

ICT02 MOCK TEST

Question 1

5 Points

Referring to the JavaScript code from line 201 to line 204 and from line 210 to line 215.

Explain how this JavaScript code creates a MongoDB database connection using environment variables.

Question 2

5 Points

Node question.

Explain what the **Node.js** is and discuss this technology in relation to coding, speed & performance, Web Servers, databases, frameworks, and application domains.

Question 3

5 Points

Referring to the PHP code from line 19 to line 21.

Explain in detail what this code does.

Question 4

5 Points

Referring to the PHP code from line 23 to line 31.

Explain in detail what this code does.

Question 5

5 Points

Referring to the PHP code from line 23 to line 31.

`maxno` appears on line 29 inside the square brackets. Should `orderNo` be used instead? Explain.

Question 6

5 Points

Node question.

Explain how JavaScript, traditionally a client-side scripting language, can be used for back-end Web development as part of the Node.js runtime environment.

Question 7

5 Points

Referring to the PHP code from line 19 to line 21.

Explain what `$_SESSION['c_userid']` is (line 20), where it gets its value from and how this value is used here.

Question 8

5 Points

Referring to the PHP code from line 101 to line 121.

Explain in detail what this code does and clearly describe the web page it generates.

Question 9

5 Points

Referring to the code on line 112.

A reference to **followingpage.php** (`href=followingpage.php`) appears on line 112 of the **initialpage.php**.

Write the PHP code for the **followingpage.php** file according to the specification below:

*When clicking on a link located on **initialpage.php**, the user should be able to access **followingpage.php** which should read from the database table **Album_Copy** and display a list of items related to the one item selected by the user on **initialpage.php**.*

Question 10

5 Points

Referring to the PHP code from line 41 and from line 51 to line 55.

Briefly explain the code on line 41.

Question 11

5 Points

Referring to the PHP code from line 19 to line 21.

Explain what `$currentdatetime` is (line 20), where it gets its value from and how this value is used here.

Text Editor

Question 12

5 Points

MongoDB and Mongoose question.

Define what the following things are and explain how they are used in the development of a Node/MongoDB CRUD Web app: **JSON/BSON document**, **MongoDB collection**, **mongoose schema**, and **mongoose model**.**MongoDB and Mongoose question**

Question 13

5 Points

Referring to the JavaScript code from line 201 to line 205 and from line 227 to line 238.

Explain how this JavaScript code implements the CREATE operation (of the CRUD operations) and how a new document is added into MongoDB.

Question 14

5 Points

MongoDB Atlas Question.

Explain what a **Database-as-a-Service (DBaaS)**, what it is used for and what the benefits of using it are.

Question 15

5 Points

Referring to the PHP code from line 41 and from line 51 to line 55.

Explain what `$latestorderNo`, `$indexprodid`, `$quantityinbasket` and `$subtotal` are (line 53 and 54), where they get their values from and how these values are used.

Question 16

5 Points

MongoDB Connection question.

Explain how **environment variables** and the **Dotenv** package are used to create a connection between Node.js and MongoDB.

Question 17

5 Points

Referring to the PHP code from line 41 and from line 51 to line 55.

Explain what `$SQL4` is (line 51) and what it is used for.

Question 18

5 Points

Node question.

Define what the following packages are and explain what their respective roles are in the development of a Node-driven back-end web app: **Nodemon, Express, Ejs, dotenv, and Mongoose.**

Question 19

5 Points

Referring to the JavaScript code from line 201 to line 202 and from line 217 to line 225.

Explain how the GET and POST HTTP requests are handled in this JavaScript code and what output this JavaScript code produces.

Question 20

5 Points

Referring to the PHP code from line 23 to line 31.

Explain in detail what `$exeSQL2` and `$results2` are (lines 27 and 28) and how they are used here.

somepage.php

```
01 <?php
02 session_start();
03 include("db.php");
04
05 $pagename="Confirmation";
06 echo "<link rel=stylesheet type=text/css href=mystylesheet.css>";
07 echo "<title>My ".$pagename."</title>";
08
09 include("headlayout.html");
10 echo date('l d F Y H:i:s');
11 include("detectlogin.php");
12 echo "<p></p>";
13 echo "<h2>".$pagename."</h2>";
14
15 $total=0;
16 $subtotal=0;
17 $currentdatetime=date('Y-m-d H:i:s');
18
19 $SQL1="insert into orders (userId,orderDateTime)
20 values ('".$_SESSION['c_userid']."', '".$_currentdatetime.'')";
21 $exeSQL1=mysql_query($SQL1);
22
23 if (mysql_errno($conn)==0)
24 {
25     $SQL2="select max(orderNo) as maxno from orders
26     where userId='".$_SESSION['c_userid'];
27     $exeSQL2=mysql_query($SQL2) or die(mysql_error());
28     $results2=mysql_fetch_array($exeSQL2);
29     $latestorderNo=$results2['maxno'];
30     echo "<p>Your order has been placed successfully";
31     echo "<b><p>ORDER NO: ".$latestorderNo."</b>";
32
33     echo "<table border=1 cellpadding=5>";
34     echo "<tr>";
35     echo "<th>Name</th>";
36     echo "<th>Price</th>";
37     echo "<th>Quantity</th>";
38     echo "<th>Subtotal</th>";
39     echo "</tr>";
40
41     foreach ($_SESSION['place'] as $indexprodid => $quantityinbasket)
42     {
43         if ($indexprodid>0)
44         {
45             $SQL3="select prodId, prodName, prodPrice
46             from product where prodId='".$_indexprodid;
47             $exeSQL3=mysql_query($SQL3) or die(mysql_error());
48             $results3=mysql_fetch_array($exeSQL3);
49             $subtotal=$quantityinbasket * $results3['prodPrice'];
50
51             $SQL4="insert into
52             order_line (orderNo, prodId, quantityOrdered, subTotal)
53             values ('".$latestorderNo.", '".$_indexprodid.",
54             ".$quantityinbasket.", '".$_subtotal.'')";
55             $exeSQL4=mysql_query($SQL4) or die(mysql_error());
```

somepage.php (continued)

```
56         echo "<tr>";
57         echo "<td>".$prodinbasketarray['prodName']."</td>";
58         echo "<td>GBP".$prodinbasketarray['prodPrice']."</td>";
59         echo "<td>".$quantityinbasket."</td>";
60         echo "<td>GBP".number_format($subtotal,2)."</td>";
61         echo "</tr>";
62         $total=$total+$subtotal;
63     }
64 }
65 echo "<tr>";
66 echo "<td colspan=3><b>ORDER TOTAL</b></td>";
67 echo "<td><b>GBP".number_format($total,2)."</b></td>";
68 echo "</tr>";
69 echo "</table>";
70
71 $SQL5="UPDATE orders SET orderTotal=".$total."
72 WHERE orderNo=".$latestorderNo;
73 $exeSQL5 = mysql_query($SQL5) or die (mysql_error());
74
75 echo "<br>To leave the system <a href=logout.php>Logout</a>";
76 }
77 else
78 {
79     echo "<p>Sorry there has been an error with your order";
80     echo "Go back to <a href=basket.php>My Basket</a>";
81 }
82
83 include("footlayout.html");
84 ?>
85
```