Ahmadu Bello University, Zaria

Department of Mathematics

**COSC 405: Web Application Engineering II**

**Test 1**

**Instruction**: Attempt ALL questions. **Time Allowed**: 50 Minutes

**Student’s Registration Number**:…………………………………………………………… Signature:………………………………………

1. Answer all the following questions.
   1. Show the HTML-code resulting from a call to the PHP-function program\_list, presented below, with the array $maths given as argument

|  |
| --- |
| $maths[0][0] = "3";  $maths[0][1] = "Mathematics";  $maths[1][0] = "1";  $maths[1][1] = "Computer Science";  $maths[0][2] = "2";  $maths[1][2] = "Statistics";    function program\_list ( $l ) {  $res = "<ul>\n";  for ( $i = 0 ; $i < count($l) ; $i ++ ) {  $id = $l[$i][0];  $text = $l[$i][1];  $res = $res . " <li> <a href=math.php?id=$id>$text</a>\n";  }  $res = $res . "</ul>";  return $res;  } |

**Answer:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | <ul> | |  | <li> <a href=[math.php?id=3](http://localhost/ctve1/math.php?id=3" \t "_blank)>Mathematics</a> | |  | <li> <a href=[math.php?id=1](http://localhost/ctve1/math.php?id=1" \t "_blank)>Computer Science</a> | |  | </ul> | |

* 1. Write a regular expression that is matched by either
     1. the digit 0
     2. or a digit 1-9 followed by zero or more appearances of digits 0-9.

For example, the digit sequences "012" and "00" should not match the pattern, whereas "12" and "0" should.

**Answer:**

|  |
| --- |
| **0+[1-9](0+[0-9])**  **Or**  **0|[1-9](0|[0-9])** |

1. Design a Web application with the user interface shown in the top-left segment of the table below. The application contains three files common.php, page1.php and page2.php described as follows. common.php contains the two lines “Mathematics Department” and “A.B.U. Zaria” which are a common header for the two pages.

A user moves from page1.php to page2.php and from page2.php to page1.php always by clicking “Next Page”. Each time a user moves from one page to another, the value of the “Counter” variable is increased by 1. For example, supposed page1.php is first displayed and then the user clicks “Next Page” six times, then the value of “Counter” should be 7.

Write the XHTML/PHP code for the three files in the spaces provided below.

|  |  |
| --- | --- |
|  | Code for common.php  <?php  session\_start();  if (!isset($\_SESSION['counter'])) {  $\_SESSION['counter'] = 1;  }  ?>  <!DOCTYPE html>  <html>  <head>  <title></title>  </head>  <body>  <h1 style="text-align: center;">Mathematics Department</h1>  <h2 style="text-align: center; font-family: cursive;">A.B.U. Zaria</h2>  <br>  <br>  <div style="text-align: center;">  <form method="get" action="">  <h3 style="text-align: center;">Counter: <span id="counter" name="counter"><?php echo $\_SESSION['counter']; ?></span></h3>  <button id="counter" name="next"><b>Next Page</b></button>  </form>  </div> |
| Code for Page1.php  <?php  include 'common.php';  if (isset($\_GET['next'])) {  // $\_SESSION['counter'];  ++$\_SESSION['counter'];  header('Location: page2.php');  }  ?>  </body>  </html> | Code for Page2.php  <?php  include 'common.php';  if (isset($\_GET['next'])) {  ++$\_SESSION['counter'];  header('Location: page1.php');  }  ?>  </body>  </html> |