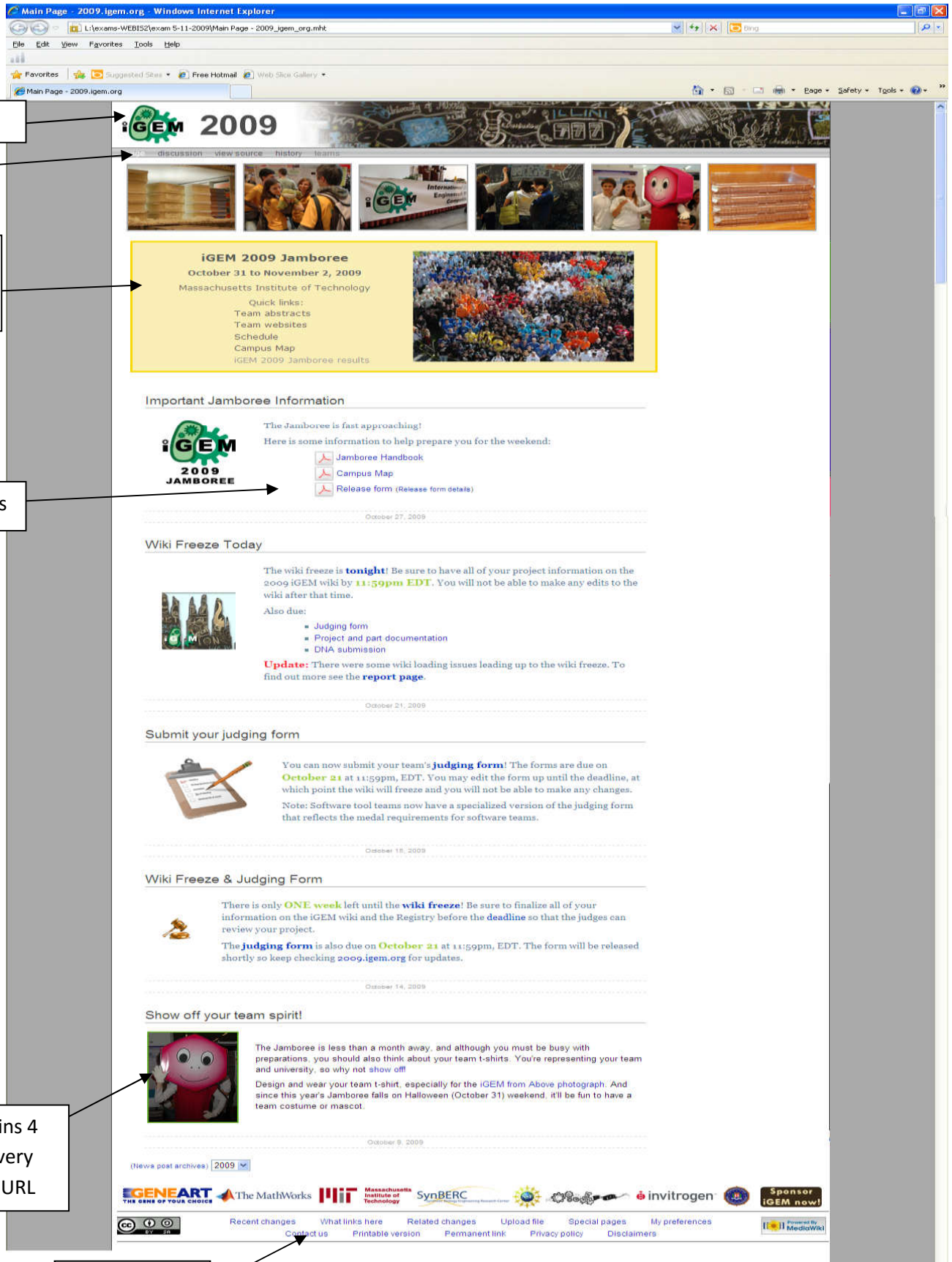


Please design your CV using **only the tools that you learned until now in the class.**

Try to design similar page to the following page with the tools that you learned until now in the class. The needed images are included in attached folder. Consider that there is main folder called mywebsite contains three folder called htmlpages, phppages, and images. The next page should be located inside htmlpages folder and the images are located inside the images folder.



**Please Answer the following Two Questions**

**Question 1:**

Modify the page that you are designed in the previous section taking into consideration the new changes that are illustrated in the following figure. Try to design similar page to the following page with **the tools that you learned until now in the class**. The needed images are included in attached folder. Consider that there is main folder called mywebsite contains three folders called `htmlpages`, `phppages`, and `images`. The next page should be located inside `htmlpages` folder and the images are located inside the `images` folder.

The image shows a screenshot of the iGEM 2009 website, viewed in Internet Explorer. The page layout includes a header with the iGEM 2009 logo, a navigation bar, and a main content area with various sections. Annotations with arrows point to specific elements:

- Image is link**: Points to the iGEM 2009 logo.
- links**: Points to the navigation bar.
- Group of links**: Points to the 'Quick links' section under 'iGEM 2009 Jamboree'.
- Links to pdf files**: Points to the 'Jamboree Handbook', 'Campus Map', and 'Release form' links.
- Group of links**: Points to the 'About iGEM', 'iGEM Start to Finish', and 'Resources' sections.
- Image map contains 4 equal size rects every one has different url**: Points to the iGEM mascot image.
- Group of links**: Points to the footer section containing various links like 'Recent changes', 'What links here', etc.

Dr. Nagwa M. Omar

**Question 2: Design the following lists**

**1-**

**Aircraft Types**

- I. General Aviation (piston-driven engines)
  - A. Single-Engine Aircraft
    - 1. Tail wheel
    - 2. Tricycle
  - B. Dual-Engine Aircraft
    - 1. Wing-mounted engines
    - 2. Push-pull fuselage-mounted engines
- II. Commercial Aviation (jet engines)
  - A. Dual-Engine
    - 1. Wing-mounted engines
    - 2. Fuselage-mounted engines
  - B. Tri-Engine
    - 1. Third engine in vertical stabilizer
    - 2. Third engine in fuselage

**2-**

**Mixed Lists**

- 1. top level item - 1
- 2. top level item - 2
- 3. top level item - 3
  - 1. second level item - 3.1
  - 2. second level item - 3.2
  - 3. second level item - 3.3
    - third level item - 3.3.1
    - third level item - 3.3.2
    - third level item - 3.3.3
      - 1. fourth level item - 3.3.3.1
      - 2. fourth level item - 3.3.3.2
    - third level item - 3.3.4
      - fourth level item - 3.3.4.1, showing you a definition list:
        - dweeb  
young excitable person who may mature into a *Nerd* or *Geek*
        - hacker  
a clever programmer
        - nerd  
technically bright but socially inept person
      - Center  
Centre  
A point equidistant from all points on the surface of a sphere.  
In some field sports, the player who holds the middle position on the field, court, or forward line.

3 <sup>rd</sup> Level Faculty of Computers and Information	Web Programming Sheet # 4
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**Please Answer the following two Questions**

**Question 1:**

Design the two forms similar to the following ones taking the following into consideration:

- 1- The first form data should be sent in the same time to two email addresses with subject “stolen data “
- 2- The second form data should be sent to “any.php” file that is located on server called ” www.any.com” under folder called “phpfiles”
- 3- Design another instances of the forms and disable all elements
- 4- Design another instances of the forms and convert all elements to read-only
- 5- Design another instance of the first form and display all elements with initial values
- 6- In another instance of the first form enforce the appearance of vertical scroll bar in the first top-down menu

## Form #1

Demo	PHP source	Template source	Container HTML	Zebra_Form generated HTML
<h3>A meeting room reservation form</h3>				
<p>Your name: *</p> <input type="text"/>				
<p>Your email address: *</p> <input type="text"/>				
<p>Department: *</p> <div>- select -</div>				
<p>Which room would you like to reserve: *</p> <p> <input type="radio"/> Room A  <input type="radio"/> Room B  <input type="radio"/> Room C         </p>				
<p>Extra requirements:</p> <p> <input type="checkbox"/> Flipchart and pens  <input type="checkbox"/> Plasma TV screen  <input type="checkbox"/> Coffee, tea and mineral water         </p>				
<p>Reservation date *</p> <div> <input type="text"/>  </div> <p>› Date format is YYYY-MM-DD</p>				
<p>Reservation time :</p> <div> <div>09</div> <div>00</div> </div>				
<p>Submit</p>				

## Form #2

Syntax: *	INSERT	SELECT	UPDATE	DELETE
Table: *	members			
Form Action: *	index.html			
Input Label	Input Type	Process?	Input Name	DB* Col. name (if different)
Field 1: Name	Text	yes	name	
Field 2: Last Name	Text	yes	last_name	lname
Field 3: Subscribe	Checkbox	yes	subscribe	
Please enter values here (one line per option)				
Newsletter Offers				
Field 4: Gender	Radio Button	yes	gender	
Please enter values here (one line per option)				
Male Female				
Field 5: State	Select	yes	state	
Please enter values here (one line per option)				
Texas Illinois New York				
Field 6: Message	Textarea	yes	message	
Field 7: Password	Password	yes	password	
Field 8: Attachment	File	yes	attachment	
Field 9: Id	Hidden	no	id	
Field 10: Sign up for Free!	Submit	yes	submit	
Submit Now!				



## Question 2:

Try to design similar page to the following one using the tools that you learned until now in the class. The needed images are included in attached folder. Consider that there is main folder called mywebsite contains three folder called htmlpages, phppages, and images. The next page is located inside htmlpages and the images are located inside the images folder. the form data should be submitted to file called actionpage.php that is located insides the folder phppages. Concerning the video file insert one from your choice







Please answer the following questions:

Question 1:

Next you will find snapshot from web page. You have to design similar one using HTML, CSS. Using CSS has high priority in the webpage design. Do not try to design the page using HTML only. The images are included with the sheet, anything in the webpage not an image is a text. Do not collect many images in a single image. The actions when mouse passes over an element are illustrated in figures after the webpage snapshot. Compare the webpage snapshot with the figures to discover the action you should apply.



The actions

- i. Some links styles change when mouse passes over them as follows: there is one picture for every group of links and one link in every group is chosen. Some links don't change their style



Every picture and text in this figure is a link; when mouse passes over any element there is no change



Every text in this figure is a link. The top text style is changed when mouse passes over it as illustrated. No change in other links styles



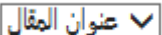
Every text in this figure is a link. The text style is changed when mouse passes over the element as illustrated



Every picture and text in this figure is a link; when mouse passes over any element there is no change

[news.any.com](http://news.any.com)

Link to email address when mouse passes over it, it becomes underlined and its font size and color are changed

- ii. When the following list menu is clicked  the following items appear:



- iii. The background and text of the every element in the menu



is changed as following when the mouse passes over it:



Please answer the following questions:

### Question 1: (PHP)

1-Correct the errors in the following scripts "if any" then give the HTML output as well as the output on the browser : "you have to understand every instruction"

a)

```
<?php
$Bar = "a"; $Foo = "Bar"; $World = "Foo"; $Hello = "world"; $a= "Hello"; echo $$$$a;
?>
```

b) <?php

```
function makecoffee($type = 'any', $coffeeMaker = NULL) {
    $device = $coffeeMaker ? "hands" : $coffeeMaker;
    return "Making a cup of ".$type." with $device.\n";
}
echo makecoffee();
echo makecoffee("cappuccino", "teapot");
?>
```

c) <?php

```
function &scalar_ref_inc_x($x) {
    $x++;
    return $x; }
$x = 1;
$x2 =& scalar_ref_inc_x($x);
scalar_ref_inc_x($x2);
echo $x . ', ' . $x2 . "\n"; ?>
```

d) <?php

```
function &find_variable($one, $two, $three) {
    if($one > 10 && $one < 20) return $one;
    if($two > 10 && $two < 20) return $two;
    if($three > 10 && $three < 20) return $three; }
$one = 2; $two = 20; $three = 15;
$var = &find_variable($one, $two, $three);
$var++;
print "1: $one, 2: $two, 3: $three"; ?>
```

e) <?php

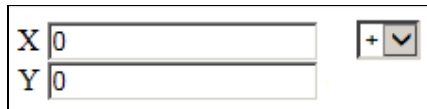
```
error_reporting(E_ALL);
function &scalar_ref_inc_x(&$x) {
    $x++;
    return $x; }
$x = 1;
$y=1;
$x2 =& scalar_ref_inc_x($x);
scalar_ref_inc_x($x2);
$x3 =scalar_ref_inc_x($y);
$x3++; echo "$x3". "<br>";
echo $x . ', ' . $x2 . "\n"; ?>
```

f) <?php

```
function &find_variable(&$one, &$two, &$three) {
    if($one > 10 && $one < 20) return $one;
    if($two > 10 && $two < 20) return $two;
    if($three > 10 && $three < 20) return $three; }
$one = 2; $two = 20; $three = 15;
$var = &find_variable($one, $two, $three);
$var++;
print "1: $one, 2: $two, 3: $three"; ?>
```

2-Write while ( ) in PHP script to print out a table of Fahrenheit and Celsius temperature equivalents from -50 degrees F to 50 degrees F in 5-degree increments. On the Fahrenheit temperature scale, water freezes at 32 degrees and boils at 212 degrees. On the Celsius scale, water freezes at 0 degrees and boils at 100 degrees. So, to convert from Fahrenheit to Celsius, you subtract 32 from the temperature, multiply by 5, and divide by 9. To convert from Celsius to Fahrenheit, you multiply by 9, divide by 5, and then add 32. **No** script is allowed outside `<?php` and `?>`

3-Write PHP Script that displays the following form: The text boxes should be displayed with default values. **No** script is allowed outside the `<?php` and `?>`. The select menu has the following items "+, -, /, \*"



X 0

Y 0

+ ▼

## Question 2: (HTML and CSS)

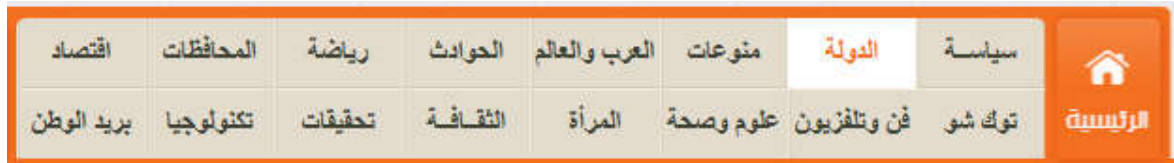
Next you will find snapshot from web page. You have to design similar one using HTML, **CSS**. Using CSS has high priority in the webpage design. Do not try to design the page using HTML only. Do not partition the page using tables. The images are included with the sheet, anything in the webpage not an image is a text. Do not collect many images in a single image. The actions when mouse passes over an element are illustrated in figures after the webpage snapshot. Compare the webpage with the figures to discover the action you should apply. Choose video and insert it in the illustrated location in the page.





## The actions

Some links styles change when mouse passes over them as follows: there is one picture for every group of links and one link in every group is chosen. Some links don't change their style



The background and text of the every element in the menu is changed as illustrated when the mouse passes over it:



"التحالف الشعبي" يجتمع الأسبوع المقبل لمناقشة خطة الانتخابات



عمرو موسى بنقي وساطته بين الدولة والكيانات السياسية



"طلاب ضد الإنقلاب" تدعو لموجة جديدة من العنف في الجامعات عدا



Every text in these figures is link. The text style is changed when mouse passes over it as illustrated.



محمد البرغوثي

من يكرة الجيش لا  
يستحق الرحمة



خالد منتصر

محمد ناجي... ساحر  
الرواية (2)



عماد الدين أديب

تحديات السيسي

سألوا أحد كبار المسؤولين  
العسكريين عن أسباب تحمسهم  
الشديد لذلك الضابط الشاب  
المميز عيدالفتاح السيسي،



Please answer the following questions:

**Question 1:**

Correct the errors in the following scripts "if any" then give the HTML output as well as the output on the browser "you have to understand every instruction"

a)	<pre>&lt;?php \$array1 = array ('a' =&gt; 20, 30, 35); \$array2 = array ('b' =&gt; 20, 35, 30); var_dump (\$array1+\$array2); ?&gt;</pre>
b)	<pre>&lt;?php \$arr1 = array("a" =&gt; 1, "b" =&gt; 2, "c" =&gt; 3); \$arr2 = array("x" =&gt; 4, "y" =&gt; 5, "z" =&gt; 6); foreach (\$arr1 as \$key =&gt; &amp;\$val) {} foreach (\$arr2 as \$key =&gt; \$val) {} var_dump(\$arr1); var_dump(\$arr2); ?&gt;</pre>
c)	<pre>&lt;?php \$foo = array(); \$foo['bar'] = NULL; var_dump(isset(\$foo['bar'])); var_dump(array_key_exists('bar', \$foo)); ?&gt;</pre>
d)	<pre>&lt;?php \$r = array('05' =&gt; "abc", '35' =&gt; "def", 10); foreach (\$r as \$key=&gt;\$value) {     var_dump(\$key);     echo "&lt;br&gt;";     if(array_key_exists(36,\$r))         unset (\$r[36]);     echo "\$key: \$value &lt;br&gt;"; } ?&gt;</pre>
e)	<pre>&lt;?php \$r = array('05' =&gt; "abc", '35' =&gt; "def", 10); echo "&lt;br&gt;////////////////////////////////////&lt;br&gt;"; foreach (\$r as \$key=&gt;&amp;\$value) {     if(array_key_exists(36,\$r))         unset (\$value);     echo "\$key: \$value &lt;br&gt;"; } ?&gt;</pre>
f)	<pre>&lt;?php \$r = array('05' =&gt; "abc", '35' =&gt; "def", 10); echo "&lt;br&gt;////////////////////////////////////&lt;br&gt;"; foreach (\$r as \$key=&gt;&amp;\$value) {     if(array_key_exists(36,\$r))         unset (\$r[36]); }</pre>

	<pre> echo "\$key: \$value &lt;br&gt;"; } ?&gt; </pre>
g)	<pre> &lt;?php function i(){ \$args = func_get_args(); \$array = \$args[0]; \$indexes = \$args; unset(\$indexes[0]); foreach( \$indexes as \$index ){     if((! is_array(\$array))    (! array_key_exists( \$index, \$array ))){         var_dump(\$args); }     \$array = \$array[\$index]; }     return \$array; } \$b=array(1,2); \$a=i(\$b,3,9); var_dump(\$a); ?&gt; </pre>
h)	<pre> &lt;?php function fun(&amp;\$array, &amp;\$any, \$var1=50, \$var2=0) {     if(\$var2 &gt; \$var1) { \$any = \$array; return; }     if(!is_array(\$any)) \$any = array();     foreach(\$array as \$k =&gt; &amp;\$v) {         if(is_array(\$v)) {fun(\$v,\$any[\$k],\$var1,++\$var2);         } else { \$any[\$k] = \$v; }     } } \$theArray = array("A" =&gt; array("a", "b", "c" =&gt; array("x")), "B" =&gt; "y"); fun(\$theArray , \$a, 1); print_r(\$a); ?&gt; </pre>
i)	<pre> &lt;?php \$people = array(     12345 =&gt; array(         'id' =&gt; 12345,         'first_name' =&gt; 'Joe',         'surname' =&gt; '2Bloggs',         'age' =&gt; 23     ),     12346 =&gt; array(         'id' =&gt; 12346,         'first_name' =&gt; 'Adam',         'surname' =&gt; '1Smith',         'age' =&gt; 18     ),     12347 =&gt; array(         'id' =&gt; 12347,         'first_name' =&gt; 'Amy',         'surname' =&gt; '10Jones',         'age' =&gt; 21     ) ); print_r(sortmulti(\$people, 'age', '1')); echo "&lt;br&gt;"; print_r(sortmulti(\$people, 'surname', '2',TRUE)); function sortmulti(\$array,\$index,\$order,\$natsort=FALSE, \$case_sensitive=FALSE) {     if(is_array(\$array) &amp;&amp; count(\$array)&gt;0) {         foreach(array_keys(\$array) as \$key)             \$temp[\$key]=\$array[\$key][\$index];         if(!\$natsort) {             if (\$order=='2') </pre>

	<pre>                 asort(\$temp);             else                 arsort(\$temp);         }         else         {             if (\$case_sensitive===true)                 natsort(\$temp);             else                 natcasesort(\$temp);             if(\$order!='2')                 \$temp=array_reverse(\$temp,TRUE);         }         foreach(array_keys(\$temp) as \$key)             if(is_numeric(\$key))// Returns TRUE if \$key is a number or a numeric //string, FALSE otherwise                 \$sorted[]=\$array[\$key];             else                 \$sorted[\$key]=\$array[\$key];         return \$sorted;     }     return \$sorted; } ?&gt; </pre>
j]	<pre> &lt;?php \$fruits = array("d" =&gt;"lemon","a" =&gt;"orange","b" =&gt;"banana","c" =&gt;"apple" ); function test_alter(&amp;\$item1, \$key, \$prefix) {     \$item1 = "\$prefix: \$item1"; }  function test_print(\$item2, \$key) {     echo "\$key. \$item2&lt;br&gt;\n"; }  echo "Before ...:\n"; array_walk(\$fruits, 'test_print'); array_walk(\$fruits, 'test_alter', 'fruit'); echo "... and after:\n"; array_walk(\$fruits, 'test_print'); ?&gt; </pre>
k]	<pre> &lt;?php error_reporting(E_ALL); var_dump(any_any(array('a'), array('simple-minded'), array('solution'))); echo"\n &lt;br&gt;"; print_r(any_any(array('foo','bar'), array('baz', 'qux'))); echo"\n &lt;br&gt;"; var_dump(any_any(array('a'), array('red', 'blue'), array('car'))); echo"\n &lt;br&gt;"; var_dump(any_any('a','b','1'));  function any_any(array \$first_element, array \$second_element) {     \$lists = func_get_args(); </pre>

```

$total_lists = func_num_args();
for($i=0; $i<$total_lists; $i++)
{
    $list =& $lists[$i];
    if (is_array($list) === FALSE)
        echo "Parameter $i is not an array.";
    if (count($list) === 0)
        echo "Parameter $i has no element.";
    unset($list);
}
$any = array();
foreach($lists[0] as &$value)
{
    array_push($any, (array)($value));
    unset($value);
}
unset($lists[0]);
for($i=1; $i<$total_lists; $i++)
{
    $list =& $lists[$i];
    $new_any = array();
    foreach($list as &$value)
    {
        foreach($any as $_)
        {
            array_push($_, $value);
            array_push($new_any, $_);
        }
    }
    $any =& $new_any;
    unset($new_any, $list, $lists[$i]);
}
return $any;
}
?>

```

```

1) <?php
$text="You don't need to be an \"HTML master\", you should be
comfortable with tags such as <html>,....";
$url="6";
$a=array();
$eurl = myfun($text, array("'"=>0,'\"'=>0,'>'=>0, "\\n"=>0), $url,&$a);
var_dump($a); var_dump($eurl);
function myfun(&$text, $any, $offset=0,$a){
    for($ch=$offset;$ch<strlen($text);$ch++){
        if(isset($any[$text[$ch]])){ $a[]=$ch; } } }
?>

```

## Question 2:

- a) Write **an efficient** php function that generates a complete web page that contains:
1. A list with 50 items. The items should have the values from "item1" to "item50". You have to use CSS in the generated HTML page
  2. Select menu with 20 items. The items are saved in numeric array. The value attribute has the array key and the menu options should have the array values.

**Notes:** No script is allowed **outside** the <?php and ?>

- b) Write **PURE** PHP script that generates the following HTML form. Consider that the students IDs, Names, Midterms and final grades are saved inside single multidimensional array and use loop to generate and fill the table data cells using the array data up to the array length. The text boxes that contain Students grads should be displayed with default values that are fetched from the array. The students Names and IDs are also fetched from the array and should be displayed as simple text in the form. For simplicity consider that the courses names are saved into separate array and use loop to display courses names as simple text in the indicated fields according to the array length. No script is allowed outside the `<?php` and `?>`

**Grading System**

Students' data  
should be  
displayed here

Student ID	Student Name				
		Midterm	Final	Midterm	Final
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Number of students per page 5 ▼

Next Page

Courses' names  
should be displayed here



Please answer the following questions:

**Question 1:**

Correct the errors in the following scripts "if any" then give the HTML output as well as the output on the browser "you have to understand every instruction"

a)	<pre>&lt;?php function fun1(\$string) {     \$a=\$string;     while (\$a = strstr(\$a, '&amp;')) {         echo "'".\$a."'\\n";         \$b=strstr(\$a, ';');         if (!\$b) { echo "exam...\\n";         \$nb=strlen(\$a);         return substr(\$string, 0, strlen(\$string)-\$nb); }         \$a=substr(\$a,1,strlen(\$a)-1); }     return \$string; } \$string="this is ;&lt;b&gt; &amp;no_bold &lt;/b&gt;"; print (fun1(\$string) . "&lt;br&gt;"); print (\$string. "&lt;br&gt;"); echo strspn (\$string, "tis"); ?&gt;</pre>
b)	<pre>&lt;?php \$html = "&lt;b&gt;bold text&lt;/b&gt;&lt;a href=howdy.html&gt;click me&lt;/a&gt;"; preg_match_all("#(&lt;(.*?)&gt;)(.*?)(&lt;/(.*?)&gt;)#", \$html, \$matches); foreach (\$matches as \$val) {     echo "First: " . \$val[0]."&lt;br&gt;";     echo "Second: " . \$val[1]."&lt;br&gt;&lt;br&gt;";} ?&gt;</pre>
c)	<pre>&lt;?php function stringExpand(\$subject, array \$vars) {     foreach (\$vars as \$name =&gt; \$value)         { \$subject=preg_replace(sprintf('/\\${%s}\?/?', \$name), \$value, \$subject); }     return \$subject; } \$a=array(1,2,3); \$subject='\${1},\${2},\${3}'; echo stringExpand(\$subject,\$a) ; ?&gt;</pre>
d)	<pre>&lt;?php function myfun(\$input, \$b, \$a) {     \$substr=substr(\$input,strlen(\$b)+strpos(\$input,\$b),(strlen(\$input)-strpos(\$input, \$a))*(-1));     return \$substr; } \$string = "1212129123945126789"; \$a = "12"; \$b = "9"; echo myfun(\$string, \$a, \$b); ?&gt;</pre>
e)	<pre>&lt;?php error_reporting(E_ALL); function mb_string(\$string1, \$string2, \$minChars = 5) {     \$string1=trim(\$string1);//trim returns a string with whitespace stripped from the //beginning and end of the string     \$string2 = trim(\$string2);     \$length1 = strlen(\$string1);     \$length2 = strlen(\$string2);     if (\$length1 &gt; \$length2) {         \$string3 = \$string1; \$string1 = \$string2;</pre>

```

$string2 = $string3; $length3 = $length1;
$length1 = $length2; $length2 = $length3;
unset($string3); unset($length3);
}
if ($length2 > 255) { return null; }
for ($s = $length1; $s >= $minChars; --$s) {
    for ($i = 0, $ix = $length1 - $s; $i <= $ix; ++$i) {
        $substring1 = substr($string1, $i, $s);
        $found = strpos($string2, $substring1);
        if ($found !== false) {
            return trim(substr($string2, $found, strlen($substring1)));
        }
    }
}
return null;
}
echo mb_string(" hello friend ", " hey friend how are you? ");
?>

```

f) <?php

```

error_reporting(E_ALL);
$input1="the job of this function";
$input2="if you do not know";
$input3="if you do not know the job of this function think again. the job of this
function is not problem as it seems ";
$input4=array("a"=>array(1=>"if you do not know the job of this function think
again",2=>"the job of this function is not problem as it seems"),"b"=>"who can know
the job of this function");
$input5=array("the job of this function","think");
$input6=array("if you do not know","study");
$count=10;
var_dump(myfun($input1,$input2,$input3,&$count,"1"));
echo"<br>"; var_dump($count);
echo"<br>"; var_dump(myfun($input1,$input2,$input3,&$count,"2"));
echo"<br>"; var_dump($count);
echo"<br>"; var_dump(myfun($input5,$input6,$input4,&$count,"1"));
echo"\n"; var_dump($count);
echo"<br>"; var_dump(myfun($input5,$input6,$input4,&$count,"2"));
echo"\n"; var_dump($count);
function myfun($a1, $a2, $a3, &$count, $a4 = -1){
    $count = 0;
    // strval Gets the string value of a variable
    // intval Gets the integer value of a variable, Throws E_NOTICE and returns 1, when object is
    //passed
    if(!($a4===strval(intval(strval($a4))))){
        print 'Invalid $a4 '.$a4.' provided. Expecting an '. 'integer'. '<br>';
        return $a3;
    }
    if($a4<-1 OR $a4===0){
        print 'Invalid $a4'.$a4.'provided.Expecting-1 or'.'+ve integer'. '<br>';
        return $a3;
    }
    if($a4===-1){ return str_replace($a1, $a2, $a3, $count);}
    if(is_array($a3)){
        foreach($a3 as $key => $this_subject){
            if(!is_array($this_subject)){
                $this_function=__FUNCTION__;///__FUNCTION__gives current function name
                $a3[$key] = $this_function($a1, $a2, $this_subject, $this_count, $a4);
                $count += $this_count;
                if($a4!==-1){ $a4 -= $this_count; }
                if($a4===0){ return $a3;}
            }
        }
    }
    return $a3;
} elseif(is_array($a1)){

```

	<pre> \$a1 = array_values(\$a1); //array_values returns array with the same values //but with numeric indices if(is_array(\$a2)){     \$a2 = array_values(\$a2); } foreach(\$a1 as \$key =&gt; \$this_search){     \$this_search = strval(\$this_search);     if(is_array(\$a2)){         if(array_key_exists(\$key, \$a2)){ \$this_replace = strval(\$a2[\$key]);         } else { \$this_replace = ''; }     } else { \$this_replace = strval(\$a2); }     \$this_function = __FUNCTION__;     \$a3 = \$this_function(\$this_search,\$this_replace, \$a3, \$this_count, \$a4);     \$count += \$this_count;     if(\$a4!==-1){ \$a4 -= \$this_count; }     if(\$a4===0){ return \$a3; } } return \$a3; } else {     \$a1 = strval(\$a1); \$a2 = strval(\$a2); \$pos = strpos(\$a3, \$a1);     if(\$pos===false){ return \$a3; }     \$a1_len = strlen(\$a1);     for(\$i=0; ((\$i&lt;\$a4)  (\$a4===-1)); \$i++){         \$a3 = substr_replace(\$a3, \$a2, \$pos, \$a1_len);         \$count++; \$pos = strpos(\$a3, \$a1);         if(\$pos===false){ break; }     }     return \$a3; } } ?&gt; </pre>
g)	<pre> &lt;?php class Test{ const MIN = 0, MAX = 100; protected \$person, \$score; public function __construct(\$p, \$s){     \$this-&gt;person = \$p; \$this-&gt;score = clamp(\$s); } protected static function clamp(\$val){     if(\$val &lt; Test::MIN) \$val = Test::MIN;     if(\$val &gt; Test::MAX) \$val = Test::MAX;     return \$val; } public function __toString(){     return "Test [person=\$this-&gt;person, score=\$this-&gt;score%]";}} \$obj = new Test("John Doe", 83); echo (object)\$obj; ?&gt; </pre>
h)	<pre> &lt;?php class Template {     const OPEN_BRACKET = "{"; const CLOSE_BRACKET = "}";     public static function inject(array \$source, \$template)     {         \$ob_size = strlen(Template::OPEN_BRACKET);         \$cb_size = strlen(Template::CLOSE_BRACKET);         \$pos = 0; \$end = strlen(\$template);         while(\$pos &lt;= \$end)         {             if(\$pos_1 = strpos(\$template, Template::OPEN_BRACKET, \$pos))             {                 if(\$pos_1) {                     \$pos_2 = strpos(\$template, Template::CLOSE_BRACKET, \$pos_1);                     if(\$pos_2) {                         \$return_length = (\$pos_2-\$cb_size) - \$pos_1;                         \$var = substr(\$template, \$pos_1+\$ob_size, \$return_length);                         \$template=                             str_replace(Template::OPEN_BRACKET.\$var.Template::CLOSE_BRACKET, </pre>

	<pre> \$source[\$var], \$template); \$pos = \$pos_2 + \$cb_size; } else{     throw new exception("Incorrectly formed template");     break; } } } else { break;} } return \$template; } } \$array = array("NAME" =&gt; "NAME", "DOB"=&gt; "DOB", "ACL" =&gt;"ACL?"); \$template = "?{NAME}. {DOB} . {ACL} "; echo Template::inject(\$array, \$template); ?&gt; </pre>
i]	<pre> &lt;?php class ClassName {     private \$sweet = array(); private \$fruits = array();     public function __construct(){         \$this-&gt;sweet = array('a' =&gt; 'apple', 'b' =&gt; 'banana');         \$this-&gt;fruits = array('sweet' =&gt; \$this-&gt;sweet, 'sour' =&gt; 'lemon'); }     public function getFruits(){ return \$this-&gt;fruits; }     public function test_print(\$item, \$key){ echo "\$key-\$item\n"; }     public function arrWalker(\$arr){         array_walk_recursive(\$arr, array(\$this, 'test_print')); } } ?&gt; //Hint: A method of an instantiated object is passed to array_walk_recursive as an //array containing the object at index 0 and the method name at index 1. </pre>
j]	<pre> &lt;?php class MyClass{     public \$D1; public \$D2; public \$D3;     public function __construct(\$d = NULL) {\$this-&gt;D1 = \$d;}     public function what() {         \$L = array(); \$r = array();         if (\$this-&gt;D2) { \$L = \$this-&gt;D2-&gt;what(); }         if (\$this-&gt;D3) { \$r = \$this-&gt;D3-&gt;what(); }         return array_merge(array(\$this-&gt;D1), \$L, \$r);}     //array_merge - Merge one or more arrays and Returns the resulting     //array so that the values of one are appended to the end of the previous one. } \$Unknown = new MyClass(3); \$Unknown-&gt;D2 = new MyClass('h'); \$Unknown-&gt;D3 = new MyClass(9); \$Unknown-&gt;D3-&gt;D2 = new MyClass(6); \$Unknown-&gt;D3-&gt;D3 = new MyClass('a'); echo '&lt;p&gt;', implode(', ', \$Unknown-&gt;what()), '&lt;/p&gt;'; ?&gt; </pre>

**Question 1:**

**Understand Examples (6-29, 6-30, 7-30) from the book entitled "learning php 5 ". (You will be asked about them in the section)**

**Question 2:**

Correct the errors in the following scripts "if any" then give the HTML output as well as the output on the browser with and without using " error\_reporting(E\_ALL); " you have to understand every instruction"

```
i. <?php
function __autoload($class_name) { require_once $class_name . '.php'; }
$anObject = new ClassName();
array_walk_recursive($anObject->getFruits(), array($anObject, 'test_print'));
echo ";;; \n \n";
$anObject->arrwalker($anObject->getFruits());
?>
```

Modify the following part if needed and give name to the file that includes it to operate correctly with the previous code

```
<?php
class ClassName {
    private $sweet = array(); private $fruits = array();
    public function __construct(){
        $this->sweet = array('a' => 'apple', 'b' => 'banana');
        $this->fruits = array('sweet' => $this->sweet, 'sour' => 'lemon'); }
    public function getFruits(){ return $this->fruits; }
    public function test_print($item, $key){ echo "$key-$item \n"; }
    public function arrwalker($arr){
        array_walk_recursive($arr, array($this, 'test_print')); } } ?>
```

```
ii. <html> <head> <title>
<?php
    $doc_title = 'Category Administration';
    echo "$doc_title \n";
?>
</title> </head>
<body>
<h1>
<?php
    echo "$doc_title \n";
?>
</h1>
<?php
    $Cat_ID = $_POST['Cat_ID'];
    $Cat_Title = $_POST['Cat_Title'];
    $Cat_Desc = $_POST['Cat_Desc'];
    $add_record = $_POST['add_record'];
    $len_cat_id = strlen($_POST['Cat_ID']);
    $len_cat_tl = count($_POST['Cat_Title']);
    $len_cat_de = strlen($_POST['Cat_Desc']);
    if ($add_record == 1) {
        if (($len_cat_id > 0) and ($len_cat_tl >= 2) and ($len_cat_de > 0)){
            $rows[]=array(category_id=> $Cat_ID, title=>$Cat_Title,
description=>$Cat_Desc);
        } else {
            if($len_cat_tl < 2)
                echo "<p>Please choose at least two titles ";
            if($len_cat_id === 0)
                echo "<p>Please fill in the category field ";
            if($len_cat_de === 0)
                echo "<p>Please fill in the description field ";
        }
    }
    echo '<form action="'. $_SERVER["PHP_SELF"].'" method="POST">?>
```

```

<table>
<tr><th bgcolor="#eeeeee">Cat_ID</th>
    <th bgcolor="#eeeeee">Title</th>
    <th bgcolor="#eeeeee">Description</th>
</tr>
<?php
    foreach ($rows as $row){
        echo "<tr>";
        echo "<td>$row[category_id]";
        $title=implode(",",$row[title]);
        echo "<td>$title";
        echo "<td>$row[description]";
        echo "</tr>";
    }
?>
<tr><td><input type="text" name="Cat_ID"    size="15" maxlength="10">
    <td><select name="Cat_Title[ ]" multiple>
        <option>Books
        <option>Games
        <option>Electronics
    <td><input type="text" name="Cat_Desc"    size="45" maxlength="255">
</table>
<input type="hidden" name="add_record" value="1">
<input type="submit" name="submit" value="Add Category">

</body> </html>

```

**Question3:** What does \$\_POST look like when the following form is submitted with the third option in the Braised Noodles menu selected, the first and last options in the Sweet menu selected, and 4 is entered into the text box? Write a process\_form( ) function that prints out all submitted form parameters and their values.

```

<form method="POST" action="order.php">
Braised Noodles with: <select name="noodle">
<option>crab meat
<option>mushroom
<option>barbecued pork
<option>shredded ginger and green onion
</select>
<br>
Sweet: <select name="sweet[ ]" multiple>
<option value="puff"> Sesame Seed Puff
<option value="square"> Coconut Milk Gelatin Square
<option value="cake"> Brown Sugar Cake
<option value="ricemeat"> Sweet Rice and Meat
</select>
<br>
Sweet Quantity: <input type="text" name="sweet_q"> <br>
<input type="submit" name="submit" value="Order">
</form>

```

**Question4:** Write a program that does basic arithmetic. Display a form with text box inputs for two operands and a <select> menu to choose an operation: addition, subtraction, multiplication, or division. Validate the inputs to make sure that they are numeric and appropriate for the chosen operation. Also validate the <select> menu choice (See section 6.4.5). The processing function should display the operands, operator, and the result. For example, if the operands are 4 and 2 and the operation is multiplication, the processing function should display something like "4 \* 2 = 8".

**Question5.** Write a program that displays, validates, and processes a form for entering information about a package to be shipped. The form should contain inputs for the from and to addresses for the package, dimensions of the package, and weight of the package. The validation should check (at least) that the package weight no more than 150 pounds and that no dimension of the package is more than 36 inches. You can assume that the addresses entered on the form are both U.S. addresses, but you should check that a valid state and a ZIP Code with valid syntax are entered. The processing function in your program should print out the information about the package in an organized, formatted report.



**Question6:** Consider that the form in the following figure is used to book plane ticket. Develop professional php script to achieve the booking function. The following questions could help you but they do not give you the complete procedure

- Design the form using HTML and CSS. You have to use PHP functions to generate the HTML. Concerning the departure and return dates no need to use the calendar you can use text boxes.
- Validate the form using PHP. From and To text boxes should contain valid city names; departure and arrival dates should be valid dates having the "day month year"; the arrival date should be smaller than departure date; no empty fields are permitted.

**Question 7:** Try to understand the plane ticket reservation system then answer the following using PHP

- Create your database and insert the needed tickets information using suitable form that is designed for the system administrator. The design of this form is left for you and the efficiency is important. You have to detect the needed fields for the form by understanding the job of the system. Also, you have to determine the needed tables and ticket information that you need to insert in the database. You should take into consideration that there are tickets for round trips, one way trips, and direct flights. You have to manage the database to give the user the chance to choose the ticket class (First, Economy, and business), number of travellers and their category (adults, children,..), you should assign different price for every class and category based on flight type (round, oneway, direct).
- You have to validate the information that is submitted by the administrator. Choose the validation conditions to be strong and suitable for the fields. In case of entering wrong data, redisplay the form with the default values and the wrong data that is entered in the form field is written in red color. An error statement should be written beside the field that carries wrong data. In case of valid data insert it in the database after filtering it then write the statement "data is inserted successively"
- Consider the form that you designed in the previous question (6) , consider that it is used by the user to book plane ticket. When the user clicks the book button you have to validate the information that is submitted by the user. In case of entering wrong data, redisplay the form with the default values and the wrong data that is entered in the form field is written in red color. An error statement should be written beside the field that carries wrong data. Display summary of the entered information to the user in case of entering valid data.
- You have to secure the accepted items from the user or the administrator

**Question 8:** Write scripts for the following PHP files which should be linked together in a single website.

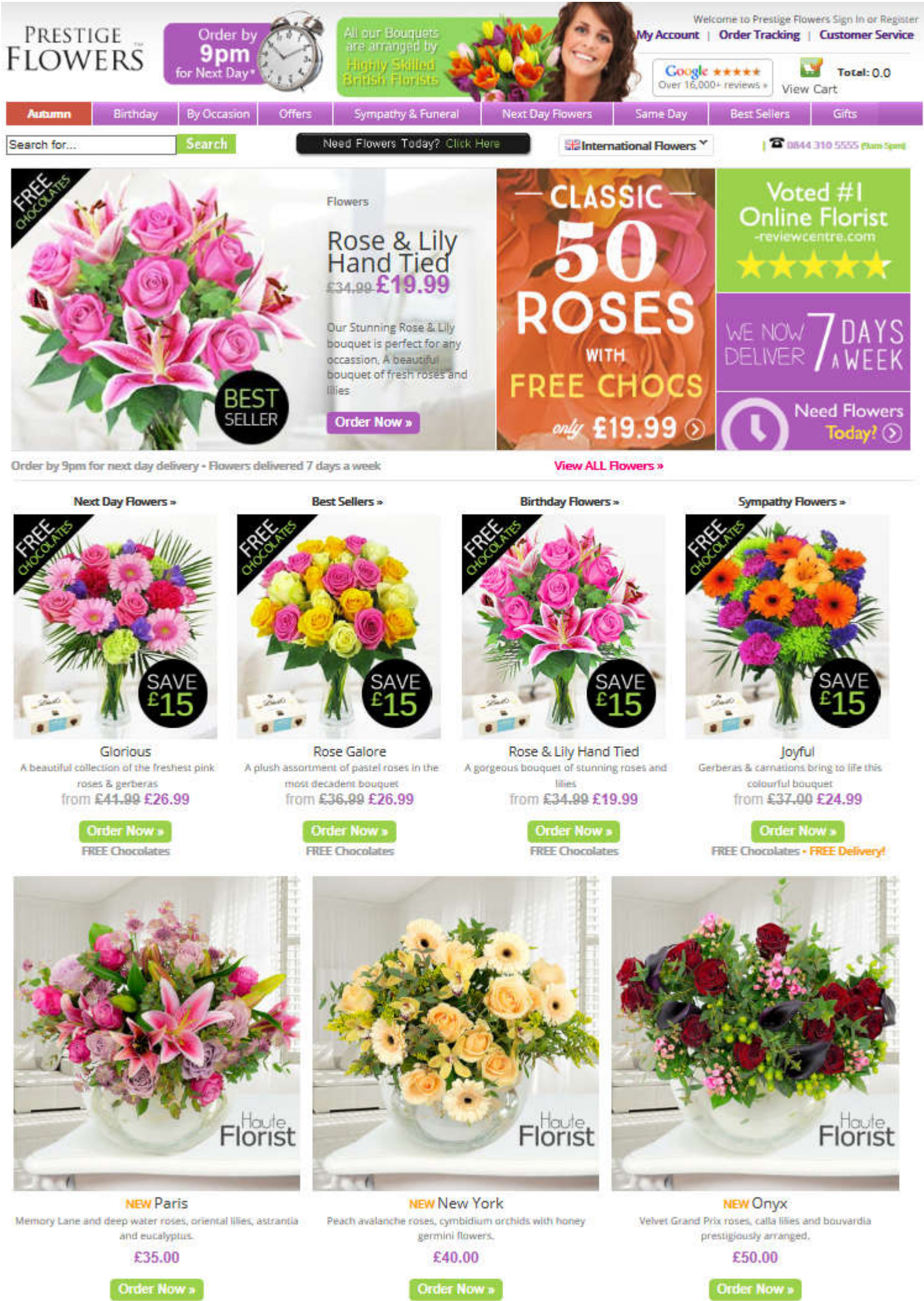
- configdb.php – this file creates suitable database and the needed tables.

2. index.php – this file uses PHP to create well aligned registration form includes user name, password, re-enter password, and email fields in addition to submit button.
3. register.php - In this file, you should
  - a. accept the registration form data from index.php file
  - b. do form validation as follows:
    - i. the password should be strong longer than 8 symbols has capital and small letters, and numbers
    - ii. the email should be valid
    - iii. the password and the reentered one should be the same
  - c. secure the accepted data
  - d. inform the user if there is wrong data by redisplaying the form with the previous data and error message
  - e. If the data passes the validation, insert user data to database



**Question 1:**  
**Understand Examples (7-56, 7-58) from the book entitled "learning php 5 ".**

- Question (2):**
- Consider the following snapshots of Website that sells flowers “bouquets”. Design similar ones using HTML, CSS and activate the Website function in a **secure** way using PHP. The images are included with the exam, anything in the webpage not an image is a text. Do not collect many images in a single image. You have to take the following into consideration while you design and activate the function of the site:
- a) Create suitable database which is used to carry the necessary information of categories (Birthday flowers, Next day flowers, .....), flowers “bouquets”, customers, orders,.....
  - b) The items that are displayed in the main page that is illustrated in the following snapshot in figure (1) are fetched from the database. The page in the figure displays some flowers “bouquets” from every category. The bouquet details are fetched from the database and are displayed below the bouquet as shown in the figure.
  - c) The best seller bouquet is tracked and determined using the database. It is displayed as shown in the page snapshot in figure (1); see “Rose and Lily Hand Tied” bouquet on the top of the page.
  - d) The background and text color of the items in the menu and **Order Now »** button that appear in the page snapshot in figure (1) are changed when the mouse passes over them
  - e) The flowers “bouquets” and the text below them are links have the illustrated style in the page snapshot in figure(1) “no border, not underlined,...” and do not change their style when the mouse passes over them



**Figure (1): The Main Page Snapshot**



- f) Activate secure search capability in your database. The user can enter the bouquet name partially or completely in the following text box   that appears in the page snapshot in figure (1). The results of flowers “bouquets” should appear in a page similar to the previous one in figure (1).
- g) For any bouquet, when the user presses "Order now", the bouquet details are displayed as shown in the following snapshot that are illustrated in figure (2) that displays the “New Onyx” bouquet details and delivery details. You should design similar one. The details should be fetched from the database. The bouquet information should be added to **CART**. You should use session to implement the cart. The number of items and total price including the shipping price should be added to the cart and are displayed in the top of the page as shown in the snapshot. The cart information should be deleted after 1 hour. The cart information should be available to all pages that are located on the same server
- h) When the user presses "secure checkout" in the page that is illustrated by the following snapshot in figure (2), a validation function should check that the user enters delivery details and delivery address. The fields that have \* beside them should not be left empty. The postal code should be a series of letters and/or digits including spaces, the phone number should be in the format ddd-dd-dddddd. You should use regular expressions to validate the postal code and the phone number. If the user enters wrong information, the same page should be displayed again with the previous entered values. The values in the wrong fields should be displayed in red inside the field. An error message indicates the error should be displayed beside the wrong field
- i) After completing the delivery information, you should securely add the complete order information to the suitable tables in the database.
- j) You shouldn’t permit the caching of your pages

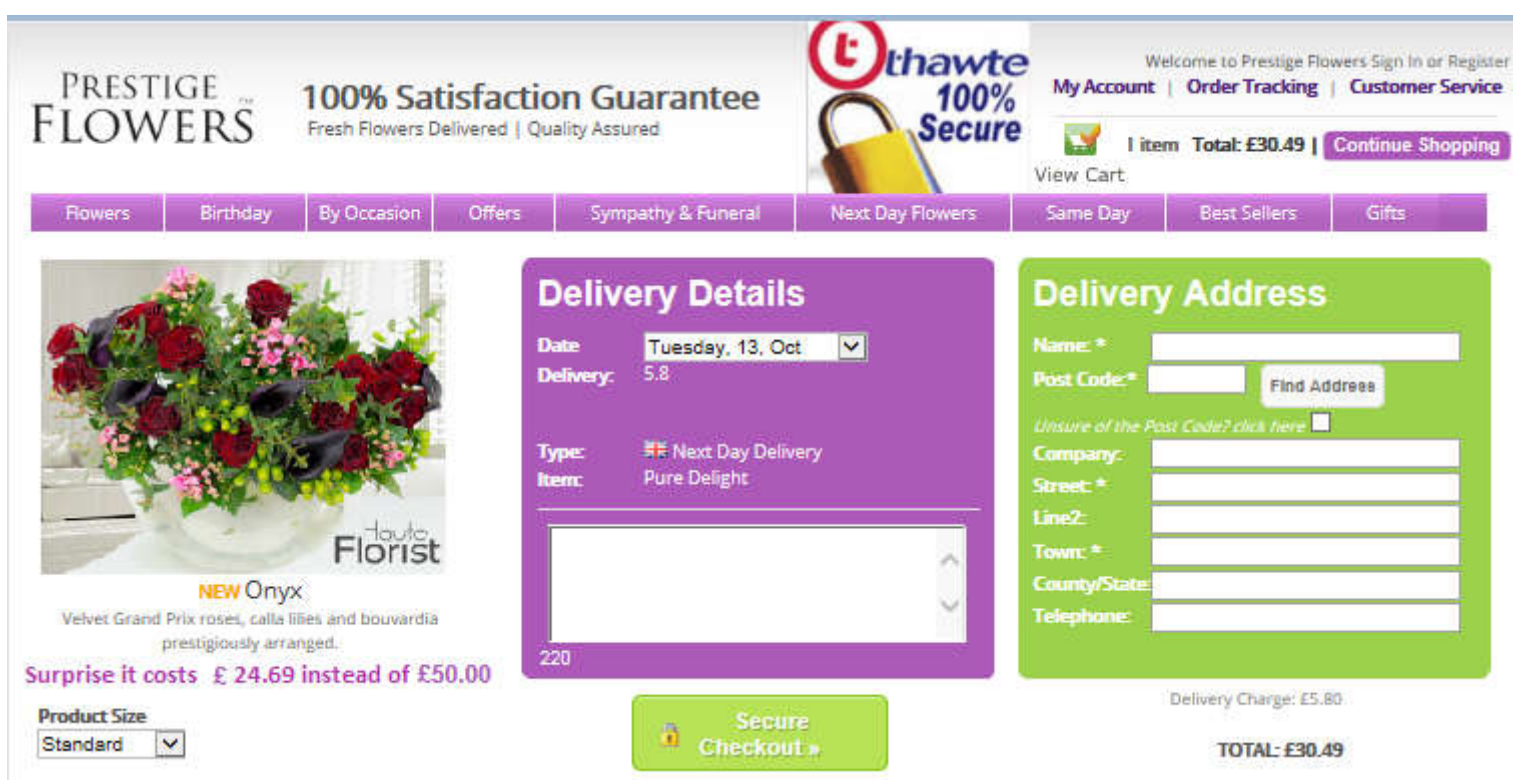


Figure (2): New Onyx bouquet details and delivery details

**Do not submit Q1 and Q2 solutions to the TA you will asked about them in the section.  
Submit Q3 and Q4 by email to the TA.**

**Q1: correct the error (if any) then give the HTML output of the following script as well as the output on the Internet Explorer at the start of its execution and after submitting each of the following string pairs in the corresponding form text boxes?**

	a:	b:	c:
Title	Computer Vision	Industry's Robots	Kids Games
Pages	600	300	Thirty

```
<?php
require 'DB.php';
function Connect_Create($user,$pass,$db_name){
    $connection = DB::connect("mysql://$user:$pass@localhost/$db_name");
    if (DB::isError($connection)){
        die ("Could not connect to the database: <br>". DB::errorMessage($connection));}
    $query= $connection->query("CREATE TABLE books (
    Title VARCHAR(255),
    Pages INT)");
    return $connection;
}
function insertinto_db($title, $pages, $connection){
    $result = $connection->query('INSERT INTO books VALUES
    (?,?)',array($title,$pages));
    if (DB::isError($result)){
        die("Could not query the database: <br>". $query." "
        .DB::errorMessage($result));}
    echo "Inserted OK.<br>";
    $connection->setFetchMode(DB_FETCHMODE_ASSOC);
    $query = "SELECT * FROM books";
    $result = $connection->query($query);
    if (DB::isError($result)){
        die("Could not query the database: <br>". $query." "
        .DB::errorMessage($result));}
    echo '<table border="1">';
    echo "<tr><th>Title</th><th>Pages</th></tr>";
    while ($result_row = $result->fetchRow()) {
        echo "<tr><td>";
        echo $result_row["Title"] . '</td><td>';
        echo $result_row["Pages"] . '</td></tr>';}
    echo "</table>";
    $connection->disconnect( );
}
?>
<html> <head>
<title>Inserting From a Form</title>
</head> <body>
<?php
echo '
<h1>Enter a new title:</h1>
<form action=".'.$_SERVER["PHP_SELF"].'" method="GET">
<label> Title: <input type="text" name="title" /> </label>
<label> Pages: <input type="text" name="pages" /> </label>
<input type="submit" value="Go!" />
</form>';
$password="Asd"; $username="root"; $dbname="exam";
$title = $_GET["title"];
$pages = $_GET["pages"];
$connection=Connect_Create($username,$password,$dbname);
if (($title != NULL ) && ($pages != NULL)){
    insertinto_db($title,$pages,$connection);}
?> </body> </html>
```

**Q2: You are given two PHP files db\_login.php and admin.php. What is the output at the start of admin.php execution on the Internet Explorer and after submitting each of the following in the corresponding form text boxes?**

	i	ii:	iii:	iv:
Cat_ID		1	ID	sports
Cat_Title		600	<b>Automotive</b>	Community sports
Cat_Desc		This is an exam	Accessories for cars	F');DELETE FROM categories;('.

**db\_login.php has the following script:**

```
<?php
require_once('DB.php');
$username = 'user'; $password = 'pass'; $hostspect = 'localhost';
$database = 'phpbook'; $phptype = 'mysql';
// $phptype = 'oci8';
if ($phptype != 'oci8'){
$dsn = "$phptype://$username:$password@$hostspect/$database"; }
else { $net8name = 'www';
$dsn = "$phptype://$username:$password@$net8name"; }
$db = DB::connect($dsn);
if (DB::isError($db)) { die ($db->getMessage( )); }
$query= $db->query("CREATE TABLE categories(
category_id varchar(10) NOT NULL,
title varchar(128) NOT NULL,
description varchar(255) NOT NULL )");?>
```

**admin.php file has the following script:**

```
<html><head>
<?php
require_once('db_login.php'); ?> <title>
<?php
$doc_title = 'Category Administration';
echo "$doc_title\n"; ?>
</title> </head> <body> <h1>
<?php
echo "$doc_title\n"; ?> </h1>
<?php
$Cat_ID = $_POST['Cat_ID']; $Cat_Title = $_POST['Cat_Title'];
$Cat_Desc = $_POST['Cat_Desc']; $add_record = $_POST['add_record'];
$len_cat_id = strlen($_POST['Cat_ID']);
$len_cat_tl = strlen($_POST['Cat_Title']);
$len_cat_de = strlen($_POST['Cat_Desc']);
if ($add_record == 1) {
if (($len_cat_id > 0) and ($len_cat_tl > 0) and ($len_cat_de > 0)){
$sql = "insert into categories (category_id, title, description)";
$sql .= " values ('$Cat_ID', '$Cat_Title', '$Cat_Desc')";
$result = $db->query($sql);}
else {
echo "<p>Please make sure all fields are filled in ";
echo "and try again.</p>\n"; } }
$sql = "select * from categories";
$result = $db->query($sql);
echo '
<form action="'. $_SERVER["PHP_SELF"] .'" method="POST">'?>
<table>
<tr><th bgcolor="#eeeeee">Cat ID</th> <th bgcolor="#eeeeee">Title</th>
<th bgcolor="#eeeeee">Description</th> </tr>
<?php
while ($row = $result->fetchRow( )){
echo "<tr><td>$row[0]</td><td>$row[1]</td><td>$row[2]</td></tr>\n"; } ?>
<tr><td><input type="text" name="Cat_ID" size="15" maxlength="10" /></td>
<td><input type="text" name="Cat_Title" size="40" maxlength="128" /></td>
<td><input type="text" name="Cat_Desc" size="45" maxlength="255" /></td>
</tr> </table>
<input type="hidden" name="add_record" value="1" />
```



```
<input type="submit" name="submit" value="Add Category" /> </body> </html>
```

**Q3: Modify the solution of Q2 in the previous sheet "plane ticket reservation system" by answering the following**

- i. When the user clicks the book button you have to check the availability of ticket using your database based on the submitted information. You have to display the result in simple webpage.
  - a. If the user selects search by schedule, you should compare the dates only and returns the search results.
  - b. If the user selects search by price and checks Flexible dates check box, you have to return the tickets ordered by price within the submitted dates in the rang +/- 3 days.
  - c. In the two cases (a,b), when the user chooses one of the search results you have to display the ticket details and total ticket/tickets price if it is available and ask the user to confirm the reservation. In case of multiple travellers, you should display ticket price, the category, and the number of travellers in each category with the total cost.
  - d. If you received the confirmation from the user you have to update your database and inform the user.
- ii. If there is any notice during the reservation process you should inform the user using simple webpage and giving him the possibility to return to the main page.
- iii. You have to secure the accepted items
- iv. The user should have the ability to book more than one ticket (not in the same time) and your application should use session to remember the tickets information during the whole reservation process for one hour. After reserving every ticket you should give the user summary of the previous tickets that are booked till the current reservation. The session information should be available to any webpage in a folder called airline in the server.

The screenshot shows a web form for booking a flight. At the top, there are three tabs: 'Book My Trip' (active), 'TimeTable', and 'Flight Status'. Below the tabs, there are three radio buttons: 'Round Trip' (selected), 'One Way', and 'Multi Destination'. There are two text input fields for 'From' and 'To', with a 'Find a City' link next to the 'To' field. Below these are two date pickers: 'Departure date' (Mon, 24 December 2012) and 'Return date' (Sun, 30 December 2012). There are three radio buttons for 'Search by': 'Price', 'Schedule' (selected), and 'Flexible dates (for better fare options)' (checkbox). Below the search options, there are three dropdown menus for 'Travellers': 'Adult(s)' (1), 'Child(ren)' (0), and 'Infant(s)' (0). At the bottom, there is a 'Class' dropdown menu (Economy) and a checkbox for 'Direct Flights Only'. A 'Book' button is located at the bottom right.

**Question 4: modify the answer of Q3 in the previous sheet to add the following:**

1. register.php - In this file, you should add the following to the form validation
  - i. check for the email to be unique did not used in a previous registration
  - b. secure the accepted data
- c. You should save the user information to the session. This session information should be available to other files that are located on the same directory which contain the current file and should be deleted after 2 hours
- d. If the data passes the validation, save user data to database then redirect the user to page that welcoming this user
2. login.php - In this file, the user can login to the system. You should
  - a. secure the accepted data

- b. test whether the user email and password are correct. If the login information is incorrect you should redisplay the form with the default values and the wrong data that is entered in the form field is written in red color. An error statement should be written beside the field that carries wrong data. Else you should save the user information to its session. This session information should be available to other pages as illustrated in 1-c.
- 3. logout.php - In this file, you should delete the user session data