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RAMAIAH UNIVERSITY OF APPLIED SCIENCES

Faculty of Engineering & Technology

Semester End Examination Question Paper – B. Tech.

Department: Computer Science and Engineering
Course: B. Tech. in Computer Science and Engineering
Semester/Batch: 6th / 2018
Course Code: 19CSL317A
Date: 28/07/2021
Course Title: Web architecture and Application development laboratory

Semester End Examination – Practical/Laboratory

INSTRUCTIONS TO STUDENTS:

1. Answer THE PARTICULAR QUESTION assigned to you by the Examiner
2. Use only SI units
3. Missing data may be appropriately assumed
4. **Send the scanned answer script to harikrishna.cs.et@msruas.ac.in and upload the same pdf in RUAS portal**

Maximum Duration: 3 Hours **Maximum Marks: 50**

Scenario:
An online clothing store has several products such as polo-tees, rain coats, riding jackets, formal shirts and blazers. The clothing attributes are item Id, item name, item description and item cost.

Design a database and create a web application with HTML user interface connecting the database using PHP. The application displays the database details in HTML page in a table format, where the item cost less than INR 879 are listed in the HTML table as result.

You are required to document design and implementation including:

a. Development of ER diagram and class diagram for the above scenario considering a registered user with valid attributes for both the diagrams
b. Creation of database

c. Source code with documentation
d. Result screenshots
e. Analysis and discussion

Sl. No.	Item	Maximum Marks	Marks Obtained
1	**ER and Class diagram for the scenario**	**10**	
2	**Database + Source code and documentation + Results + Analysis and Discussion** b + c + d + e	8 + 20 + 5 + 7 = **40**	
	Total	**50**	
	Final Score	**25**	

Solution:

a. ER diagram and Class diagram

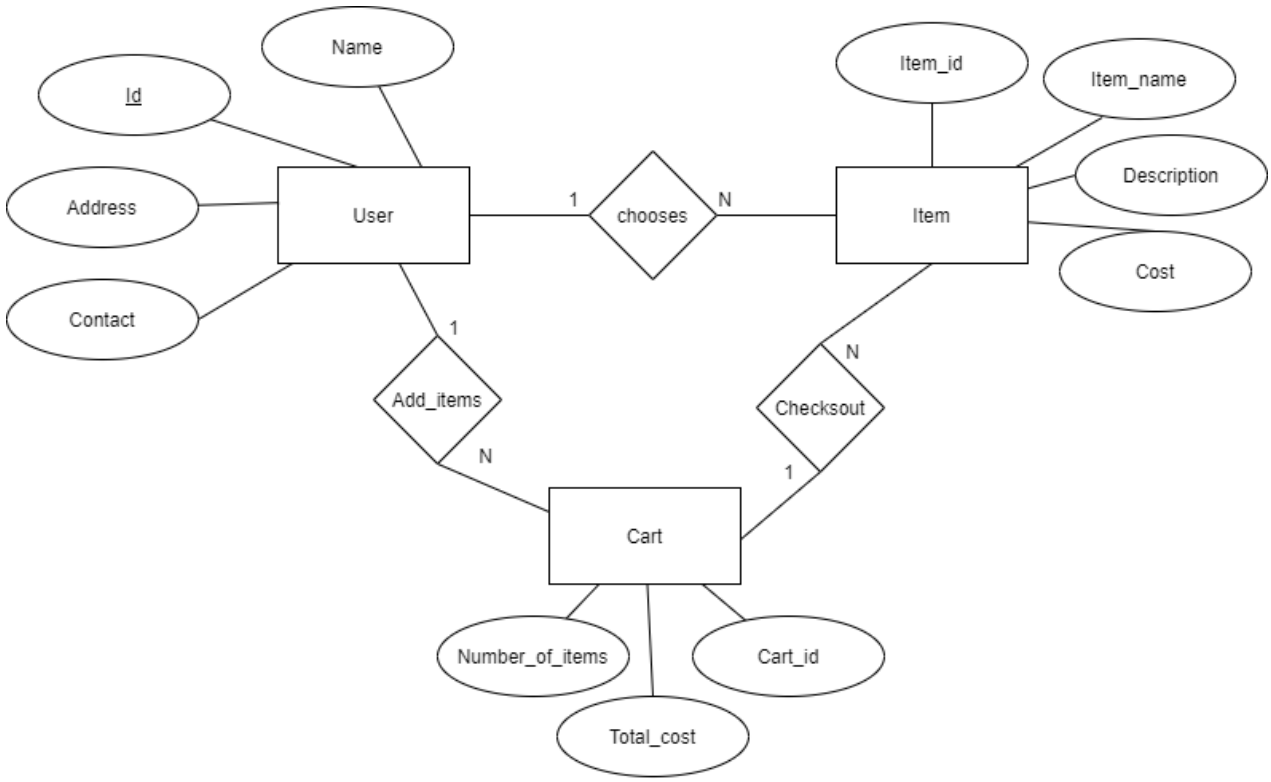

Figure 1 ER diagram with 3 entities and respective attributes and relations

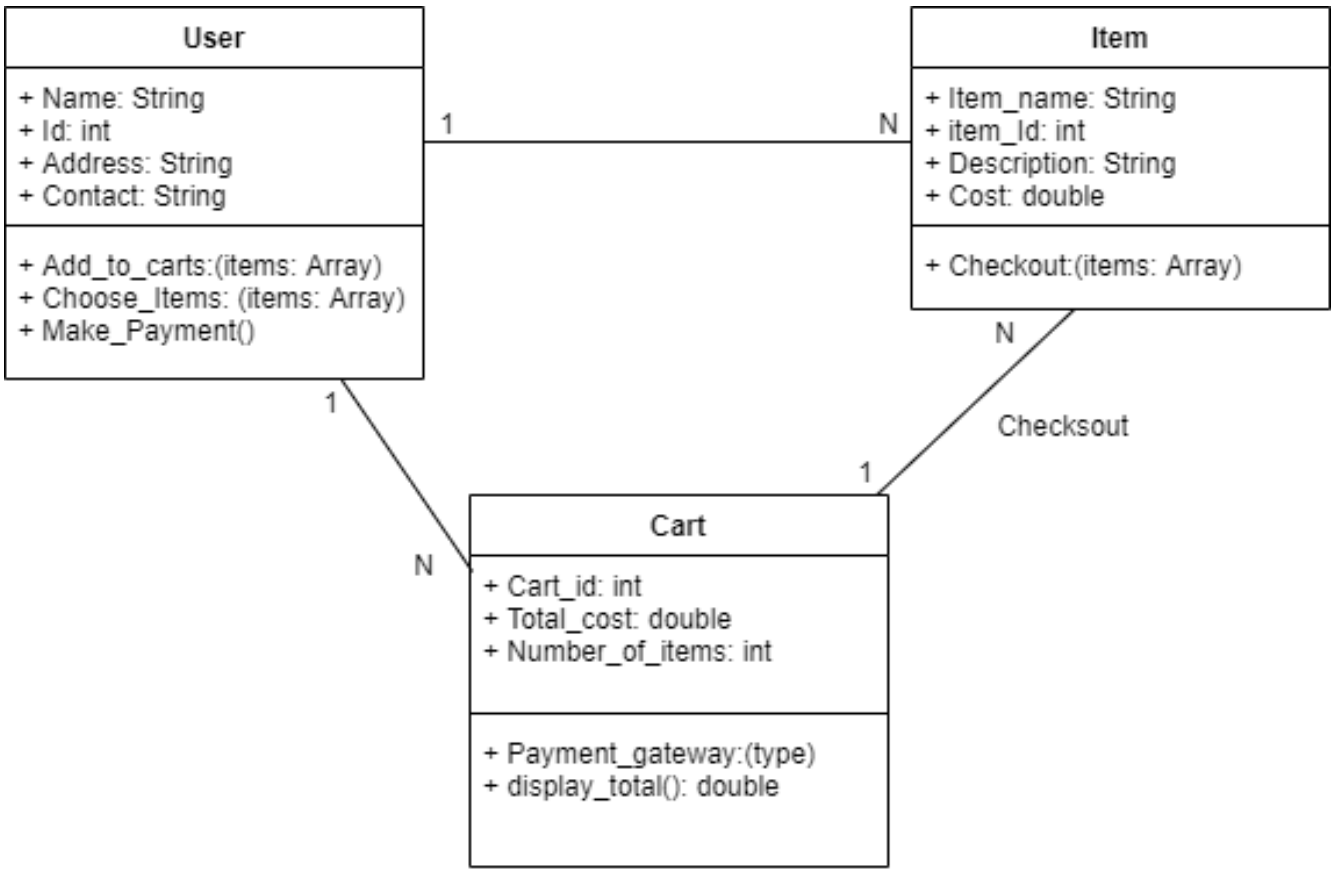

Figure 2 Class diagram with 3 entities and respective attributes and relations

b. Creation of the database

1. Login to MySQL-server with user and password

```
PS D:\Program Files\Xampp\htdocs\lab_exam> mysql -u root -p
Enter password: ********
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 325
Server version: 8.0.23 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Figure 3 login to Mysql

2. Create the database and use the database

```
mysql> create database online_clothing;
Query OK, 1 row affected (0.01 sec)

mysql> use online_clothing;
Database changed
mysql>
```

Figure 4 creating database and using it

3. Create the table *items*

```
mysql> create table items(
    -> item_id int primary key,
    -> item_name varchar(20) not null,
    -> description varchar(30) not null,
    -> cost double not null
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> show tables;
+---------------------------+
| Tables_in_online_clothing |
+---------------------------+
| items                     |
+---------------------------+
1 row in set (0.00 sec)

mysql>
```

Figure 5 creating table 'items'

4. Add values in table *items*

```
mysql>
mysql> insert into items values
    -> (1, 'polo-tees', 'faishonable and sleek', 800),
    -> (2, 'rain coats', 'durable and water-resistant', 650),
    -> (3, 'riding jackets', 'pure 100% leather', 1430),
    -> (4, 'formal shirts ', 'professional and stylish', 830),
    -> (5, 'blazers', 'stylish', 1520)
    -> ;
Query OK, 5 rows affected (0.00 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from items;
+---------+---------------+---------------------------+------+
| item_id | item_name     | description               | cost |
+---------+---------------+---------------------------+------+
|       1 | polo-tees     | faishonable and sleek     |  800 |
|       2 | rain coats    | durable and water-resistant |  650 |
|       3 | riding jackets | pure 100% leather        | 1430 |
|       4 | formal shirts | professional and stylish  |  830 |
|       5 | blazers       | stylish                   | 1520 |
+---------+---------------+---------------------------+------+
5 rows in set (0.00 sec)

mysql>
```

Figure 6 adding values in table 'items'

5. Query of items which cost less than 879 ₹

```
mysql> select * from items where cost < 879;
+---------+---------------+-----------------------------+------+
| item_id | item_name     | description                 | cost |
+---------+---------------+-----------------------------+------+
|       1 | polo-tees     | faishonable and sleek       |  800 |
|       2 | rain coats    | durable and water-resistant |  650 |
|       4 | formal shirts | professional and stylish    |  830 |
+---------+---------------+-----------------------------+------+
3 rows in set (0.00 sec)

mysql>
```

Figure 7 items which cost less than 879 rupees

c. Source Code with documentation

```
<html>
    <head>
        <meta charset="UTF-8">
        <title> Online Clothing Store </title>
        <link rel="stylesheet" type="text/css" href="style.css">
    </head>
    <body>
        <h1> Welcome to Online Clothing Store</h1>
        <br/>
        <h4> The items are listed below</h4>

        <?php
        // connecting to mysqli client using username and password
        $con = mysqli_connect("localhost","root","subhendu","online_clothing");

        // handling error for database connection
        if(mysqli_connect_errno())
        { echo "DATABASE ERROR"; }

        // query to fetch items from the database whose cost is less than 879
        $query="select * from items where cost < 879";

        // fetching the result of the query
        $result=mysqli_query($con,$query);

        // displaying the result
        echo"<table border=3>
        <tr>
        <th> ID</th>
        <th> Name</th>
        <th> Description</th>
        <th> Cost (in ₹)</th>
        </tr>";
        if (mysqli_num_rows($result)>1)
        {
            while($row=mysqli_fetch_assoc($result))
            {
                echo'<tr>';
                echo '<td>'.$row['item_id'].'</td>';
                echo '<td>'.$row['item_name'].'</td>';
                echo '<td>'.$row['description'].'</td>';
                echo '<td>'.$row['cost'].'</td>';
                echo'<tr>';
            }
        }?>

    </body>
</html>
```

d. Results

1. Starting up *Xampp* for Apache Server

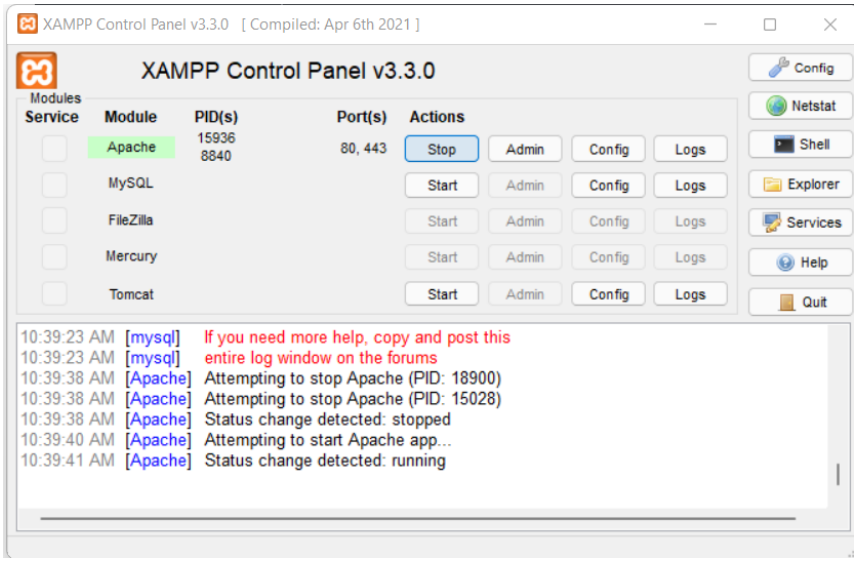

Figure 8 Xampp for using Apache

2. In browser opening *localhost/lab_exam/index.php*

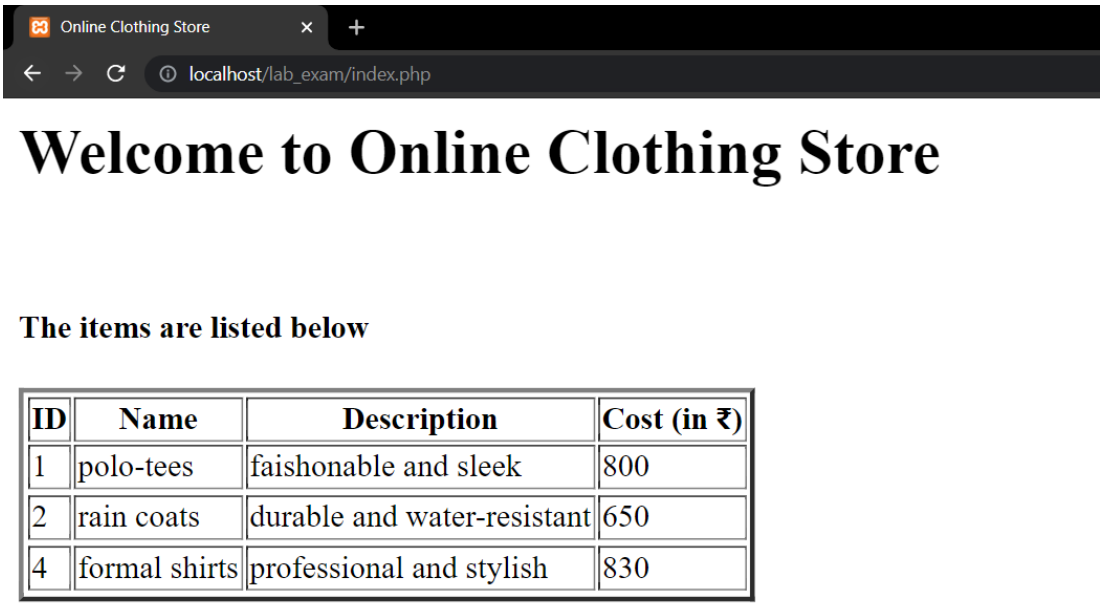

Figure 9 PHP page served with Apache

e. Analysis and Discussion

PHP is a server-side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e commerce sites. It is integrated with a number of popular databases, including MySQL, PostgreSQL.

In this lab we displayed the database details in HTML page in a table format, where item cost less than 879 ₹. All the code is executed in PHP header tag.

We used *mysqli (an extension of php for using MySql database)* for connecting to Mysql server and fetching result according to our query. After fetching the result, we displayed it using HTML table tag.