1. Write a php code to display value and datatypes of different types of data

**Input:**

<?php

$integer = 42;

$float = 3.14;

$string = "Hello, PHP!";

$array = array(1, 2, 3);

$boolean = true;

$nullValue = null;

echo "Value: $integer, Data Type: " . gettype($integer) . "<br>";

echo "Value: $float, Data Type: " . gettype($float) . "<br>";

echo "Value: $string, Data Type: " . gettype($string) . "<br>";

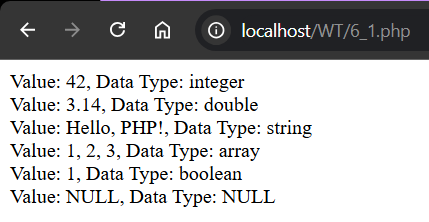
echo "Value: " . implode(", ", $array) . ", Data Type: " . gettype($array) . "<br>";

echo "Value: $boolean, Data Type: " . gettype($boolean) . "<br>";

echo "Value: " . var\_export($nullValue, true) . ", Data Type: " . gettype($nullValue) . "<br>";

?>

**Output:**



1. Write a php code to demonstrate for each loops on numeric and associative arrays

**Input:**

<?php

// Numeric array

$numericArray = array(1, 2, 3, 4, 5);

// Associative array

$associativeArray = array("first" => "Alice", "second" => "Bob", "third" => "Charlie");

// Using foreach on numeric array

echo "Numeric Array:<br>";

foreach ($numericArray as $value) {

    echo $value . "<br>";

}

// Using foreach on associative array

echo "Associative Array:<br>";

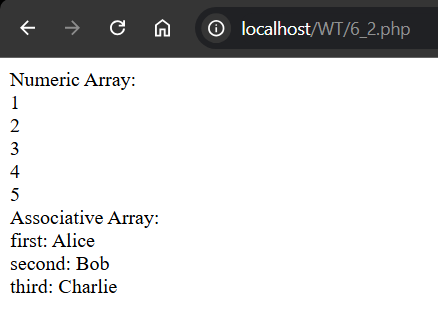
foreach ($associativeArray as $key => $value) {

    echo "$key: $value<br>";

}

?>

**Output:**



1. To find factorial using recursion

**Input:**

<?php

// Function to calculate factorial

function factorial($n) {

    if ($n <= 1) {

        return 1; // Base case

    }

    return $n \* factorial($n - 1); // Recursive call

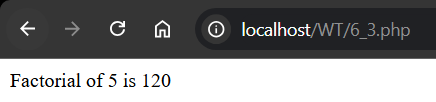
}

$num = 5;

echo "Factorial of $num is " . factorial($num);

?>

**Output:**



1. To print Fibonacci sequence using recursion

**Input:**

<?php

// Function to print Fibonacci sequence

function fibonacci($n) {

    if ($n <= 0) {

        return 0; // Base case for n = 0

    } elseif ($n == 1) {

        return 1; // Base case for n = 1

    } else {

        return fibonacci($n - 1) + fibonacci($n - 2); // Recursive call

    }

}

$count = 10; // Number of Fibonacci numbers to generate

echo "Fibonacci Sequence:<br>";

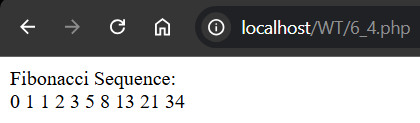
for ($i = 0; $i < $count; $i++) {

    echo fibonacci($i) . " ";

}

?>

**Output:**



1. To demonstrate variable and call back functions

**Input:**

<?php

// Callback function

function greet($name) {

    return "Hello, $name!";

}

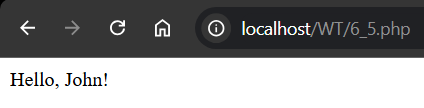
// Variable function

$functionName = 'greet';

echo $functionName("John"); // Calls the greet function

?>

**Output:**



1. To fetch various form controls and insert those values in a table on specified database

**Input:**

**Php code:**

<?php

// Include database connection file

$conn = mysqli\_connect('localhost','root','','hospital\_mgmt');

if($conn){

    echo "<br>Connected Successfully<br>";

}else{

    echo "<br>Connection Failed<br>";

    exit();

}

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

    // Collect and sanitize input data

    $name = mysqli\_real\_escape\_string($conn, $\_POST['name']);

    $gender = mysqli\_real\_escape\_string($conn, $\_POST['gender']);

    $blood\_type = mysqli\_real\_escape\_string($conn, $\_POST['blood-type']);

    $contact = mysqli\_real\_escape\_string($conn, $\_POST['contact']);

    $age = (int)$\_POST['age'];

    $username = mysqli\_real\_escape\_string($conn, $\_POST['username']);

    $pwd = mysqli\_real\_escape\_string($conn, $\_POST['pwd']);

    // Output the form data to confirm it's being received correctly

    echo "<h3>Form Data Received:</h3>";

    echo "Name: " . $name . "<br>";

    echo "Gender: " . $gender . "<br>";

    echo "Blood Type: " . $blood\_type . "<br>";

    echo "Contact: " . $contact . "<br>";

    echo "Age: " . $age . "<br>";

    echo "Username: " . $username . "<br>";

    // Hash the password

    $hashedPwd = password\_hash($pwd, PASSWORD\_DEFAULT);

    // Prepare SQL query

    $sql = "INSERT INTO users (name, gender, blood\_type, contact, age, username, password)

            VALUES ('$name', '$gender', '$blood\_type', '$contact', $age, '$username', '$hashedPwd')";

    // Execute query and check for success

    if (mysqli\_query($conn, $sql)) {

    // Get the last inserted user ID

    $userId = mysqli\_insert\_id($conn);

        echo "<br><h4>User signed up successfully!</h4><br>Your User ID is: " . $userId . "<br>";

    mysqli\_close($conn);

    // Redirect to the Sign-In page after a 5-second delay

    header("Refresh: 5; url=../client/signin.html");

    exit();  // Ensure no further code executes after redirection

    } else {

        echo "Error: " . $sql . "<br>" . mysqli\_error($conn);

    }

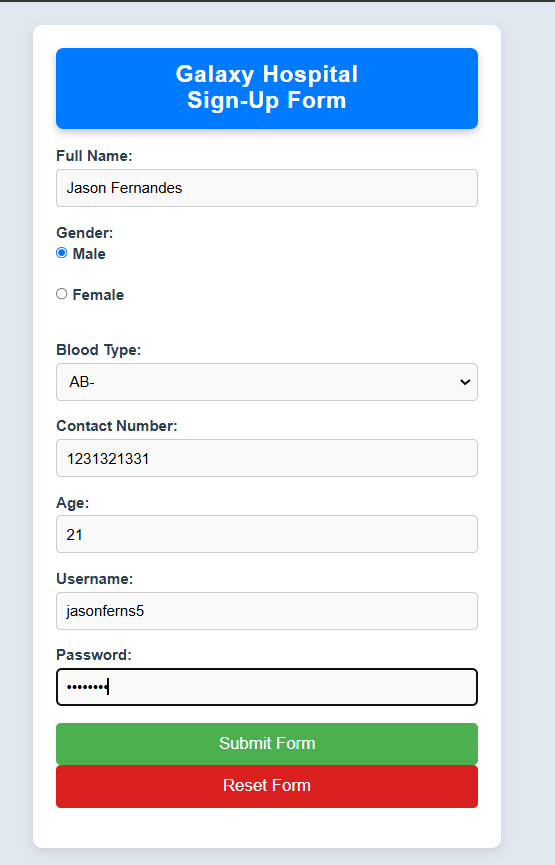
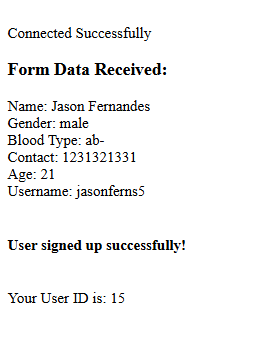
mysqli\_close($conn);

}

?>

**Output:**

**Html**: **Php**:

**Php server side:**



1. Demonstrate display operation using php and mysql(displays a join operation)

**Input:**

<?php

// Include database connection file

$conn = mysqli\_connect('localhost', 'root', '', 'hospital\_mgmt');

// Check connection

if (!$conn) {

    die("Connection Failed: " . mysqli\_connect\_error());

}

$doctors\_wards = []; // Initialize array to hold results

$error\_message = "";

// Fetch data when the button is clicked

if (isset($\_POST['join\_button'])) {

    // SQL query to join the 'doctors' and 'wards' tables

    $sql = "SELECT doctor.DoctorId AS doctor\_id, doctor.NAME AS doctor\_name, ward.wardid, ward.wardname

            FROM doctor

            INNER JOIN ward

            ON doctor.WardId = ward.wardid";

    $result = mysqli\_query($conn, $sql);

    // Check if query was successful and there are results

    if ($result && mysqli\_num\_rows($result) > 0) {

        $doctors\_wards = mysqli\_fetch\_all($result, MYSQLI\_ASSOC); // Fetch all results as an associative array

    } else {

        $error\_message = "No results found or error: " . mysqli\_error($conn);

    }

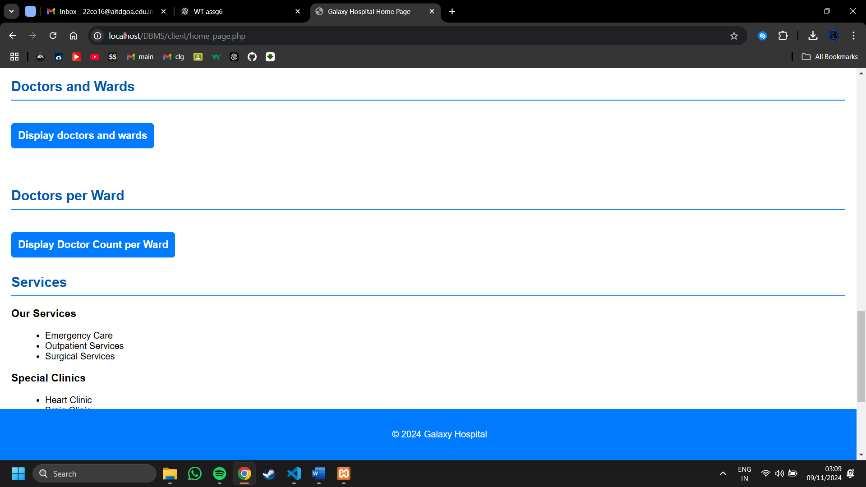
}

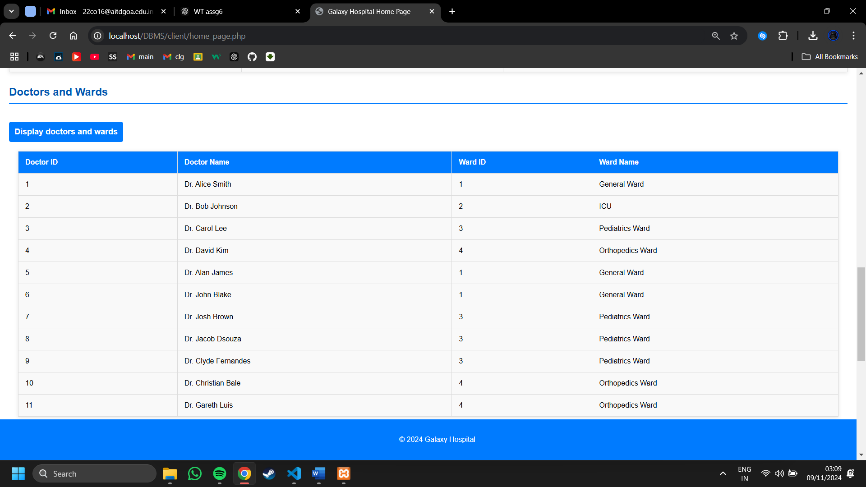
// Close the connection

mysqli\_close($conn);

?>

**Output:**





1. Demonstrate update operation in the same manner

**Input:**

<?php

// Include database connection file

// require 'db\_connection.php'; // Update the path as needed

$conn = mysqli\_connect('localhost', 'root', '', 'hospital\_mgmt');

if ($conn) {

    echo "<br>Connected Successfully.<br>";

} else {

    echo "<br>Connection Failed.";

    exit();

}

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

    // Collect form data

    $id = $\_POST['id']; // For update and delete

    $userId = $\_POST['userid'];

    $patientName = mysqli\_real\_escape\_string($conn, $\_POST['patient\_name']);

    $appointmentDate = mysqli\_real\_escape\_string($conn, $\_POST['appointment\_date']);

    $appointmentTime = mysqli\_real\_escape\_string($conn, $\_POST['appointment\_time']);

    $wardNo = $\_POST['ward\_no'];

    $action = $\_POST['action']; // Action can be "add", "update", or "delete"

    $redirectToHome = false; // Flag to check if we should redirect to home

    // Output the received form data

    echo "<h3>Form Data Received:</h3>";

    echo "User ID: " . $userId . "<br>";

    echo "Patient Name: " . $patientName . "<br>";

    echo "Appointment Date: " . $appointmentDate . "<br>";

    echo "Appointment Time: " . $appointmentTime . "<br>";

    echo "Ward Number: " . $wardNo . "<br>";

    if ($action == 'add') {

        // Insert appointment record

        $sql = "INSERT INTO appointment (user\_id, patient\_name, appointment\_date, appointment\_time, ward\_no)

                VALUES ('$userId', '$patientName', '$appointmentDate', '$appointmentTime', '$wardNo')";

        if (mysqli\_query($conn, $sql)) {

            // Get the last inserted appointment ID

            $appointmentId = mysqli\_insert\_id($conn);

            echo "<br><h4>Appointment booked successfully.<\h4><br>Your Appointment ID is: " . $appointmentId;

            $redirectToHome = true; // Set flag to true for redirection

        } else {

            echo "Error: " . $sql . "<br>" . mysqli\_error($conn);

        }

    } elseif ($action == 'update') {

        // Update appointment record

        if (!empty($id)) {

            $sql = "UPDATE appointment

                    SET user\_id = '$userId', patient\_name = '$patientName', appointment\_date = '$appointmentDate',

                        appointment\_time = '$appointmentTime', ward\_no = '$wardNo'

                    WHERE id = '$id'";

            if (mysqli\_query($conn, $sql)) {

                echo "<br><h4>Appointment updated successfully.<\h4><br>Your Appointment ID is: " . $id;

                $redirectToHome = true; // Set flag to true for redirection

            } else {

                echo "Error: " . $sql . "<br>" . mysqli\_error($conn);

            }

        } else {

            echo "<br>Appointment ID is required for updating.";

        }

    } elseif ($action == 'delete') {

        // Delete appointment record

        if (!empty($id)) {

            $sql = "DELETE FROM appointment WHERE id = '$id'";

            if (mysqli\_query($conn, $sql)) {

                echo "<br>Appointment ID " . $id . " has been deleted successfully.";

                $redirectToHome = true; // Set flag to true for redirection

            } else {

                echo "Error: " . $sql . "<br>" . mysqli\_error($conn);

            }

        } else {

            echo "<br>Appointment ID is required for deletion.";

        }

    }

    // Close the database connection

    mysqli\_close($conn);

    // Redirect to homepage after a successful operation

    if ($redirectToHome) {

        header("Refresh: 5; url=../client/home\_page.php");

        exit();

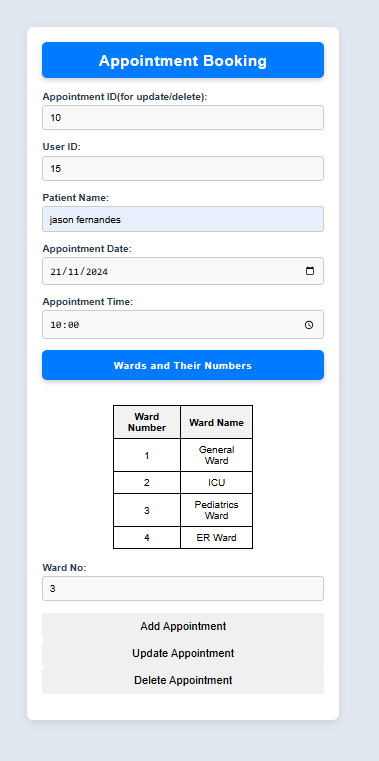
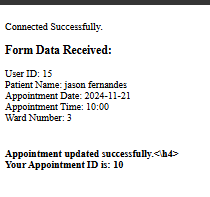
    }

}

?>

**Output:**

**Html: Php:**

**Php server side:**

**Before update operation:**

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**After update operation: **