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**SCT221-0986/2022**

**WEB DEVELOPMENT II**

**ASSIGNMENT I**

1. **Explain the difference between include() and require() in PHP. When would you use each? (3 Marks)**

In **include()**, If the file is not found, it shows a warning, but the script continues to run while in **require(),** If the file is not found, it shows a fatal error and stops the script.  
 **When to use:**

Use include() when the file is optional or not essential and require() when the file is critical to the application.

1. **Describe the purpose of sessions in PHP. How are they initiated and destroyed? (3 Marks)**

Sessions are used to store user information across multiple pages (like login details). Typically lasting until the user closes the browser, log out or session times out.

How they are initiated:

Use session\_start() Function at the top of the page.

How they are destroyed:

Use session\_destroy() Function after calling session\_start() Function

This helps maintain user data without using cookies or passing data through URLs.

1. **Write a PHP script snippet to connect to a MySQL database named school\_db using MySQLi extension. (3 Marks)**

<?php

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "school\_db";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

echo "Connected successfully";

?>

1. **List and briefly explain three common SQL commands used for data manipulation. (3 Marks)**

INSERT – Adds new data to a table.  
 Example: INSERT INTO students (name, email) VALUES ('Kelsey', 'Kelsey@gmail.com');

UPDATE – Modifies existing data in a table.  
 Example: UPDATE students SET [email='Kasandi@gmail.com](mailto:email='newmail@example.com)' WHERE id=1;

DELETE – Removes data from a table.  
 Example: DELETE FROM students WHERE id=1;

1. **What is SQL injection? How can it be prevented in PHP applications? (3 Marks)**

SQL Injection is a hacking method where attackers insert harmful SQL into a query to access or damage a database.

**Prevention methods in PHP:**

Use prepared statements with mysqli or PDO.

Always sanitize user input using htmlspecialchars() or filter\_input(). Example using mysqli:

$stmt = $conn->prepare("SELECT \* FROM users WHERE username = ?");

$stmt->bind\_param("s", $username);

$stmt->execute();

1. **Write a PHP script that retrieves all records from a table called students and displays their names and email addresses in an HTML table. (5 Marks)**

<?php

$conn = new mysqli("localhost", "root", "", "school\_db");

$result = $conn->query("SELECT name, email FROM students");

echo "<table border='1'><tr><th>Name</th><th>Email</th></tr>";

while ($row = $result->fetch\_assoc()) {

echo "<tr><td>".$row['name']."</td><td>".$row['email']."</td></tr>";

}

echo "</table>";

$conn->close();

?>

1. **Create a simple HTML form with fields for username and password. Write the PHP code to process the form data, check if the submitted username exists in the users table, and display an appropriate message. (5 Marks)**

<form action="process.php" method="post">

<label>Username:</label>

<input type="text" name="username" required><br><br>

<label>Password:</label>

<input type="password" name="password" required><br><br>

<input type="submit" value="Login">

</form>

<?php

$conn = new mysqli("localhost", "root", "", "school\_db");

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

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

$stmt = $conn->prepare("SELECT \* FROM users WHERE username = ?");

$stmt->bind\_param("s", $username);

$stmt->execute();

$result = $stmt->get\_result();

if ($result->num\_rows > 0) {

echo "Username exists. Welcome back, <strong>$username</strong>!";

} else {

echo "Username <strong>$username</strong> not found in the system.";

}

$stmt->close();

$conn->close();

?>

1. **Write a SQL statement to create a table named orders with the following fields: order\_id (auto-increment primary key), product\_name (varchar), quantity (int), order\_date (date). Also, demonstrate how to insert a new order record into this table. (5 Marks)**

**Create Table**

CREATE TABLE orders (

order\_id INT AUTO\_INCREMENT PRIMARY KEY,

product\_name VARCHAR(100),

quantity INT,

order\_date DATE

);

**Insert Data**

INSERT INTO orders (product\_name, quantity, order\_date)

VALUES ('Laptop', 2, '2025-07-31')