Ahmadu Bello University, Zaria

Department of Mathematics

**COSC 405: Web Application Engineering II**

**Test 2**

**Instruction**: Attempt both questions. **Time Allowed**: 60 Minutes

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

1. Consider the following MySQL database tables and answer the questions that follow.

|  |  |
| --- | --- |
| **sid** | **cid** |
| U10CS1111 | COSC211 |
| U10CS1111 | COSC407 |
| U09MT2121 | COSC101 |
| U12ST4113 | COSC101 |
| U09MT2121 | COSC211 |

**course:** **signup**:

|  |  |  |
| --- | --- | --- |
| **cid** | **cname** | **teacher** |
| COSC101 | Introduction to Computing | SI Dishing |
| COSC211 | OO Programming I | BA Ismail |
| COSC407 | Data Communications & Networks | SM Tukur |

**student:**

|  |  |  |
| --- | --- | --- |
| **sname** | **sid** | **address** |
| Abba Gwani | U10CS1111 | Borno |
| Mallam Maikaratu | U09MT2121 | Kusfa |
| Abu Shabab | U10CS3232 | Katsina |
| Alhaji Nda | U12ST4113 | Mokwa |

1. (**3 marks**). Write down the output of the query:

SELECT cid, COUNT(sid) AS c\_count FROM signup GROUP BY cid;

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | cid | c\_count | | COSC101 | 2 | | COSC211 | 2 | | COSC407 | 1 | |

1. (**3 marks**). How many rows are there in the result of the following query?

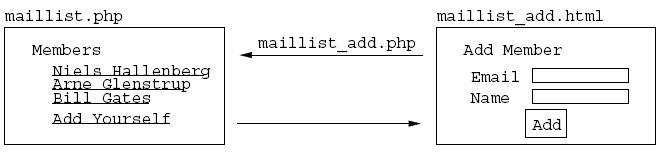
SELECT student.sid, sname,cid FROM student, course ORDER BY student.sid;

|  |
| --- |
| 12 |

1. (**4 marks**). Write a MySQL query that displays the names of courses with at least two students.

|  |
| --- |
| SELECT signup.cid, cname, count(signup.sid)  FROM signup, course  WHERE signup.cid = course.cid  GROUP BY signup.cid  HAVING count(sid) >= 2; |

1. Consider the following site map for an online registration Web application.



Unlabeled arrows represent hyperlinks to a new HTML page, possibly generated by a PHP script. Labeled arrows represent transactions that update the database by running a PHP script.

The following is the code for the file maillist.php that displays the updated list of members in the maillist. Complete the missing code by writing in the empty rectangles following the comments.

|  |  |  |
| --- | --- | --- |
| <html><title>Members</title>  <body><h2>Members</h2>  <ul>  <?php  // Establish database connection  $db = mysql\_connect("localhost","root");  mysql\_select\_db('mail', $db) or die (mysql\_error($db));  // Extract rows from the table   |  | | --- | | $rows = mysql\_query("SELECT email, name FROM Mailist"); 🡪 3 marks |   // Iterate through the rows and display each row as a list item as shown in the figure above.   |  | | --- | | while ( $row = mysql\_fetch\_array($rows) ) { 🡪 3 marks  // Display a single row  echo '<li><a href="mailto:'.$row['email'].'">'.$row[1].'</a> </li>’; 🡪 4 marks  } |   ?>  </ul>  <p><a href="maillist\_add.html">Add Yourself</a>  </body></html> |