

**5COSC006W SERVER-SIDE WEB DEVELOPMENT**  
**TEST 02 – MOCK TEST PAPER**

**Part 1: CARRIES 25 MARKS.**

**Part 2: CARRIES 50 MARKS (Use appendix A)**

**Part 3: CARRIES 25 MARKS (Use appendix B)**

## **PART 1: [25 Marks]**

*This part presents general questions.*

### **Question 1**

- (a) Explain how server-side scripting technologies can be used to enable Web-database integration in order to develop an e-commerce application.

**[03 marks]**

- (b) Explain how Cascading Style Sheets can be used to efficiently define a consistent look and feel for a website. Provide a diagram to support your answer.

**[02 marks]**

### **Question 2**

- (a) Explain how client-side scripting technologies can be used to develop dynamic pages. You should produce diagrams and provide an example to illustrate your answer.

**[10 marks]**

- (b) Briefly discuss two examples of commercial scripting languages and one example of open-source scripting languages that can be used for Web-database integration. For each of them, briefly explain what they consist of.

**[10 marks]**

## **PART 2: [50 Marks]**

*This part refers to the code for **somepage.php** located in appendix A (which you are familiar with).*

A prototype for an online ordering system which supports the retailing activities of a firm specialised in household and office products has been developed using PHP and MySQL (as it has been done in class). The analysis, design and development processes have relied on an agile methodological approach. An extract of the source code is given in appendix A.

### **Question 3**

With regards to the code located from lines 19 to line 21.

- (a) Explain what this code does. Sketch a simple diagram to support your answer.

**[05 marks]**

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

**[05 marks]**

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

**[04 marks]**

### **Question 4**

With regards to the code located from lines 23 to line 31.

- (a) Explain what the code from line 25 to 31 does.

**[04 marks]**

- (b) Explain in great detail what `$exeSQL2` and `$results2` are (lines 27 and 28) and how they are used here. [06 marks]
- (c) `maxno` appears on line 29 inside the square brackets. Should `orderNo` be used instead? Explain. [03 marks]

## Question 5

With regards to the code located on line 41 and from lines 51 to 55.

- (a) Briefly explain the code on line 41. [04 marks]
- (b) Explain what `$SQL4` is (line 51) and what it is used for. Produce a diagram to support your answer. [05 marks]
- (c) Explain what `$latestorderNo`, `$indexprodid`, `$quantityinbasket` and `$subtotal` are (line 53 and 54), where they get their values from and how these values are used. [08 marks]

## Question 6

- (a) Explain what the advantages are of the selected approach which consists of using an agile development method with the aim to develop a prototype. [03 marks]
- (b) Give a very brief overview of how you would test the prototype to ensure that sufficient quality has been achieved. [03 marks]

## PART 3: [25 Marks]

This part refers to the code for **initialpage.php** located in appendix B and to the information below.

Two MySQL tables Album and Album\_copy were created and populated as shown here.

### Album

albumCode	albumTitle	artist	yearOfRelease
912	Graduation	Kanye West	2007
354	The Blueprint 3	Jay-Z	2009
770	Universal Mind Control	Common	2008

### Album\_Copy

copyCode	albumCode	purchaseDate	condition
1355	354	2011-02-28	Good
3454	912	2010-09-27	OK
9822	354	2012-01-22	Damaged
7453	770	2011-04-14	Excellent
8903	912	2011-10-03	Damaged

## Question 7

- (a) Briefly describe the web page that would be generated by the code on **initialpage.php** (appendix B). To support your description you should also sketch out the web page.

[05 marks]

- (b) A reference to **followingpage.php** (`href=followingpage.php`) appears on line 112 of the **initialpage.php** file shown in appendix B.

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`.*

[20 marks]

## APPENDIX A: 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());
```

## APPENDIX A: 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
```

## APPENDIX B: initialpage.php

```
101 <?php
102 include("db.php");
103 echo "<html>";
104 echo "<body>";
105 echo "<h1>INITIAL PAGE</h1>";
106
107 $SQL="select * from Album order by albumCode";
108 $exeSQL=mysql_query($SQL) or die(mysql_error());
109
110 while ($results=mysql_fetch_array($exeSQL))
111 {
112     echo "<br><a href=followingpage.php?u_id=".$results['albumCode']. ">";
113     echo $results['albumTitle']. "||";
114     echo "</a>";
115     echo $results['artist']. "||";
116     echo $results['yearOfRelease']. "||";
117 }
118
119 echo "</body>";
120 echo "</html>";
121 ?>
122
123
124
```