

Web database Programming 10

CT Question & solve :

Design & develop a web application for any organization.

- ✓ (i) Write the title and abstract.

Ans:

Title: Student Management System

Abstract: This web app manages student data, allowing admins to add, edit, delete and view records with secure login and registration. It ensures efficient data handling and maintains data integrity.

- (ii) List out the features:

- (1) User login / sign up
- (2) Admin dashboard
- (3) CRUD for student records
- (4) Secure authentication

⑤ Role based access

⑥ Responsive UI with Bootstrap

⑦ PHP and MySQL backend

(iii) Design and develop UI considering index, signup and login.

Ans: Pages:

- index.php → Home page
- signup.php → User registration page
- Login.php → User login page
- dashboard.php → Admin/User dashboard after login.

Design Tips:

- Use bootstrap for responsive layout
- keep forms clean and simple
- Use session handling in PHP for login

- Add input validation in forms.

(iv) Create a database, draw ER diagram for three tables and write the PHP scripts.

Answer:

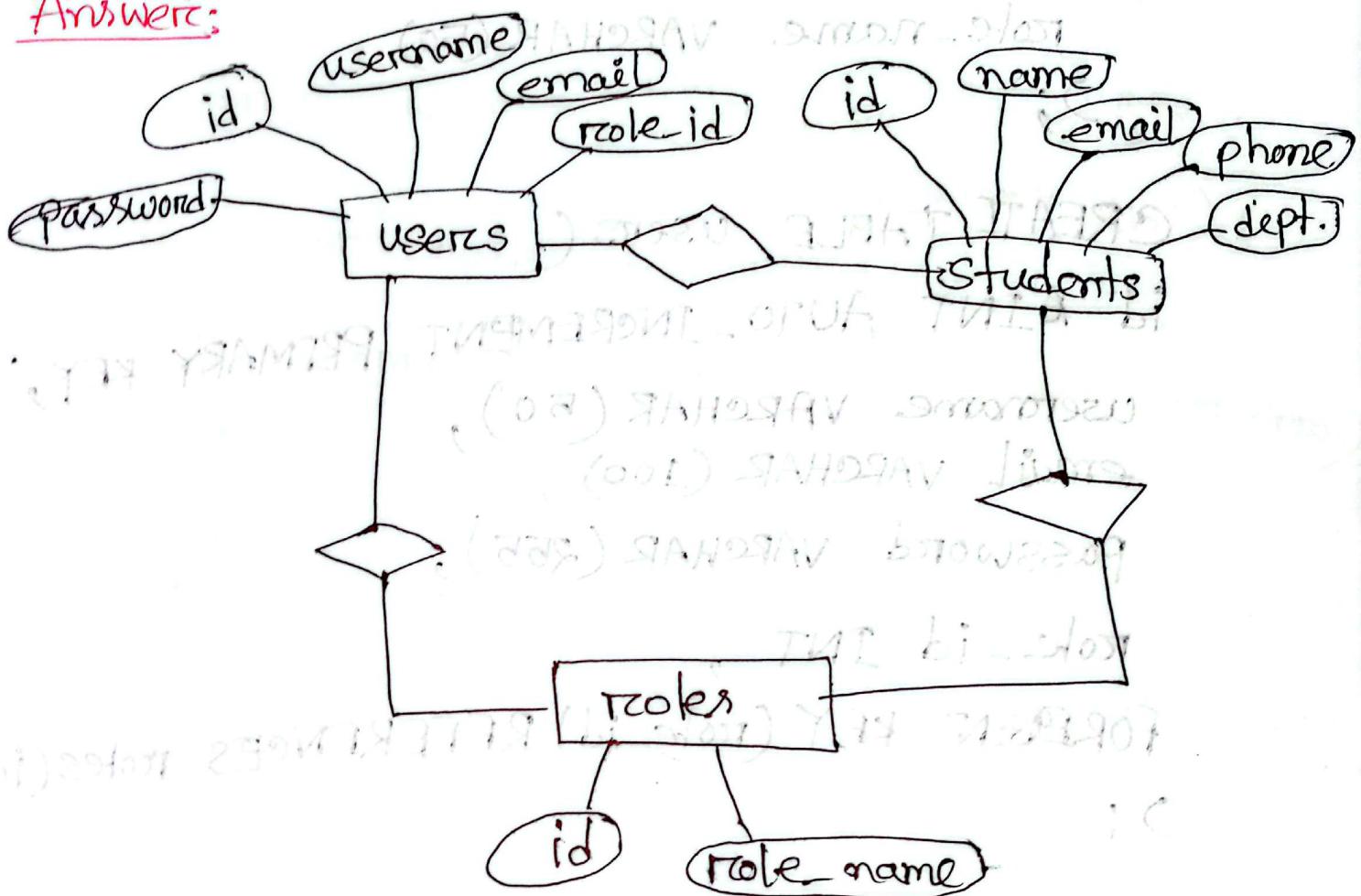


Fig: ER diagram

Tables:

- ~~users~~ `Std_info` (`id`, `pass`, `username`, `email`)
- ~~std~~ `students` (`id`, `name`, `email`, `phone`)

roles (id, role-name)

Database creation SQL:

```
CREATE TABLE roles(  
    id INT AUTO_INCREMENT PRIMARY KEY,
```

role-name VARCHAR(50),

);

```
CREATE TABLE users(  
    id INT AUTO_INCREMENT PRIMARY KEY,  
    username VARCHAR(50),  
    email VARCHAR(100),  
    password VARCHAR(255),  
    role_id INT,  
    FOREIGN KEY (role_id) REFERENCES roles(id)  
);
```

```
CREATE TABLE students (  
    id INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(100),  
    email VARCHAR(100),
```

phone VARCHAR (20),
department VARCHAR (100)
);

: (teacher format) short

PHP script to connect database.

```
<?php  
$conn = new mysqli("localhost", "root", "",  
"student");  
if ($conn->connect_error){  
    die("Connection failed: ". $conn->connect_error);  
}  
echo "Connected successfully";  
?>
```

mysql database table for teacher info

(v) Write the PHP scripts for Create and Read operation.

Answer

Create (Insert student) :

<? php

```
$conn = new mysqli("localhost", "root", "", "db")
```

```
if (isset($_POST['submit'])) {  
    "student-db");
```

```
$name = $POST['name'];
```

```
$ email = $POST['email'];
```

```
$ phone = $-post['phone'];
```

```
$department = $POST['department'].
```

```
$ SQL = "Insert Into students (name, email,  
phone, department)
```

```
Values ('$name', '$email', '$photo',  
        '$department'));
```

```
$conn->query($sql);
```

```
echo "Student added successfully!";
```

? } ?

Read (display students) :

```
<?php
```

```
$conn = new mysqli("localhost", "root", "",  
"student_db");
```

```
$result = $conn->query ("SELECT * from  
students");
```

```
echo "<table border=1>";
```

```
echo "<tr><th> id <th>
```

```
<th> name <th>
```

```
<th> Email <th>
```

```
<th> phone <th>
```

```
<th> department <th>
```

```
</tr>";
```

```
while ($row = $result->fetch_assoc()) {
```

```
echo "<tr><td>" . $row['id'] . "<td><td>
```

```
• $row['name']. "<td> <td>"
```

```
• $row['email'] . "<td> <td>"
```

```
• $row['Phone']. "<td> <td>"
```

```
• $row['department']. "<td> </tr>";
```

```
}
```

echo "Create";

?>

"localhost", "root", "password") prepare and a connection.

(vi) Write the PHP scripts for Edit and Delete operation.

Answer:

Edit (update student):

<?php

\$conn = new mysqli("localhost", "root", "",

"student-db");

\$id = \$_POST['id'];

\$name = \$_POST['name'];

\$email = \$_POST['email'];

\$phone = \$_POST['phone'];

\$department = \$_POST['department'];

\$sql = "UPDATE students SET name = '\$name',
email = '\$email', phone = '\$phone',
department = '\$department', WHERE id = \$id";

```
$conn->query($sql);  
echo "Student updated!";  
}  
?>
```

Delete :

```
<?php  
$conn = new mysqli("localhost", "root", "",  
"student_db");  
if (isset($_GET['delete'])) {  
    $id = $_GET['delete'];  
    $sql = "DELETE FROM students WHERE  
           id=$id";  
    $conn->query($sql);  
    echo "Student deleted!";  
}
```

```
?>
```

```
{ }  
?>
```

(vii) Write the php scripts for a role based operation.

Answer:

```
<?php  
session_start();  
$conn = new mysqli("localhost", "root", "",  
"student_db");  
if (isset($_POST['login'])) {  
    $email = $_POST['email'];  
    $pass = $_POST['password'];  
    $query = "SELECT users.* , roles.role_name  
    FROM users JOIN roles ON user.role_id  
    WHERE email = '$email' AND  
    password = '$pass';"  
    $result = $conn->query($query);  
    if ($result->num_rows == 1) {  
        $data = $result->fetch_assoc();  
        $Session['role'] = $data['role-name'];  
        if ($data['role-name'] == 'Admin') {  
            header("Location: admin-dashboard.php");  
        }  
    }  
}
```

```
        }  
    } else {  
        echo header("Location: userDashboard.php");  
    }  
    else {  
        echo "Invalid login!";  
    }  
}  
else {  
    echo "User does not exist!";  
}
```

Session login code:

```
session_start();  
$username = $_POST['username'];  
$password = $_POST['password'];  
if ($username == "admin" & $password == "1234") {  
    $_SESSION['user'] = $username;  
    echo "Login successful!";  
}
```

■ Role play login:

```
session_start();  
if ($_POST['role'] == 'admin') {  
    $_SESSION['role'] = 'admin';  
    header("Location: admin.php");  
}  
else {  
    $_SESSION['role'] = 'user';  
    header("Location: user.php");  
}
```

■ Meaning of the code:

- mysqli → A php extension used to connect and interact with MySQL databases.
- echo: A php command that displays/output text to the screen.
- mysqli_connect_error(): Returns the error message if the database connection fails.

Q কোনো ক্লিয়ের HTML and PHP combination
করতে পারি?

Answer: We can combine HTML and PHP by saving the file as .php and writing PHP code ~~use~~ inside <?php---?> tags within the HTML.

Example: <!DOCTYPE html>

<html>

<body>

<h1> Welcome </h1>

<p> Hello, <?php echo "Hello World"; ?> !</p>

<body>

</html>

</html>

</body>

</html>

<?php <?php <"0"> ?>

<?php <?php <"0"> ?>

<?php <?php <"0"> ?>

<?php <?php <"0"> ?>

C.T. Question - B section

1. Write a php script to take three inputs from the user, find out the largest number among three numbers.

Input

a

b

c

Output: The largest number is ?

Hints: text color must be green.

Answer:

<html>

<body>

<form method = "post">

<body>

<html>

Enter first number (a): <input type = "number" name = "a">

Enter second number (b): <input type = "number" name = "b">

Enter third number (c) : <input type = "number" name = "c">


```
<input type="submit" value="Find Largest">
</form>
<?php>
if ($_SERVER ["REQUEST_METHOD"] == "POST")
{
    $a = $_POST ['a'];
    $b = $_POST ['b'];
    $c = $_POST ['c'];
    $largest = $a;
    if ($b > $largest)
        $largest = $b;
    if ($c > $largest)
        $c = $largest;
    $largest = $c;
}
echo "<p style='color: green;'> The largest
number = $largest </p>";
?>
</body>
</html>
```

(2) Create a php program that will take two inputs from the user, first number and last number. Considering the input write your name and department "n" times using while loop.

Answer:

```
<!DOCTYPE html>
<html>
  <body>
    <form method="post">
      Enter starting number : <input type="number" name="start" />
      <br>
      Enter ending number : <input type="number" name="end" />
      <br>
      <input type="submit" value="Print Info" />
    </form>
<?php
if($_SERVER["REQUEST_METHOD"] == "POST")
{
  $start = $_POST['start'];
  $end = $_POST['end'];
  $n = $end - $start + 1;
  for($i = 1; $i <= $n; $i++)
  {
    echo "Name: Department  
". $_SESSION['name']. " ". $_SESSION['dept'];
  }
}
```

```
$end = $post['end'];
$i = $start;
while($i <= $end) {
    echo "Sumona - CSE <br>";
    $i++;
}
?>
<body>
</html>
```

How to install React.js

Step-1: Install Node.js

- node -v
- npm -v

Step-2: Install React using create-react-app

- npx create-react-app my-app

Step-3: React Project folder

- cd my-app

Step-4: Start the development Server

- npm start

~~Step~~ • <http://localhost:3000>

ক্ষেত্রে React এ কীভাবে JSX দিয়ে inline CSS design বর্ণনা করবি?

⇒ import React from 'react';

```
function MyComponent () {  
    const styles = {  
        backgroundColor: 'Skyblue',  
        color: 'white',  
        padding: '20px',  
        borderRadius: '10px',  
        textAlign: 'center',  
    };  
    return (  
        <div style={styles}>  
            <h2>Hello, this is inline CSS in  
            React!</h2>  
        </div>  
    );  
}  
export default Mycomponent;
```

database Programming

Database Create

```
<?php
```

```
$dbuser = "root";  
$dbpass = "";  
$dbhost = "localhost";  
  
$myconnect = mysqli_connect($dbhost, $dbuser,  
                             $dbpass);  
$sql = "CREATE DATABASE example";  
       database name  
$result = mysqli_query($myconnect, $sql);
```

```
mysqli_close($myconnect);
```

```
?>
```

```
</home> ~ [root] > ls -l > log.txt
```

config database

```
<?php  
$dbname = "example";  
$dbuser = "root";  
$dbpass = " ";  
$dbhost = "localhost";  
  
$myConnect = mysqli_connect($dbhost, $dbuser,  
$dbpass, $dbname);
```

~~Sign Up~~

Signup table

```
<?php ?>
```

```
<form action = "" method = "POST">
```

```
<label> Name </label>
```

```
<input type = "text" name = "name">
```

```
<label> Email </label>
```

```
<input type = "email" name = "email">
```

```
<label> Password </label>
<input type="submit", value="Add student">
```

```
</form>
```

InsertStudent

```
<?php
```

```
include (".. / db / config . php");
```

```
$ name = $ _ POST [ 'name' ] ;
```

```
$ email = $ _ POST [ 'email' ] ;
```

```
$ Password = $ _ POST [ 'password' ] ;
```

```
$ insert_Student = " Insert Into student - info
```

```
(name, email, password) values ($name,
```

```
$email, $password)
```

```
$result = mysqli_query ($myconnect,
```

```
$insert_Student);
```

```
echo " Record inserted successfully";
```

```
else
echo " Error while inserting record";
```

```
echo " Record inserted successfully";
```

```
else
echo " Error while inserting record";
```

```
echo " Record inserted successfully";
```

```
else
echo " Error while inserting record";
```

Q What is SEO and why is it important?

→ SEO (Search Engine optimization) is the process of improving a website's visibility in organic search engine results. It's important because higher ranking drive more traffic, build trust and increase the chances of attracting potential customers. Since especially since most users click on the top few results on Google.

Q What is on-page and off-page SEO?

→ On page: It includes providing good content, good key words selection, putting keyword on correct places, giving appropriate title to every page, etc.

off page SEO: It includes link building, increasing link popularity by submitting open directories, search engines, link exchanges, etc.

Q What is a Domain?

→ A domain is part of a website address that identifies it on the internet. (google.com)

Q Domain extension: It's the last part of a domain name.

Q Website: A website is a collection of related web pages accessed through the internet.

Q Web servers: A web server stores websites and sends them to users when requested via browsers.