then save the result in the browser and to be sure of deleting record from table terms.

"Localhost/phpmyadmin"

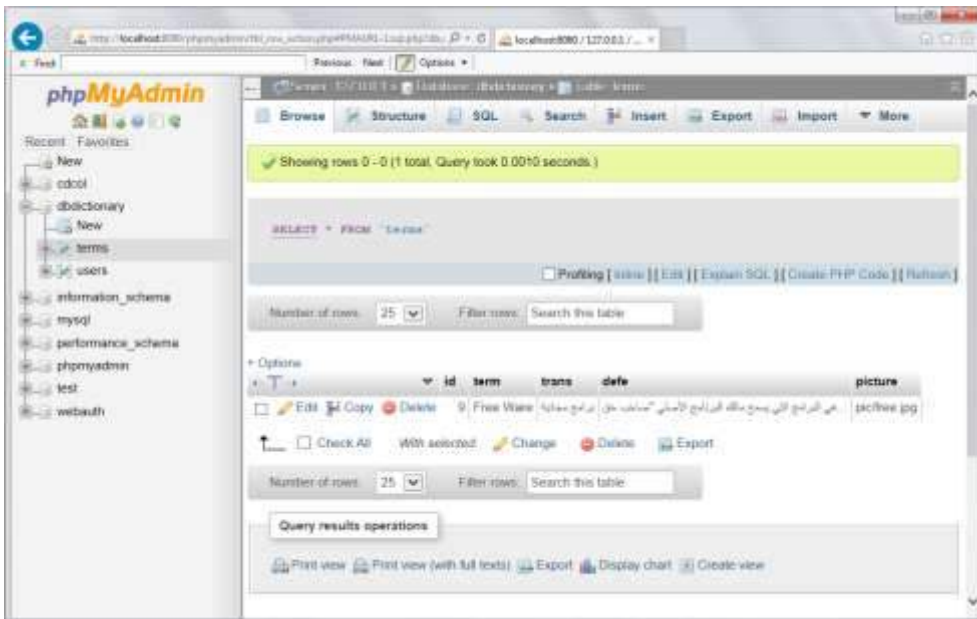


Figure (14) a screen shows the data base without the deleted term.

Activity (2)

Under your teacher supervision create
delete term page

"Del_term.php



Follow on activity (2)

The certainty of deleting term in the
Activity & exercises book. P: 16



The third Subject

Edit data page "Edit_term.php"

Help page "Help.php"



Learning outcomes:

At the end of this subject, the student will be able to:

- 1- Design an interface page of updating term.
- 2- Execute HTML code for creating updating term page.
- 3- Select code with php language that's suitable for inserting Header.
PHP page.
- 4- Use code with php language for Header & connection pages.
- 5- Explain code with php language for updating term data.
- 6- Update data in data base table.
- 7- Cooperate with his classmates to be sure of updating the data of a
term in the data base.
- 8- Select the elements that could be shown in the Help Page.
- 9- Create Help page.

My dear student you have learned, that dealing with data bases

Includes (adding- searching –deleting-updating)

Sometimes it requires updating or editing its data, so we have to create editing data term page and save the updated data in the data base.

Executing updating in term data, through the following stages:

- ◀ Creating updating data page.
- ◀ **Showing** terms on the updating page.
- ◀ Choosing the term we need to update.
- ◀ **Showing** the term data we meant to update in the controls on the browser.
- ◀ Doing the update inside the data base.
- ◀ **Showing** the data after updating.

Firstly: Creating edit data term page:

Through one of the applications of creating web pages:-

A–As we have created (searching-adding-deleting) pages, we do the same following steps :

- Writing the page title, inserting table. In the first row we write the columns titles as it shown in the following screen :



Figure (15) Designing the interface of update term page.

B– Doing the processing and updating in the term data, then we save the updates in the data base table this through php code parts that we have added in the places we refer to in the following figure:

```

1 <html dir="rtl">
2   <head>
3     <meta content="text/html; charset=utf-8" http-equiv="Content-Type">
4     <title>تحديث مصطلح</title>
5   </head>
6 <body>
7   <!-- php code number 1 -->
8   <h1><p > تعديل مصطلح </p> </h1>
9   <!-- php code number 2 -->
10  <form method="post" action="edit_term.php">
11  <!-- php code number 3 -->
12    <table style="width: 100%">
13      <tr bgcolor="#3Fff00">
14        <td>المسلسل</td>
15        <td>المصطلح</td>
16        <td>الترجمة</td>
17        <td>التعريف</td>
18        <td>الصورة</td>
19        <td>الخصائص</td>
20      </tr>
21  <!-- php code number 4 -->
22  </table>
23  <!-- php code number 5 -->
24  </form>
25  <form method='post' action='edit_term.php?id=$ GET[id]&amp;action=$ GET[action]' enctype="multipart/form-data">
26  <hr style='color:orange;maroon;width:1267px'>
27  <h2>تعديل بيانات</h2>
28  <hr style='color:orange;maroon;width:1267px'>
29  <div >
30  <!-- php code number 6 -->
31
32  <!-- php code number 7 -->
33
34  </div>
35  </form>
36 </body>
37 </html>

```

Code php. No. 1

Code php. No. 2

Code php. No. 3

Code php. No. 4

Code php. No. 5

Code php. No. 6

Code php. No. 7

Figure (16) HTML code that is about creating edit term page.

Notice:

–It should be clear only the places or including the code . What is written between the two signs `<!--` `-->` it should not be executed



Study the previous figure discuss your notes with your classmates and teacher, select the places where we add php codes and how many are they..

Notice:

- ◀ HTML code has been written normally, all we have done is inserting controls in the designing window.
- ◀ The aim is not saving HTML code but we have to know the beginning and the end of the tag that is concerned with every element of the page, like the beginning and the end of the table, the beginning and the end of every row.
- ◀ You are asked to be skillful at selecting the places for adding php code.

From the previous screen, it is clear that the previous code doesn't include any new instructions that we have explained before, the numbers on the screen refer to the places that we will insert php code in it to do the processing and executing updating term page process in data base table, we will show the parts of php code and we require adding sections that we refer to on the screen.

The following layout of the edit page can also be created to be used as an interface to modify the term in the abbreviated code:



Secondly: Writing code:

(A): The abbreviated PHP code:

The final purpose of PHP code is editing the data of a term "term record" in the terms table in the database through the updating page which previously designed and created. This is by displaying the data of all terms and choosing a specific term to update its data as described in the most accurate PHP code or by entering modified data for a particular term by its code. The terminology code can be identified by opening the terms table and using the codes to modify the data of a particular term record to simplify the PHP code and ensure that it fulfills the purpose in a simple way. The following abbreviated code achieves this purpose:

```
<?php
    include("header.php");
    include("connection.php");
    mysql_query("SET NAMES 'utf8'");
    if(isset($_POST['Submit1']))
    {
        $fileName = $_FILES['filedata']['name'];
        $tmpName = $_FILES['filedata']['tmp_name'];
        move_uploaded_file($tmpName,'pic/'.$fileName);
        $iddata=$_POST['id_term'];
        $term=$_POST['txt_term'];
        $trans=$_POST['trans'];
        $defe=$_POST['TextArea1'];
        $picture="pic/" . $fileName . " ";
        echo ($picture);
        mysql_query("update terms set term= '$term',trans ='$trans',
        defe = '$defe' ,picture='$picture'
        where id='$iddata' ");
    } ?>
```

We note in the previous abbreviated code that:

- Include the header.php page.
- Include the database connection page connection.php.
- in the code `mysql_query ("SET NAMES 'utf8'");` the function `mysql_query` is used to handle the data on the browser screen in Arabic correctly and not appearing in the form of question marks such as "????????...." sign. The following is an explanation of the code:

Code	Explanation
<pre><?php</pre>	<p>The beginning of the PHP code.</p>
<pre>if (isset(\$_POST['submit1'])) {</pre>	<p>Check the Submit button clicking</p> <p>Testing the "Update" button and then the code between the brackets.{} is executed</p>
<pre>\$fileName = \$_FILES['filedata']['name']; \$tmpName = \$_FILES['filedata']['tmp_name']; move_uploaded_file(\$tmpName,'pic/'.\$fileName); \$fileName = \$_FILES['File1']['name']; \$iddata=\$_POST['id_term']; \$term=\$_POST['txt_term']; \$trans=\$_POST['trans']; \$defe=\$_POST['TextArea1']; \$picture="pic/" . \$fileName . " ";</pre>	<p>Store the image file name in the \$fileName variable</p> <p>Store the image inside the \$ tmpName variable</p> <p>move_uploaded_file The function used to upload the file, it needs two parameters, the first is image and the second is image file name and its path.</p> <p>Through corresponding assignment statements the values of fields stored in the five variables (\$term – \$iddata – \$trans – \$defe – \$picture)</p>

	<p>For example, the value of field 'id_term' has been assigned to variable \$iddata and so on to other variables.</p>
<p>echo (\$picture);</p>	<p>Print the variable \$picture content on the Internet browser screen.</p> <p>By typing HTML code into PHP by command echo();.</p>
<p>mysql_query("update terms set term= '\$term',trans ='\$trans', defe = '\$defe', picture='\$picture' where id='\$iddata' ");</p>	<p>Use the function mysql_query</p> <p>This function is used to perform an update query for a terms table for each of the fields (term, trans, defe, picture)</p> <p>For the record with the id code and the query output in the \$ query variable. Thus, the value of each field in the data record, which equal to the value of id, is modified by the new value entered in the controls on the browser screen that were previously stored in the variables referred to.</p>



Unit: 4

Dealing with the website data

}

?>

Closing the last bracket} means closing the IF statement that is mentioned at the beginning of the PHP code.

Then the end of the code.

When you execute the previous code, you will modify the entire record or term data in the "Terms" table in the database. However, some limitations in the abbreviated code may be covered in code (b) more professionally.

- (1) The amendment is primitive by inserting all term data as if it were a new term and then updating the record based on the number or code of the term.
- (2) The best when modifying the term data is that all terms data are displayed in front of the user and then by pressing a button or an adjustment link next to a specific term whose data is called only and modify the data of term to be updated only then update in the data table.
- (3) (3) If the user presses the "Edit" button and no data is entered except the term code, all data of the record fields are updated with null values.
- (4) The primitive data update method does not give options to the user.
- (5) Modifying term data requires knowledge of terms codes or opening data table and access to terms codes. This method is not practical, so it is best to view the term data and choose the update process for a particular record or term.
- (6) When you modify the term data, a message does not appear stating that the modification was successful or that there is a problem, so it is preferable to show a message to the user explaining that the update was successful.
- (7)

(8) It is also best to view all the terms data before updating and then re-display all the terms data after the update to make sure that the modification has already been made.

(B) More accurate PHP code:

The following table shows an explanation to the parts of the code and a summary to every part:

Code number	The code		The purpose of the code
1		<pre><?php Include ("header.php"); ?></pre>	Including Header page.
2		<pre><?php include("connection.php"); mysql_query("SET NAMES 'utf8'"); \$sql="select * from terms"; \$query=mysql_query(\$sql); \$num=mysql_num_rows(\$que ry); ?></pre>	Do connection with the data base and count number of records that we want to update show all records of terms page

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<p>3</p>	<pre><?php echo("<h1> عدد المصطلحات \$num </h1>"); ?></pre>	<p>showing number of records that are available to update , by studying the code, it shows that it prints the number of terms next to it the variable value \$ num which contains the number of terms which we get from the previous code.(part 2)</p>
<p>4</p>	<pre><?php While (\$row = mysql_fetch_array(\$query)) { \$id=\$row['id']; \$term=\$row['term']; \$trans=\$row['trans']; \$defe=\$row['defe']; \$picture=\$row['picture']; echo (" <tr > <td>\$id</td> <td>\$term</td> <td>\$trans</td> <td>\$defe</td> <td> <input name='termp' type='image 'src='\$picture' width='80' height='80'/> </td></pre>	<p>A- Searching for the first record and saving the data in variables- using the looping statement While to do the code between two brackets according to the number of results ?????? that we call for the first data record from the data base table by the query mysql_ fetch_ array then moving by the pointer to the next record and put in in the 5 variables.</p> <p>B Inserting new row to the table of the browser screen which contains the value of the special 5 variables and showing it in the table which we have to correct it and it contains 6 columns.</p>

	<pre> <td> تعديل </td> </tr>); } ?> </pre>	<p>C Create a hyperlink called updating at the end of the term row, then it uploads updating term page ,it repeated the instruction to the following records then showing it in the table until it finishes the other records in variable \$row.</p>
<p>5</p>	<pre> <?php if (isset(\$_GET['id'])) { \$sql="select * from terms where id='\$_GET[id]'"; \$query=mysql_query(\$sql); </pre>	<p>Through the term code ID the search starts for the record completely and save the term data in the following variables:</p> <p>A When pressing on the updating button next to a certain record then we get the number id by using \$get{ 'id } , then save select statement in variable \$sql</p> <p>B Through mysql_query, the search for the record starts by its number inside the database table and save the result in variable \$query.</p>

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	<pre>style='width: 482px' value='\$picture' /> <input name='filedata' type='file' maxlength='43'>

</pre>	<p>contains in the fifth part of the code.</p>
	<pre><input name='Submit2' style='width:6px' type='submit' value='إضافة' />

</pre>	<p>D- Inserting button "adding" submit2</p>

<p>7</p>	<pre> If (isset(\$_POST['Submit2'])) { If (!is_dir('pic')) { mkdir(pic); } \$fileName = \$_FILES['filedata']['name']; \$tmpName = \$_FILES['filedata']['tmp_name']; If (!empty(\$fileName)) { move_uploaded_file(\$tmpName,'pic/'.\$fileName); } \$iddata=\$_POST['iddata']; \$terma=\$_POST['txt_term']; \$transa=\$_POST['trans']; \$defea=\$_POST['TextArea1']; \$pic=\$_POST['pic']; If (!empty(\$fileName)) { \$picturea="pic/" . \$fileName . " "; } else{ \$picturea= \$pic ; } mysql_query("SET NAMES 'utf8'"); </pre>	<p>A The following code tests if the user pressed click on the adding button (submit2) then it checked if there is a folder its name is pic, if there isn't one , we have to create it, to be sure that there are values for the controls and that they aren't empty, also saving the new data after updating in the variable , if isn't updated by the term picture that is used by the previous picture.</p> <p>B Updating data in the data base table by the new values that has been saved in the last variables.</p>
----------	---	---

```

$sql="update terms set
    term='$terma',trans='$transa' ,defe =
'$defea',
    picture='$picturea' where id='$iddata' ";
$query=mysql_query($sql);

If ($query)
{
    header("Location: update_term.php");
    exit;
}
}
?>
    
```

C showing the page after updating on the web browser screen.

Thirdly: upload and update term data through web browser:

After finishing creating the page, you can open it through the web browser to try executing it and to be sure of the right work of the codes as in the following screen ,this by writing the following address:

localhost/dictionary/edit_term.php



Figure (17) showing updating term page on the web browser window.

Updating term

We choose the record we mean to update in edit term page, then we click on the hyperlink update on the chosen record (it could be the first record), the update code is executed, then the web browser page appears and in it the term data under the page / at the end of the page where the user could update the term data and click on adding button as shown on the following screen:

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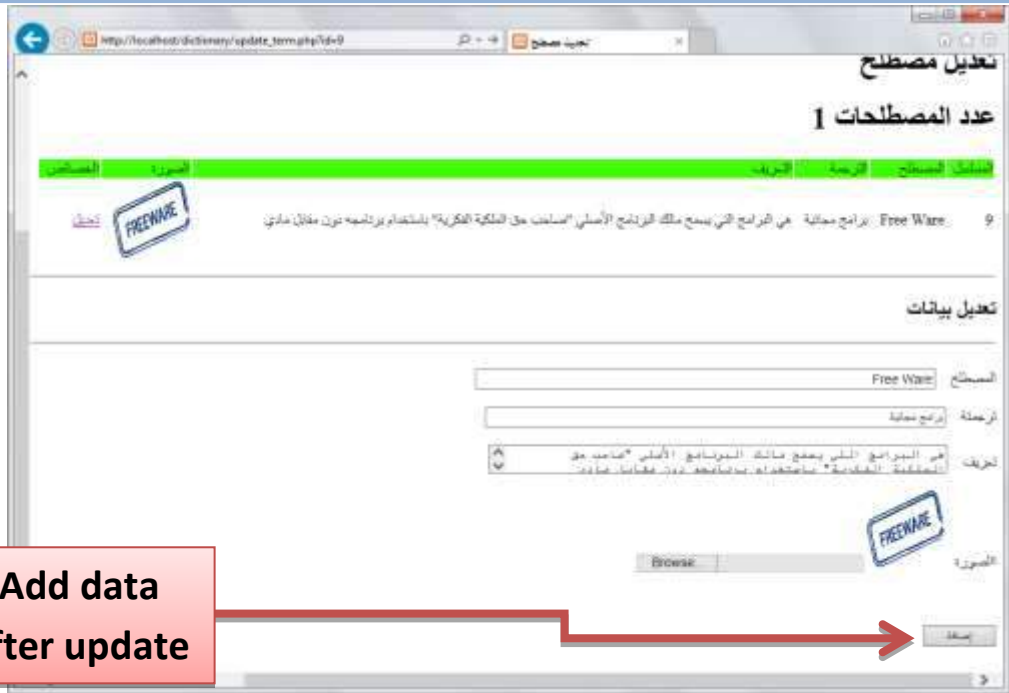


Figure (18) Executing editing term on the web browser window.

After updating and clicking adding the term data appears on the same web browser screen as the following figure:



Figure (19) showing the data on the web browser window after executing the update.

Fourthly: The certainty of updating term data in the database:

You can open the data base in a new tab to the web browser and this by writing the following link (localhost/phpmyadmin) in the address line and watching the record after updating where the data base appears:

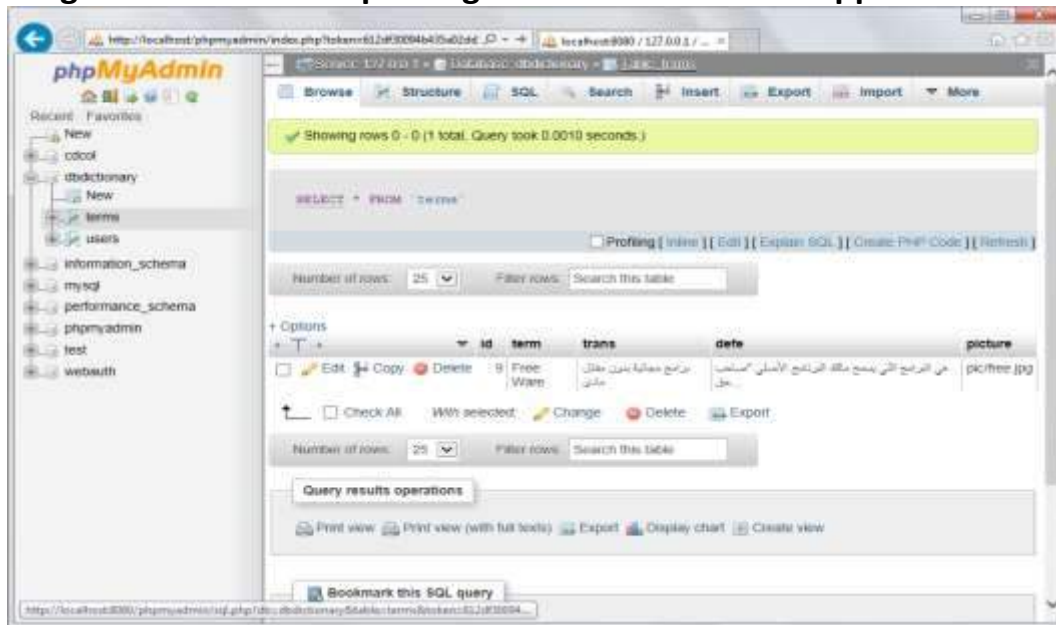


Figure (20) the certainty of updating/editing data base in data base table.

Activity (3)

Cooperate with your classmates and teacher in creating /editing /updating term data page

Edit_term .php

The Activity and Exercises book page (21)



-Creating help page:-

-in most of the web sites help page is available. It supplies the user with the information he needs to know how to deal with the web sites pages in it. The page includes:

- 1- An explanation of how to use the web site.
- 2-Direct hyperlinks to some of the web site pages.
- 3-Search for how to do tasks on the web site.
- 4- Some Help programs.
- 5-Hyperlinks to external sites.

Exercise No: 4

**Evaluation to how much we need the Help page
and specify its specifications"help.php"**

The activity &exercises book page 27

- You can my dear student get the benefits of all that you have studied in creating your own project Help page.

Activity No: 4

Creating Help page "Help.PHP".

In the activity and exercises book page 29



Unit 5

Securing Web " the computer photographic terms dictionary"

At the end of this unit the student will be able to:

- 1- Recognize some concepts & special terms concerning securing websites.
- 2- Create registration page of a new user
- 3- Create sign in php and sign out php registration page
- 4- Design an electronic mean to spread the awareness of the secure using of the internet
- 5- Discuss some concepts and some issues concerning safe thinking, safe information when using communication and information technology *means*
- 6- Following and respecting the ethics and principles of free thinking when dealing with information, equipments, nets , service and applications of the web
- 7- Keep the ethics and principles of law when using information devices and networks.
- 8- Follow the ways of protecting the application programs from the risk that might face it
- 9- Follow the ways of protecting websites, the database from risks that might face them
- 10- Document information that he gets from electronic information resources.

Introduction:

Dear student through studying the previous units, you create a web site by using the language of php by inserting database to the website (terms) and the ability to search or update or delete. By this you gain information and basic skills for designing websites by php language.

Now comes the stage of securing the web, so you need to fully know the ways of protection in case of breaking through the website in general let's start by explaining the following:

- ↔ Conceptive entry for securing the websites.
- ↔ Creating a page for registering a new user.
- ↔ Creating a page for a signing in & signing out
- ↔ The necessary procedures for securing the web.



The first Subject:
**An entry in securing
websites**



Learning out comes:

At the end of this subject, it's expected that student will be able to:

1. Know what's meant by penetration.
2. Explaining the ways of protecting a website.
3. Searching through electronic information resources for ways and styles of penetrating websites.
4. Conclude how to protect the photographic terms dictionary website.



Securing websites is a necessity to stop penetration, which leads to many harms and negative results like:

- 🗑️ Stealing or losing important database that may lead to great problems in all fields.
- 🗑️ Getting institutional or personal information and what harms it may cause.
- 🗑️ Showing unsuitable content that it might contains political, religious, ethical attitudes.
- 🗑️ Deforming the image of the foundation or the person who owns the website generally.

The penetration concept:

The website penetration, it's generally called website hacking by using the penetrator the hacker a way or a weak program that enables him to get the validity of controlling the website management or dealing with its database by any way (showing, deletion, editing and so on).

The ways of protecting the website:

1 – Protecting server (website hosting) Protecting the website here is the responsibility of the sever or website hosting where it makes / sets security options & controls it more , also it endures the responsibility of too many challenges especially in the system of operating the server.

2- protecting the website developers:

The website developers and those who are in charge of it are responsible for protection this through:

- Be sure of the inputs before storing it in the database.
- Encrypt password.
- Managing the important website folders with strong passwords.
- Specifying the user's validity correctly and clearly.



Some precautions to keep securing the website:

1- Keep software up to date



Be sure of the continual updating programs that are in use, especially that are used for managing, designing the website. If it is the program operation system of the server or any other program that work on the website.

2- Dealing with error messages

Dealing with error messages

in creating a website, error messages might appear, like that there is no connection to the database or not saving the term in the table correctly, so it's necessary to know the possible errors & try to hide them. Because these errors make the website weak and easy to be penetrated. There we should replace any error by another message that will appear to the user,

For example:

This message appears when undefined variable use it and not recognized.

Example:

This message appears when you use an undeclared variable

Notice: Undefined variable: ss in C:\xampp\htdocs\dictionary_tv\test1.php on line 14

So, we must expect that and deal with it programatically

Through well prepared messages, those don't express to the user information that could be used for penetration. For Example, when there is incorrect password, a message appears saying that a username or the password is incorrect.



You will learn in this unit the skill of showing an incorrect message in different situations.

3- Input Data Validation

The certainty of the correct input data validation from the user {the website visitor} ,

If this doesn't happen, it paves the way to penetrating the website. This through inserting inputs causes penetration, so one of the main bases of protecting from penetration is to be sure of the user input data.

For example the certainty of the field contains values that don't exceed some or a number of letters or to be sure the field is not empty , that's by the (if) clause in the code of the used languages to be sure of the input data validity.

We can do that on two levels:

Firstly : using the server & by using php code

Secondly : the client server & by using java script code.

For Example the following example is used for the certainty that the field is not empty by using php code and it's done through the web site code.

```
IF ($term !=="" && $trans !=="" && $defe !=="" && !empty($file)
{
```

The code that is executed for the certainty that the previous variables are not empty.

```
}
```

4- Passwords:

Passwords should be complicated so it would be difficult to a penetrator to discover it, especially the server password and the site admin password and the database passwords.

For the private passwords of the websites users: we could force the user to insert a password with special characteristics. For example a number of letters not less than 8 letters. There are capital letters with numbers and special signs.

**Notice:**

Note passwords should be always kept encrypted by using one of the available encryption styles in php language like SHA function (salt password) or MD5 function.

5-Avoid inserting SQL statement is usually known by SQL injection through dealing with sites:

that a penetrator might try inserting special parameter inside SQL statement, this through the site data base input form to be done on the data base without informing the designer & the in charge of site to give other results, the penetrator could use it badly or do bad changes in the data table. For securing that we use SQL real –escape- string sign to prevent inserting SQL statement to the data base so it won't be done on the data base.

6- Avoid writing XSS (Cross site scripting) code through the website.

Having no programming to be sure of the inputs & give the chance to the penetrator to write a code in the site may result that the penetrator may insert a code in the web pages, So this may lead to negative effects and risks to both the user & the website owner.

For example:

If there is a form that allows the user to write a comment then show all comments successfully , the penetrator will use it to write java script code for example , when sending the comment to server , this code is stored in database , and when it is shown in HTML page the code is done this may redirect the user to another page and in it a harmful content or fishing page (it contains fake form to get important data from a user that visiting the site like passwords or a number of a visa card.

We can avoid that by using suitable programming style like not allowing any script in the comments fields.



6- File Uploads:

Allowing file uploads to your site may cause great risks, we should avoid by following programming precautions, a file may contain script code it's done as soon as it opens on the server, and then your site becomes a victim to penetrator. We can treat this probability by testing the uploaded files.

For example:

Be sure of the file identity, if the file was an image we should be sure of the file identity, where php language affords many programming styles to be sure of the file identity in the following code:

```
file = $_FILES['uploadedfile'];
$allowedExtensions = array("jpg","jpeg","gif","png");
if (!in_array(end(explode('.', $file['name'])), $allowedExtensions))
{
echo 'عفواً...الملفات المسموح برفعها هي jpg, jpeg, gif, png';
exit(0);
}
```

For example:

The Certainty of file size which is needed to upload:

To be sure of the file size which is about to be uploaded on the server through the page, it should be about 1MB we write the following code

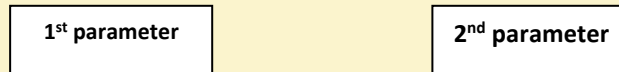
```
IF ($file['size'] > 1024000) {echo 'خطا : حجم الملف اكبر من ١ ميغابايت '};}
```




Function array

It creates new array which contains a group of elements.

Function in_array



`in_array` (the element which meant to search in the array, array elements)

To be sure of the 1st parameter inside the elements of the array (2nd parameter).

Function end

Is considered one of the arrays and meant to get back the value of the last element in an array.

Function explode



`explode('.', $file['name'])`

Its job is to transfer a variable to an array which contains several elements & gets two parameters:

1st: the ways of separation between the variable contents & it could be (space- dash- pholo stop) in the example it is (.)

2nd: it is the variable content which is meant to turn it into a text, and it is (\$filename).

7- Secure Socket Layer SSL :

It is a protocol to support secure dealing with web server and web browser through a mediator that's called certificate authority CA and could be translated by a translation sector, this affords secure pages which uses protocol HTTPS instead of the HTTP especially for the websites which deals with financial dealings or important data forms.



Example:

https://www.google.com.eg

8- Using applications and security websites tools.

After finishing designing the website, we should test the web security and the effective way is to use applications and web security tools against penetration by using codes & similar ways to what penetrators use and sometimes it's called (pen testing or penetration testing.)

There are a lot of applications that testing website security against penetrations some of them are free or open source.

Examples of these applications:

1- OpenVAS:

It is considered one of the biggest open source applications that is used widely for testing web security.

2- Netsparker:

is good for SQL injection and testing XSS.



Activity 1

Searching for website penetration ways & ways of protection in the activity book p. 33



Securing the website photographic terms dictionary through:

- 1– Registering the website users by creating a new user registration page (reg.php) and saving their data in the database.
- 2– Confirming the login to allow the insertion and changing and deleting process by creating sign in php.
- 3– Encrypting any user password.

Exercises (1)

In the activity and exercises book p. (35)



The second subject:
Creating registration page
(reg.php)



Learning out comes:

At the end of the subject, it is expected that the student will be able to:

1. Design new user reg.php page.
2. Create users table in the database.
3. Differentiate between get & post in sending the data to the server.
4. Explain the probabilities of doing wrong in inserting wrong username & password.
5. Share with his classmates in explaining php code for creating reg.php.
6. Try reg.php to specify problems.



7. Know the procedures to solve problems of creating new user reg.php.
8. Explain the conditional statement (if) in the php code that is about confirming the identification of passwords.
9. Search through the electronic information resources for types & styles of securing passwords.

Securing photographic terms dictionary website, it requires to do previous

Procedures to discuss it and starts with creating new user

reg. php.

Firstly: creating new user table called users in the database dbdictionary, it contains the following fields

Table: Users				
#	Name	Type	Length values	Index
1	Id	Integer	5	Primary
2	UserName	VarChar	30	
3	PassWord	VarChar	20	

Figure {21} Designing user's table



Study the previous table, discuss with your classmates & teacher your notes in a number of columns, the content of these fields and what each field refer to.



You have studied before the steps of creating users table in dbdictionary, follow these steps using the following:

1. Run the XAMPP control panel from the start menu as follows:

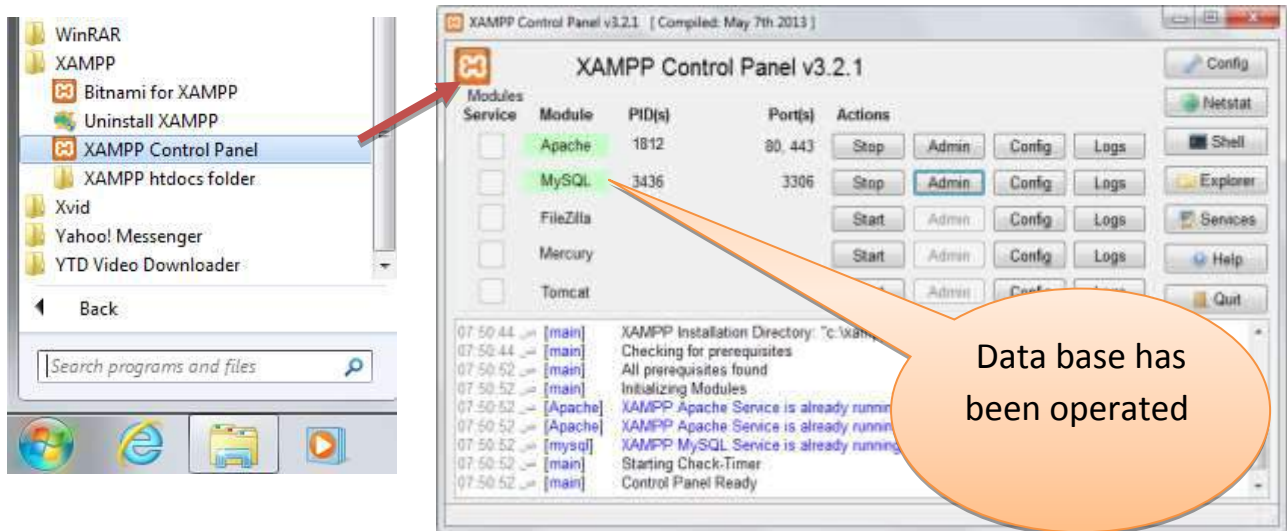


Fig. 22 Run the XAMPP Control Panel

2. A table has been created in the data base.



Figure (23) users table in the data base.

Secondly: creating new users reg.php .page

- 1- Open dictionary website for changing in it & inserting php page & this by using expression web
- 2- Create new page of php type as in the following Figure:

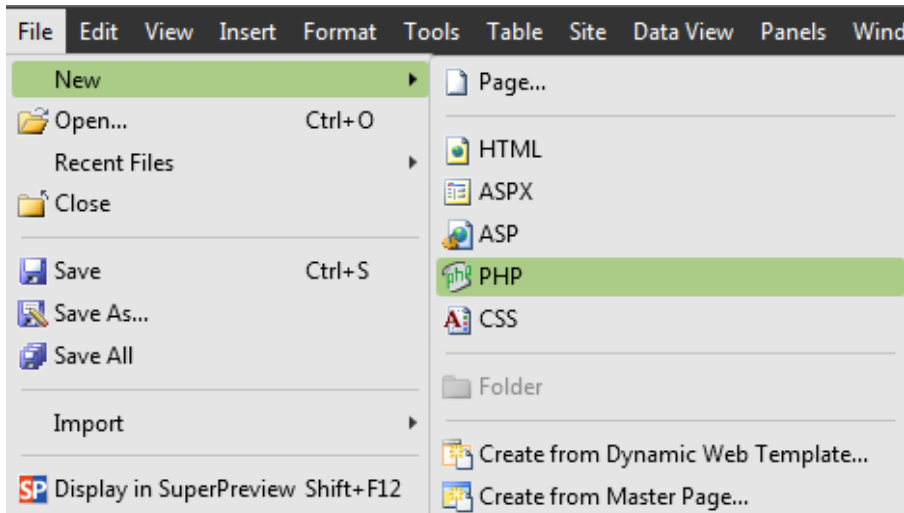


Figure (24) creating php page & in expression website application

- 3- Insert form and in it objects as below. New users registration:

تسجيل مستخدم جديد

form

اسم المستخدم

كلمة المرور

تأكيد كلمة المرور

Figure (25) inserting form contains some of the controls in expression web.



Discuss with your classmates and teacher what notes you have got.

Note:

The code HTML has been written as soon as the form has been created through designing a pattern where numbers refer to the places of writing PHP code.

The difference between post and get when creating a form:

In the window of the form characteristics post has been marked to the method & not get.

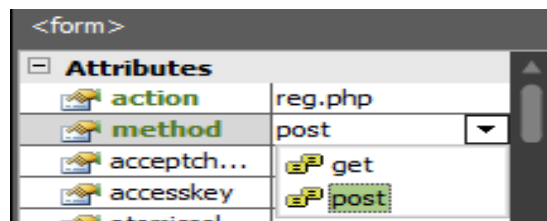


Figure (28) adjust the characteristics method of the form.

Examine html code in the beginning tag of the form to be sure that the value of the method equal to post as in the following:

```
<form method="post" action="reg.php">
```



What is the importance of specifying the value of post not get in the characteristics of the form.



The importance of the form & how to create it:

Form is used for passing or sending all the data that exists in all the controls from the web to the web server.

There are 2 ways for sending the form data:

1- `<form method="GET">`

2- `<form method="POST">`

- When clicking on the button submit protocol http request appears for sending data form to the Web server.
- Request relies on the normal way if it was get or post, secret and secured data has been sent.
- In case post is assigned secret and secured data has been sent.

While "Get" is used in certain cases. Some of them:

- ◀ If the data is little.
- ◀ If data is not secret because it appears on the address line of the internet screen.



Activity 2

Discover the difference between Get & Post when creating a data form in the activity and exercises book. P. 36.





6– Add code php instead of the numbers in the of code HTML as follows:

PHP code	no
<pre><?php session_start(); ?></pre>	<p>Note we should write this code in the beginning of the page before the code</p> <p>1</p>
<pre><?php include("header.php"); ?></pre>	<p>2</p>
<pre><?php include("connection.php"); if(isset(\$_POST['Submit1'])) { \$txt_user=\$_POST['txt_user']; \$txt_pass=\$_POST['txt_pass']; \$txt_con=\$_POST['txt_con']; mysql_query("SET NAMES 'utf8'"); \$query=mysql_query("insert into users values(',\$txt_user','\$txt_pass')"); } ?></pre>	<p>3</p>

Figure (29) php code is about creating new user reg.php

Study the previous code parts, then discuss with your teacher and classmates.



Explaining parts of PHP code.

1- PHP code:

```
<?php
session_start();
?>
```

it refers to a session declaratin inside the code of the page

Session :

It's a way of storing data in a variable inside the server to one user.

This variable is available for usage through all the website pages. All the time the user browse the pages.

When dealing with the user entry page, we should be sure that the user registered an entry or not, until using the session variables through the website pages. Through adding the previous code at the beginning of the website page which we need using session variables to it. For dealing with the session we should use the previous code at the beginning of the page.

2- PHP code

```
<?php
include("header.php");
?>
```

The code refers to including header .php as explained before

3- PHP code

```
include("connection.php");
```

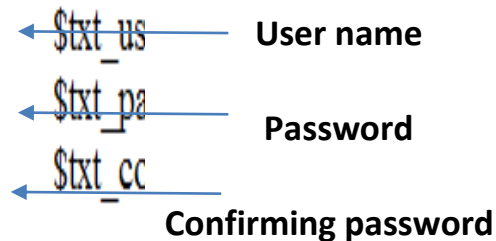
it refers to including the page that is connected to the database as explained before.



- Using variable user **POST**:
- To get the value of controls just after clicking on submit button
- we use (if) statement to be sure of pressing on submit button:

```
if(isset($_POST['Submit1']))
```

- The content of controls on the form is assigned to variables.



- Using the function mysql = query helps to solve the problem of dealing with data on the browser screen in Arabic language correctly without question marks.

```
mysql_query("SET NAMES 'utf8'");
```

Through mysql query the user value has been inserted. They are username, password in variables \$txt_user, \$text_pass and the true value is specified for the variable \$query in case the insertion process succeeds in the users table in the database

Note: the statement "insert into sql is used to add new data of a record to users table in the database

```
$query=mysql_query("insert into users values(',$txt_user','$txt_pass')");
```





Note:

The statement "insert into sql is used to add new data of a record to users table in the database.

Thirdly: trying & doing reg.php page in browser window to specify problems & treating them:

- Open page in browser by the following address

<http://localhost/dictionary/reg.php>

Then, follow the following procedures with opening the users table each time and note the input effect in the table:

Procedures steps in reg.php	the effect of the input in users table
<ul style="list-style-type: none"> • Insert username • Insert 2 passwords • click on the register button • Open users table • Notice data has been added or not? • Record your notes 	<p>The screenshot shows a table with columns 'id', 'username', and 'password'. The first row contains the values '17', 'ahmed', and 'moon'. Below the table, there are several action buttons: 'Edit', 'Copy', 'Delete', 'Check All', 'Change', and 'Export'. A red arrow points to the 'Delete' button for the first row.</p>



<ul style="list-style-type: none"> • Insert new user. • Leave password field empty • Record your notes <p>.....</p>	<table border="1"> <thead> <tr> <th colspan="3">+ Options</th> <th>id</th> <th>username</th> <th>password</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>17</td> <td>ahmed</td> <td>moon</td> </tr> <tr style="background-color: #e0e0e0;"> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>22</td> <td>abdallah</td> <td></td> </tr> </tbody> </table>	+ Options			id	username	password	<input type="checkbox"/>	Edit	Copy	17	ahmed	moon	<input type="checkbox"/>	Edit	Copy	22	abdallah																																					
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<ul style="list-style-type: none"> • Insert new user password • Insert two unidentical passwords • Record your notes <p>.....</p>	<table border="1"> <thead> <tr> <th colspan="3">+ Options</th> <th>id</th> <th>username</th> <th>password</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>17</td> <td>ahmed</td> <td>moon</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>22</td> <td>abdallah</td> <td></td> </tr> <tr style="background-color: #e0e0e0;"> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>23</td> <td>ansary</td> <td>sun</td> </tr> </tbody> </table>	+ Options			id	username	password	<input type="checkbox"/>	Edit	Copy	17	ahmed	moon	<input type="checkbox"/>	Edit	Copy	22	abdallah		<input type="checkbox"/>	Edit	Copy	23	ansary	sun																														
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<ul style="list-style-type: none"> • Leave all the fields empty • Record your notes 	<table border="1"> <thead> <tr> <th colspan="3">+ Options</th> <th>id</th> <th>username</th> <th>password</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>17</td> <td>ahmed</td> <td>moon</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>22</td> <td>abdallah</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>23</td> <td>ansary</td> <td>sun</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>24</td> <td></td> <td>moon</td> </tr> <tr style="background-color: #e0e0e0;"> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>25</td> <td></td> <td></td> </tr> </tbody> </table>	+ Options			id	username	password	<input type="checkbox"/>	Edit	Copy	17	ahmed	moon	<input type="checkbox"/>	Edit	Copy	22	abdallah		<input type="checkbox"/>	Edit	Copy	23	ansary	sun	<input type="checkbox"/>	Edit	Copy	24		moon	<input type="checkbox"/>	Edit	Copy	25																				
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<ul style="list-style-type: none"> • insert the same user more than once • Record your notes • .. 	<table border="1"> <thead> <tr> <th colspan="3">+ Options</th> <th>id</th> <th>username</th> <th>password</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>17</td> <td>ahmed</td> <td>moon</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>22</td> <td>abdallah</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>23</td> <td>ansary</td> <td>sun</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>24</td> <td></td> <td>moon</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>25</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>26</td> <td>youssif</td> <td>sun_shine</td> </tr> <tr style="background-color: #e0e0e0;"> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>27</td> <td>youssif</td> <td>sun_shine</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Edit</td> <td>Copy</td> <td>28</td> <td>youssif</td> <td>sun_shine</td> </tr> </tbody> </table>	+ Options			id	username	password	<input type="checkbox"/>	Edit	Copy	17	ahmed	moon	<input type="checkbox"/>	Edit	Copy	22	abdallah		<input type="checkbox"/>	Edit	Copy	23	ansary	sun	<input type="checkbox"/>	Edit	Copy	24		moon	<input type="checkbox"/>	Edit	Copy	25			<input type="checkbox"/>	Edit	Copy	26	youssif	sun_shine	<input type="checkbox"/>	Edit	Copy	27	youssif	sun_shine	<input type="checkbox"/>	Edit	Copy	28	youssif	sun_shine
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Figure (30) the probabilities of inserting the user name and password.



Discuss with your classmates and teacher your notes about the effect of the inputs of every case in users table.

After studying the possible procedures and its data in reg.php page and its effect on the inputs in user table. It is clear that the shape of the form, it has no security rules and Precautions, Because of the following reasons

- There is no certainty of data validation like (accepting empty fields has no test for identical passwords.....).
- User name field in users table and this illogical, as there should not be more than one username with the same name.
- The password is clear without encryption.

for treating these problems : we should do the following :

1-treating repetition in username field in users table

- ◀ Treating repetition we should do the following:
- ◀ click on structure in MYSQL page, as you learned the characteristics of users tables

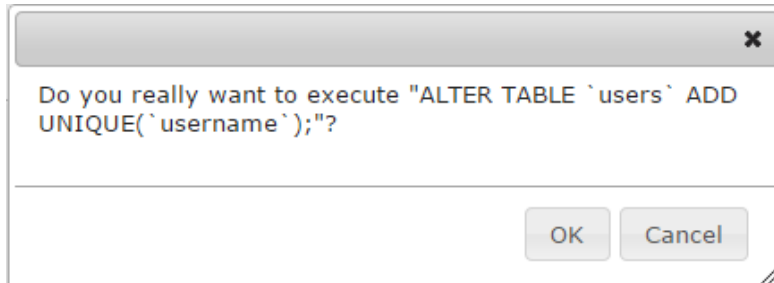
- ◀ click to make the field unique (Unique field doesn't accept repetition)



Figure (31) updating the properties of username to stop repetition



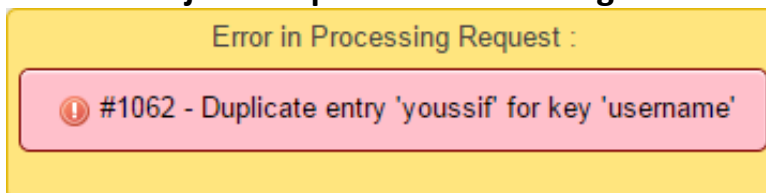
After clicking on unique which means doesn't accept repetition, a window appears as follows:



Alter Unique: it means unique in the field characteristics

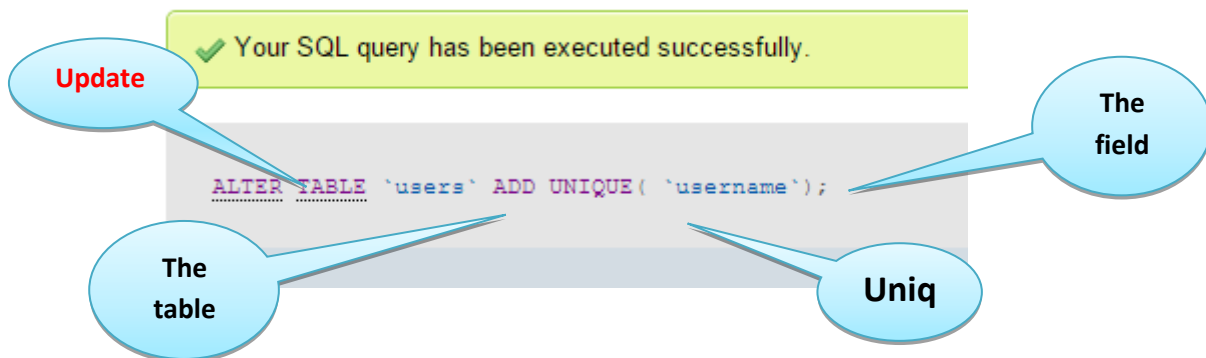
Figure (32) a text box Certainty for the username is unrepeated "unique"

- ◀ Click on OK, a window appears to you, it shows the in ability of the field to be unique & that's for having a repeated record or more.
- ◀ So it is better to adjust unique before inserting data.



-Figure (33) Error messages because of the inability for adding unique properties , because there is a repeated username.

- ◀ When this process succeeds (there is no repeated records) no error message appears as the previous message and the following message appears:



-Figure (34) a message shows running/operating SQL statement successfully.



- 1- We have to be sure of not leaving any field empty and the two passwords are similar by php code which has to be done on the server.

We have to be sure that all insertion elements (username – password) contains data and not empty & so the identification between the two passwords We have to write the conditional statement after specifying the variables which is shown in the previous part of the code no 3 On reg.php page and by switching on .We change this code then it becomes as in the following figure

```
<?php
include("connection.php");
if(isset($_POST['Submit1']))
{
    $txt_user=$_POST['txt_user'];
    $txt_pass=$_POST['txt_pass'];
    $txt_con=$_POST['txt_con'];

    if($txt_user != "" && $txt_pass != "" && $txt_pass == $txt_con)
    {
        mysql_query("SET NAMES 'utf8'");
        $query=mysql_query("insert into users values(',$txt_user','$txt_pass')");
    }
    else
    {
        echo "<label id='Label1' style='color: #FF0000;font-size: large;'>م
        يجب ادخال اسم المستخدم وكلمة المرور وأن تكون كلمتي المرور متكافئتين
        </label>";
    }
}
?>
```

The required
Conditional
statement

Figure (35) it's about the certainty of not leaving any field empty & the identification of password.



The conditional expression with if statemen:

```
if($txt_user != "" && $txt_pass != "" && $txt_pass == $txt_con)
```

◀ It's meant if there was:

-variable \$txt _ user doesn't equal to empty chain if the variable \$txt_pass doesn't equal to empty chain.

- \$txt_pass variable content equal to variable content \$txt_con the final result becomes true

- **so we should be sure of 3 mentioned conditions at the same time so the final result is true**
- when there isn't any of them the result is false
- then appears a warning message warns about not leaving empty elements & the two passwords should be identical

◀ after changing the code & inserting (if) statement do the following:

- Save the page.
- Upload the page on the internet browser.



o Insert new user data and leave one of the field's empty .Record your notes & discuss it with your teacher & your classmates.

.....

o Sign in again But insert unidentical passwords purposely. Record your notes & discuss with your teacher & classmates.

.....

2- Certainty of completing storing data in a table successfully

The completion of storing data in a table successfully in this case we test variable \$query the result is true, then doing (SQL) statement successfully.

```

<?php
include("connection.php");
if(isset($_POST['Submit1']))
{
    $txt_user=$_POST['txt_user'];
    $txt_pass=$_POST['txt_pass'];
    $txt_con=$_POST['txt_con'];
    if($txt_user != "" && $txt_pass != "" && $txt_pass == $txt_con)
    {
        mysql_query("SET NAMES 'utf8'");
        $query=mysql_query("insert into users values(',$txt_user','$txt_pass')");
        if($query)
        {
            echo("<label id='Label1' style='color: #FF0000;font-size: large;'>تم تسجيل البيانات بنجاح</label>");
        }
    }
    else
    {
        echo("<label id='Label1' style='color: #FF0000;font-size: large;'>لم يتم اضافة البيانات</label>");
    }
}
else
{
    echo "<label id='Label1' style='color: #FF0000;font-size: large;'>
    يجب ادخال اسم المستخدم وكلمة المرور وأن تكون كلمتي المرور متكافئتين
    </label>";
}
}
?>

```

The wanted
conditional
statement

Figure (36) form. PHP code it's about the certainty of storing data in the users table in the data base successfully



Activity (3)

Making sure of the correct inputs & completion of storing data in the WB p.41



-Encryption of password.

There are many methods for encrypting passwords one of them is using the query MD5. it's one of the functions/quires , that's used for encryption which means changing literalness chain from known letters & numbers to unknown letters & numbers

Function MD5 (message –digest algorithm)

This function returns the encryption result of literal chain

Example:

Output on the browser screen	PHPcode
6d4db5ff0c117864a02827bad3c361b9	<pre><?php \$str = "moon"; echo md5(\$str); ?></pre>



PHP Code for Password Encryption:

Open the code of reg.php. Page then insert what's referred to on the following figure as follows in the places that are circled below:

Customize the function MD5 to the variable to confirm the password

```
$txt_user=$_POST['txt_user'];
$txt_pass=$_POST['txt_pass'];
$txt_pass=md5($txt_pass);
$txt_con=$_POST['txt_con'];
$txt_con=md5($txt_con);
```

customize the function MD5 to variable

So variable content \$txt_pass and variable \$txt_con becomes encrypted password save the page then upload to the browser.

- Register more than on new user
- open users table, notice passwords of every user and differentiate between the input words and the content in the fields of the table

Notice Encrypting

+ Options		id	username	password
<input type="checkbox"/>	Edit Copy Delete	30	Sama_Elansary	0c40e267a57e4dce30c85d5b09e751aa
<input type="checkbox"/>	Edit Copy Delete	31	Fatma_Abdallah	19f79239c0c369c73df66e3dd20dcf4f
<input type="checkbox"/>	Edit Copy Delete	32	Heba_Youssif	edda2fc163233f03ffba47c670d4117c
<input type="checkbox"/>	Edit Copy Delete	33	Youssif_Abdallah	7f9d3e4a2e6ff5e78ccaf346214ad919

↑ Check All With selected: Change Delete Export

Figure (37) showing passwords after the encryption in users table in the database.



There are other methods for securing passwords, you can my dear student search the web under your teacher supervision to do the following activity:



Activity (4)

Learn how to encrypt data through searching the web and digital libraries in the WB p.44.



Activity (5)

Searching for php code for encrypting data through the web in the WB p (47)

The third subject

Designing page -sign in in
php/ sign out .php



Learning out comes:

At the end of this subject:

1. Create sign in page by using expression web.
2. Cooperate with classmates to study HTML to create sign in page.
3. Create sign out page by using expression web.

Firstly: Creating signing in php by using expression web:

How it works:

- 1- Inserting the username and password then click on enter button.
- 2- Searching in users table for a user name if it exists, then it has been compared between the passwords of the user with the stored password in the user data base table.
- 3- If it is right; the user name will be stored in the variable session and shows a welcome message by the username.
- 4- If it is not right there's a difference between the username & password then a wrong message appears.
- 5- There are other pages affects by signing in like adding term page updating page, deleting page where we should change code in it every one of them where we couldn't complete adding , updating, and deleting except after recording signing in to the website.

Steps of creating a page:

- Open expression web and design a page called sign in .php
- Insert form and insert on it controls as in the screen below

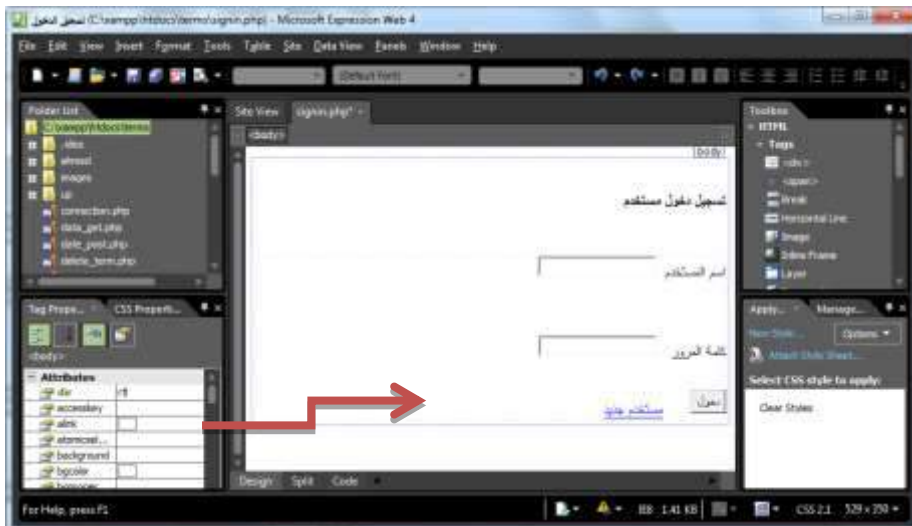
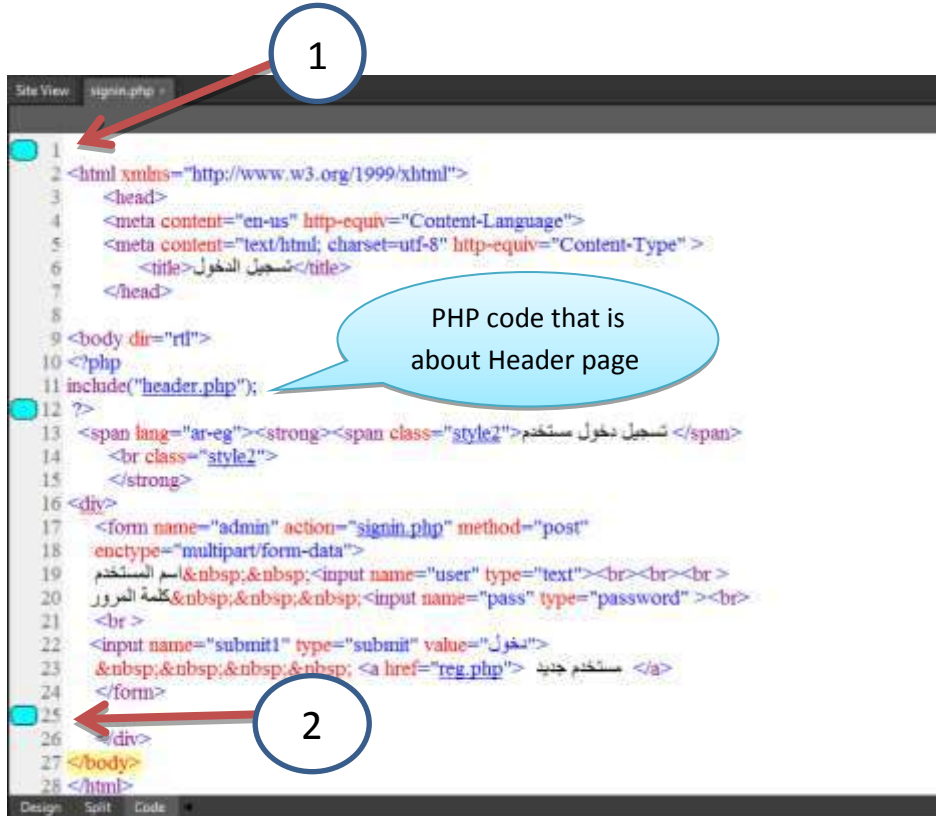


Figure (38) designing the interface of a user signing in page

Note:

The hyperlink to the word new user in the previous reg.php page that was created before, so the code window looks as in the following figure



```

1
2 <html xmlns="http://www.w3.org/1999/xhtml">
3 <head>
4 <meta content="en-us" http-equiv="Content-Language">
5 <meta content="text/html; charset=utf-8" http-equiv="Content-Type" >
6 <title>تسجيل الدخول</title>
7 </head>
8
9 <body dir="rtl">
10 <?php
11 include("header.php");
12 ?>
13 <span lang="ar-eg"><strong><span class="style1">تسجيل دخول مستخدم</span>
14 <br class="style2">
15 </strong>
16 <div>
17 <form name="admin" action="signin.php" method="post"
18 enctype="multipart/form-data">
19 اسم المستخدم &nbsp;&nbsp;&nbsp;<input name="user" type="text"><br><br><br >
20 كلمة المرور &nbsp;&nbsp;&nbsp;&nbsp;<input name="pass" type="password" ><br>
21 <br >
22 <input name="submit1" type="submit" value="دخول">
23 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;<a href="reg.php"> مستخدم جديد </a>
24 </form>
25 </div>
26 </body>
27 </html>

```

Figure (39) HTML PHP code, it's about creating signing in page



Study the code in the previous screen record your notes & discuss them with your classmates & teacher.

Add the following php code instead of the following place in the previous code screen:

Number	The code
1	<pre data-bbox="724 607 967 723"><?php session_start(); ?></pre>
2	<pre data-bbox="284 768 1422 1778"><?php include("connection.php"); mysql_query("SET NAMES 'utf8'"); if(isset(\$_POST['submit1'])) { \$usern=\$_POST['user']; \$passw=\$_POST['pass']; \$passw=md5(\$passw); if(\$usern != "" && \$passw != "") { \$sql="select * from users where username='\$usern' && password= '\$passw' "; \$query=mysql_query(\$sql); \$num=mysql_num_rows(\$query); if (\$num == 1) { \$row=mysql_fetch_array(\$query); \$_SESSION['username']=\$row['username']; header("Location: index.php"); exit; } } } ?></pre> <div data-bbox="898 909 1396 981" style="border: 1px solid black; padding: 2px; margin: 5px;">Test clicking on the Login button</div> <div data-bbox="962 1126 1396 1198" style="border: 1px solid black; padding: 2px; margin: 5px;">Confirming inserting user name and password.</div> <div data-bbox="344 1330 1023 1621" style="border: 2px solid red; padding: 5px; margin: 5px;"> <div data-bbox="576 1346 1010 1417" style="border: 1px solid black; padding: 2px; margin: 2px;">be sure of user name is in the table</div> </div>

Figure (40) PHP code that is concerned with creating signing in page



Study the code in the previous /following screen & discuss with your classmates & teacher.

Explaining the parts of the previous code

PHP code No: 1:

It's the code which announces the beginning of the session for a user in the beginning of reg.php page that's because any web user should enter a user name & password.

PHP code No :2

- ◀ Line 1& 2 for concluding the contact page with the database and showing the data on the browser screen in Arabic correctly. It has already been explained.
- ◀ (if) statement is used to test pressing on submit button & the query is set when we become sure of the condition (if) part is done. The two following lines in if statement when the inputs is specialized (username- password) to variables \$ user n \$ password.

Note:

```
$passwd=md5( $passwd);
```

Adding the following line to encrypt the input password by a user is compared to what is stored in encrypted users table too .

- ◀ 2nd conditional (if) is used for verification of two controls (username & password) not empty, it has been explained before.
- ◀ If the 2nd conditional is verified together the field of each username and password are not empty that they have value, the code is verified.



Discuss with your classmates and teacher explaining {if} statement :

- ◀ Through select statement we search in users table in the database about the users name which is inserted and put it in variables \$ Usern and also search for the password that has been entered and put in variable on one condition the name & password are there together and identical with the inputs.
- ◀ MySQL query is specialized on the variable \$sql to the variable \$query & it's explained before.
- ◀ Mysql_num_rows function is used to specify the number of registers which has been got and the number is stored in variable \$ num.
- ◀ the last part of the signing in page variable\$ num has been tested if its value equal 1 it means that there is only one user & his own password in users table.

Then the condition is confirmed and there is only one record then we do the following:

- MYSQL_fetch _ array function is executed & turned the result of sql into array its result is the value of a record stored in variable \$ row.
- Specialize the username from username field in the database of the variable username in session, so we could compare it and confirm it in any page of the website page and print it on the internet browser.
- Move into the main page then go out from if statement by the exit code
- The three IF statements are then closed with the three brackets {.
- if the value of variable \$num equal (0) this means there is no record in users table by the input user and password , then the page stays as it is.

Exercise 2

Registering user entry / input in WB. P: 51



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**Secondly designing signing out php page by using expression web:**

```
<?php
session_start();
$_SESSION['username'] = "";
header("Location: index.php");
exit;
?>
```

The idea of signing out page depends on specializing null value to variables session and redirecting the main page index php this appears in the opposite code.

By the help of your classmates and teacher design a sign out page,
Try to do this page.



The fourth subject The website security precautions



Learning out comes:

At the end of this subject the student will be able to:

1. execute updates according to session concept for a user and for the ability to update or add or delete in the database
2. Practice the hyperlink process for signing in and signing out pages of a user.
3. Employ the conditional statement (if) to confirm signing in.

Dear student after finishing designing all websites pages and so are signing in & out of a user. We should secure the site by the following:

The necessary changes in a website to what suits the style of signing in a user:

1. Adding the session start code at the beginning of each page is required to be executed for the registered user only, and the goal is to enable access to the registered user

name

```
<?php
session_start();
?>
```

1- **Modify the code in the header page**



Figure (41) header page which is added to signing in page.



Study the previous code, discuss it with your classmates and teacher and specify how it is tested for signing in or not

Explaining the code:

The conditional IF statement

```
if(@$_SESSION['username'] == "")
```

- 📁 Php language deals with the sign @ as a variable
- 📁 Remember that one of the php language rules is to put the sign \$ before variable name.
- 📁 \$ Session is variable in the server memory for the certainty that the user could sign in or not.
- 📁 IF statement condition

-it is tested if the user name equal null which means it's empty it has no data, there are two cases if it will be done or not.

- If the condition is true (yes)
 - Sign in becomes a hyperlink which is to sign in page that 's called sign in .php and leaves many spaces and print on the browser page the user isn't registered ,then variable session its value in the code is null:

```
$_SESSION['username'] =="";
```

- If the if condition isn't true.
 - It means: Session contains a value is the user name :then the sign out phrase becomes a hyperlink to sign out page that's called sign out.php, and leaves many spaces and print a welcome message on the browser page " you're welcome " then leave many spaces , and write the user name that 's inserted in variable session by the code :\$_session [username]: you're welcome) Echo.

Notice

We can use echo code to print more than one constant or variable on the browser screen by separating between them by “ “.

```
Echo ("مرحبا بكم" . " " . $_SESSION ['username']);
```

Try to execute the previous code by opening the website then the following figure appears:



Record your notes.....

Discuss them with your classmates & teacher.



Changing the code in update page:

Add the conditional statement to the marked place to test if it is completed signing in or not, if it doesn't sign in we redirect to a page which says that the sign in or out from the **update page, is invalid.**

```

<?php
  session_start();
?>
<html dir="rtl">
<head>
<meta content="text/html; charset=utf-^" http-equiv="Content-Type" >
<title>تحديث مصطلح </title>
</head>

<body>

<?php
include("header.php");
?>

<h1><p > تعديل مصطلح </p> </h1>
<?php
include("connection.php");
mysql_query("SET NAMES 'utf^'");
$sql="select * from terms";
$query=mysql_query($sql);
$num=mysql_num_rows($query);

```

A conditional statement is added

Figure (44) Adding php code in updating page allows the user who could sign in to do changes

-Study the previous code, discuss your notes and the conditional statement with your classmates and your teacher:

```

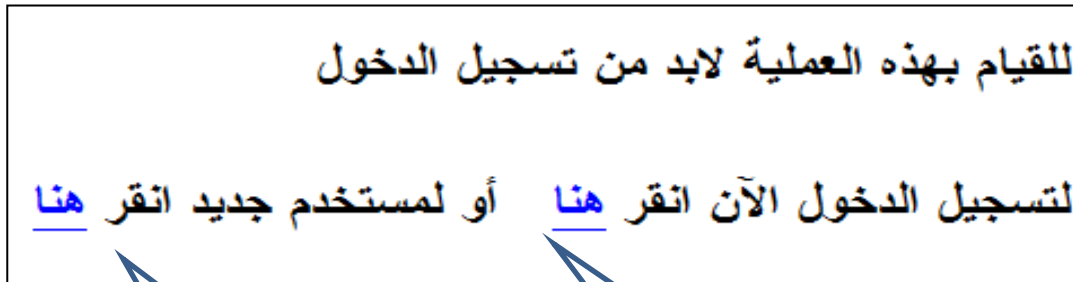
if($_SESSION['username'] == "")
{
  header("Location: ask_to_sign_in.php");
  exit;
}

```

It means that when we don't have a user sign in, we redirect the user to a page called `ask_to_sign_in.php` then go out from the code of the page

Ask-to sign in php page:

It's a page which is designed to show the user a message of what he has to do.



A hyperlink to
page `reg.php`

A hyperlink to
page `signin.php`

Use your experience to design the previous page and do its hyperlink which is shown in it.

2- After changing the code, we add the same previous conditional statement in the beginning of PHP code and in adding term page and also in deleting term page



So it is allowed only to the user who signs in, he can add, update and delete.



Exercise (3)

Explaining the code.

WB p.53



The fifth Subject **Securing database** **MYSQL.**



Learning out comes:

At the end of the subject, it is expected that the student will be able to:

1. Mentions ways to secure the database.
2. Discuss a big number of ideas to secure database.
3. Could change user name and password in the database
4. Explain the security codes and their aims.



Creating a password to secure the database:

When installing XAMPP, a user is created, its name is root without a password, and this means let everyone deal with the database, so it's important to create a password for securing the database.

◀ Remember the page is known by connection php

```
<?php
$username="root";

$password="";

$databse="term";

$server="localhost";

$connect=mysql_connect("$server","$username","$password");
if ($connect)
{
$select=mysql_select_db("$databse") or die("هناك مشكلة في قاعدة البيانات");
}
else
{
echo("لم يتم الاتصال بقاعدة البيانات");
}
?>
```

Figure (45) PHP code in connection page in the database with weak security.

Study the previous code, discuss with your friends and classmates, have you noticed that the password is null.

Explain that.....

◀ upload the security page by writing the following address in the web browser

<http://localhost/security/>



XAMPP for Windows

XAMPP SECURITY
(Requests allowed from localhost only)

This page gives you a quick overview about the security status of your XAMPP installation. (Please continue reading after the table.)

Subject	Status
These XAMPP pages are accessible by network for everyone Every XAMPP demo page you are right now looking at is accessible for everyone over network. Everyone who knows your IP address can see these pages.	UNSECURE
The MySQL admin user root has NO password Every local user on Windows box can access your MySQL database with administrator rights. You should set a password.	UNSECURE
PhpMyAdmin is free accessible by network PhpMyAdmin is accessible by network without password. The configuration 'httpd' or 'cookie' in the "config.inc.php" can help.	UNSECURE
A FTP server is not running or is blocked by a firewall! A FTP server is not running or is blocked by a firewall!	UNKNOWN

The green marked points are secure; the red marked points are definitively unsecure and the yellow marked points should be checked (for example because the software to check isn't running).

To fix the problems for mysql, phpmyadmin and the xampp directory simply use
=> <http://localhost/security/xamppsecurity.php> <= [allowed only for localhost]

Empty password

Click to get to the page of changing the password

Note the unsecure status of each item

Figure (46) changing the user name, the password in the database. Study carefully the previous screen, then do what you are asked to do then ,the following screen appears:

Security console MySQL & XAMPP directory protection

MYSQL SECTION: "ROOT" PASSWORD

MySQL SuperUser: **root**

New password:

Repeat the new password:

PhpMyAdmin authentication: http cookie

---- Security risk! ----

Safe plain password in text file?
(File: C:\xampp\security\security\mysqlrootpasswd.txt)

Figure (47) Inserting a new password and confirming it to the database to be more secure

From the previous figure write the new password and confirm it then click on password/changing.



Of course we must edit the password in connection php as follows;

```
$password="HowTo_Design_php_web_site";
```

Notice:

- ◀ The suggested password is chosen for the difficulty of guessing it by a web penetrator.
- ◀ The password should be difficult and complicated.
- ◀ No password is used except in connection php page.

Exercise (4)

Searching the web for the conditions and properties of creating a password temporarily in the workbook p 55.



© 2011/12/15 2:16



Conclusion

-My dear student, we have finished creating the photographic terms dictionary as one of the webs forms and know some of its security types by searching the web to know more.

This book is considered a new start to the world of webs designing security simply, of Couse the web could be developed in a better way and this could be through searching the internet.

-this book is considered as a new start to enter to the world of designing webs and using one of the free open source applications like {php & mysql}, you can through searching.

The internet to get other free open source webs and know how to use it and deal with its database and how to update it to what suits it to achieve the goal

The team work