

Answers to Practical Slips - SYBSc CDS Sem IV CDS - 245 Web and Mobile Applications

Lab Course 1

Q1: Write a JavaScript code to reverse a given number (Handle onClick event). [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Reverse Number</title>
  <script>
    function reverseNumber() {
      let num = document.getElementById("num").value;
      let reversed = num.split("").reverse().join("");
      document.getElementById("result").innerText = "Reversed
Number: " + reversed;
    }
  </script>
</head>
<body>
  <h2>Reverse a Number</h2>
  <input type="text" id="num" placeholder="Enter a number">
  <button onclick="reverseNumber()">Reverse</button>
  <p id="result"></p>
</body>
</html>
```

Q2: Write a Kotlin application to accept the details of Employee (Eno, Ename, Salary) and display it. [15 Marks]

kotlin

CopyEdit

```
fun main() {
    print("Enter Employee Number: ")
}
```

```
val eno = readLine()?.toIntOrNull() ?: 0

print("Enter Employee Name: ")
val ename = readLine().toString()

print("Enter Salary: ")
val salary = readLine()?.toDoubleOrNull() ?: 0.0

println("\nEmployee Details:")
println("Employee Number: $eno")
println("Employee Name: $ename")
println("Salary: $salary")
}
```

Q3: Viva / Journal [5 Marks]

For this part, be prepared to explain:

- The JavaScript `split()`, `reverse()`, and `join()` functions.
 - How `readLine()` works in Kotlin.
 - Data types in JavaScript and Kotlin.
-

Do you want me to continue all at once, or would you like them in smaller sections?

You said:

do for all

ChatGPT said:

Alright! Here are the full answers for all lab course questions.

Lab Course 1

Q1: Write a JavaScript code to reverse a given number (Handle onClick event). [15 Marks]

html

CopyEdit

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Reverse Number</title>
    <script>
        function reverseNumber() {
            let num = document.getElementById("num").value;
            let reversed = num.split("").reverse().join("");
            document.getElementById("result").innerText = "Reversed
Number: " + reversed;
        }
    </script>
</head>
<body>
    <h2>Reverse a Number</h2>
    <input type="text" id="num" placeholder="Enter a number">
    <button onclick="reverseNumber()">Reverse</button>
    <p id="result"></p>
</body>
</html>

```

Q2: Write a Kotlin application to accept the details of Employee (Eno, Ename, Salary) and display it. [15 Marks]

kotlin

CopyEdit

```

fun main() {
    print("Enter Employee Number: ")
    val eno = readLine()?.toIntOrNull() ?: 0

    print("Enter Employee Name: ")
    val ename = readLine().toString()

    print("Enter Salary: ")
    val salary = readLine()?.toDoubleOrNull() ?: 0.0

    println("\nEmployee Details:")
    println("Employee Number: $eno")
}

```

```
println("Employee Name: $ename")
println("Salary: $salary")
}
```

Q3: Viva / Journal [5 Marks]

For this part, be prepared to explain:

- The JavaScript `split()`, `reverse()`, and `join()` functions.
 - How `readLine()` works in Kotlin.
 - Data types in JavaScript and Kotlin.
-

Lab Course 2

Q1: Write a JavaScript code to validate given name; if it is invalid then display the message “Name is Invalid” otherwise display it using alert() dialog box. [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
  <title>Name Validation</title>
  <script>
    function validateName() {
      let name = document.getElementById("name").value;
      let regex = /^[A-Za-z]+$ /;
      if (!regex.test(name)) {
        alert("Name is Invalid");
      } else {
        alert("Valid Name: " + name);
      }
    }
  </script>
</head>
<body>
```

```
        <input type="text" id="name" placeholder="Enter your name">
        <button onclick="validateName()">Validate</button>
</body>
</html>
```

Q2: Write an HTML-CSS script to display an image at the background of the web page. [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
    <style>
        body {
            background-image: url('background.jpg');
            background-size: cover;
            background-repeat: no-repeat;
            height: 100vh;
        }
    </style>
</head>
<body>
</body>
</html>
```

(Replace 'background.jpg' with the actual image URL or file path.)

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- Regular expressions in JavaScript.
 - `background-image` property in CSS.
-

Lab Course 3

Q1: Write a PHP script to validate PAN Number. [15 Marks]

php

CopyEdit

```
<?php
function validatePAN($pan) {
    if (preg_match("/^[A-Z]{5}[0-9]{4}[A-Z]{1}$/", $pan)) {
        echo "Valid PAN Number";
    } else {
        echo "Invalid PAN Number";
    }
}

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $pan = $_POST["pan"];
    validatePAN($pan);
}
?>
<form method="post">
    <input type="text" name="pan" placeholder="Enter PAN Number">
    <button type="submit">Validate</button>
</form>
```

Q2: Write HTML script for the following: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16. [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
    <title>Number Display</title>
</head>
<body>
    <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16</p>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Explain:

- `preg_match()` in PHP.
 - How to use HTML to display numbers.
-

Lab Course 4

Q1: Write a PHP script to validate Mobile Number. [15 Marks]

php

CopyEdit

```
<?php
function validateMobile($mobile) {
    if (preg_match("/^[6-9][0-9]{9}$/", $mobile)) {
        echo "Valid Mobile Number";
    } else {
        echo "Invalid Mobile Number";
    }
}

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $mobile = $_POST["mobile"];
    validateMobile($mobile);
}
?>
<form method="post">
    <input type="text" name="mobile" placeholder="Enter Mobile
Number">
    <button type="submit">Validate</button>
</form>
```

Q2: Write a JavaScript code to accept Ename from user and display it on the same web page. (Use `<div>`) [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
    <script>
```

```
        function displayName() {
            let name = document.getElementById("ename").value;
            document.getElementById("output").innerText = "Entered
Name: " + name;
        }
    </script>
</head>
<body>
    <input type="text" id="ename" placeholder="Enter Employee Name">
    <button onclick="displayName()">Submit</button>
    <div id="output"></div>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Explain:

- Regular expressions for validating phone numbers.
 - The use of `document.getElementById()` in JavaScript.
-

Lab Course 5

Q1: Write a PHP script to validate Email ID. [15 Marks]

php

CopyEdit

```
<?php
```

```
function validateEmail($email) {
    if (filter_var($email, FILTER_VALIDATE_EMAIL)) {
        echo "Valid Email ID";
    } else {
        echo "Invalid Email ID";
    }
}
```

```
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $email = $_POST["email"];
}
```



```
        validateEmail($email);
    }
?>
<form method="post">
    <input type="text" name="email" placeholder="Enter Email">
    <button type="submit">Validate</button>
</form>
```

Q2: Write a JavaScript code to calculate the sum of first and last digit of a number. [15 Marks]

html
CopyEdit

```
<!DOCTYPE html>
<html>
<head>
    <script>
        function sumFirstLast() {
            let num = document.getElementById("num").value;
            let digits = num.split("");
            let sum = parseInt(digits[0]) +
parseInt(digits[digits.length - 1]);
            document.getElementById("result").innerText = "Sum: " +
sum;
        }
    </script>
</head>
<body>
    <input type="text" id="num" placeholder="Enter a number">
    <button onclick="sumFirstLast()">Calculate</button>
    <p id="result"></p>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Explain:

- `filter_var()` function in PHP.

- JavaScript string manipulation.

This is getting very long. Do you want me to continue like this or send in smaller parts?

You said:

yes do

ChatGPT said:

I'll continue with the next set of answers. Here's Lab Course 6 to Lab Course 10.

Lab Course 6

Q1: Create an HTML page giving information about celebrating Diwali in your country. Use various tags in HTML to give it a pleasant look. It should have the following links:

- a. Clip of Diwali celebration
 - b. Photos of Diwali celebration
 - c. Information why it is celebrated.
- [15 Marks]**

html

CopyEdit

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Diwali Celebration</title>
  <style>
    body {
      background-color: #FFD700;
      font-family: Arial, sans-serif;
      text-align: center;
    }
    h1 {
```

```

        color: #B22222;
    }
    a {
        display: block;
        margin: 10px;
        font-size: 18px;
        color: blue;
    }
</style>
</head>
<body>
    <h1>Diwali Celebration in India</h1>
    <p>Diwali, also known as the Festival of Lights, is one of the
most celebrated festivals in India. It symbolizes the victory of
light over darkness and good over evil.</p>

    <a href="https://www.youtube.com/watch?v=clip-of-diwali">Watch
Diwali Celebration</a>
    <a href="diwali-photos.html">View Diwali Photos</a>
    <a href="diwali-info.html">Why is Diwali Celebrated?</a>
</body>
</html>

```

(Replace links with actual URLs or pages.)

Q2: Write a PHP code to check whether the given number is Armstrong or not. [15 Marks]

php

CopyEdit

```
<?php
```

```

function isArmstrong($num) {
    $sum = 0;
    $temp = $num;
    $digits = strlen($num);

    while ($temp != 0) {
        $remainder = $temp % 10;
        $sum += pow($remainder, $digits);
        $temp = (int)($temp / 10);
    }
}

```

```
        if ($sum == $num) {
            echo "$num is an Armstrong Number";
        } else {
            echo "$num is not an Armstrong Number";
        }
    }

    if ($_SERVER["REQUEST_METHOD"] == "POST") {
        $num = $_POST["number"];
        isArmstrong($num);
    }
?>
<form method="post">
    <input type="text" name="number" placeholder="Enter a number">
    <button type="submit">Check</button>
</form>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- The concept of Armstrong numbers.
 - The use of `pow()` function in PHP.
-

Lab Course 7

Q1: Write the HTML code which generates the following output:

List of Programs in College

- **a. Arts**
 - i. B.A.
 - ii. M.A.
- **b. Commerce**

- I. B.Com.
- II. M.Com.
- III. B.B.A.
- c. Science
 - 1. B.Sc.
 - 2. M.Sc. (Physics)
 - 3. M.Sc. (Chemistry)
- d. Computer Science
 - o B.Sc. (Computer Science)
 - o B.C.A. (Science)
 - o B.Sc. (Information Technology)
 - o B.Sc. (Cyber and Digital Science)
[15 Marks]

```

html
CopyEdit
<!DOCTYPE html>
<html>
<head>
  <title>College Programs</title>
</head>
<body>
  <h2>List of Programs in College</h2>
  <ul>
    <li>Arts
      <ul>
        <li>B.A.</li>
        <li>M.A.</li>
      </ul>
    </li>
    <li>Commerce
      <ul>
        <li>B.Com.</li>

```

```

        <li>M.Com.</li>
        <li>B.B.A.</li>
    </ul>
</li>
<li>Science
    <ul>
        <li>B.Sc.</li>
        <li>M.Sc. (Physics)</li>
        <li>M.Sc. (Chemistry)</li>
    </ul>
</li>
<li>Computer Science
    <ul>
        <li>B.Sc. (Computer Science)</li>
        <li>B.C.A. (Science)</li>
        <li>B.Sc. (Information Technology)</li>
        <li>B.Sc. (Cyber and Digital Science)</li>
    </ul>
</li>
</ul>
</body>
</html>

```

Q2: Write a JavaScript code to accept a String from user and display the vowels from it. [15 Marks]

```

html
CopyEdit
<!DOCTYPE html>
<html>
<head>
    <script>
        function findVowels() {
            let str = document.getElementById("inputString").value;
            let vowels = str.match(/[aeiouAEIOU]/g);
            document.getElementById("result").innerText = vowels ?
            "Vowels: " + vowels.join(", ") : "No vowels found";
        }
    </script>
</head>
<body>

```

```
        <input type="text" id="inputString" placeholder="Enter a
string">
        <button onclick="findVowels()">Find Vowels</button>
        <p id="result"></p>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- Regular expressions in JavaScript.
 - The use of `match()` function.
-

Lab Course 8

Q1: Write an HTML script to display the following output. [15 Marks]

(Specify the required output.)

Q2: Write a PHP code to check whether the given string is a palindrome or not. [15 Marks]

php

CopyEdit

```
<?php
function isPalindrome($str) {
    $rev = strrev($str);
    if ($str == $rev) {
        echo "$str is a Palindrome";
    } else {
        echo "$str is not a Palindrome";
    }
}

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $str = $_POST["string"];
```

```
        isPalindrome($str);
    }
?>
<form method="post">
    <input type="text" name="string" placeholder="Enter a string">
    <button type="submit">Check</button>
</form>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `strrev()` function in PHP.
 - The concept of palindromes.
-

Lab Course 9

Q1: Create an HTML page with the following specifications:

(Describes state, color, fonts, etc.)

Q2: Write a Kotlin program to calculate the factorial of a given number. (Use Function) [15 Marks]

kotlin

CopyEdit

```
fun factorial(num: Int): Long {
    return if (num == 0) 1 else num * factorial(num - 1)
}

fun main() {
    print("Enter a number: ")
    val num = readLine()?.toIntOrNull() ?: 1
    println("Factorial of $num is ${factorial(num)}")
}
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- Recursive functions in Kotlin.
- The concept of factorial.

I will continue from **Lab Course 10** onwards in the next response. Let me know if you need any modifications so far! ☐

You said:

no all going well do fast

ChatGPT said:

I'll continue with **Lab Course 10 to Lab Course 15**.

Lab Course 10

Q1: Write the HTML code which generates the following output (Use CSS). [15 Marks]

(Specify the required output.)

Q2: Write a Kotlin application to check whether the given number is prime or not (Use Function). [15 Marks]

kotlin

CopyEdit

```
fun isPrime(num: Int): Boolean {  
    if (num < 2) return false  
    for (i in 2 until num) {  
        if (num % i == 0) return false  
    }  
    return true  
}
```

```
fun main() {  
    print("Enter a number: ")  
}
```

```
val num = readLine()?.toIntOrNull() ?: 1
println(if (isPrime(num)) "$num is Prime" else "$num is not
Prime")
}
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- Prime numbers.
 - Looping in Kotlin.
-

Lab Course 11

Q1: Write HTML code to design a website for Online Shopping.

- Design the home page which consists of a list of items each with a hyperlink, clicking on which should display related information on a separate web page. (Use external CSS). [15 Marks]

```
html
CopyEdit
<!DOCTYPE html>
<html>
<head>
  <title>Online Shopping</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h1>Welcome to Online Shopping</h1>
  <ul>
    <li><a href="electronics.html">Electronics</a></li>
    <li><a href="clothing.html">Clothing</a></li>
    <li><a href="books.html">Books</a></li>
  </ul>
</body>
</html>
```

(Create separate pages like *electronics.html*, *clothing.html*, etc.)

Q2: Design the following form in HTML and write a PHP script to display filled information on the web page. [15 Marks]

html

CopyEdit

```
<form method="post" action="display.php">
    Name: <input type="text" name="name"><br>
    Email: <input type="email" name="email"><br>
    <input type="submit" value="Submit">
</form>
```

php

CopyEdit

```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    echo "Name: " . $_POST["name"] . "<br>";
    echo "Email: " . $_POST["email"];
}
?>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- Forms in HTML.
 - **POST** method in PHP.
-

Lab Course 12

Q1: Design an HTML form to accept two strings and the following three options (use radio button). Write a PHP script to perform the following operations on String:

- a. Compare 2 strings

- **b. Convert string into Uppercase**
- **c. Convert string into Lowercase.**
[15 Marks]

html

CopyEdit

```
<form method="post">
    String 1: <input type="text" name="str1"><br>
    String 2: <input type="text" name="str2"><br>
    <input type="radio" name="operation" value="compare"> Compare
Strings <br>
    <input type="radio" name="operation" value="uppercase"> Convert
to Uppercase <br>
    <input type="radio" name="operation" value="lowercase"> Convert
to Lowercase <br>
    <input type="submit" value="Submit">
</form>
```

php

CopyEdit

```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $str1 = $_POST["str1"];
    $str2 = $_POST["str2"];
    $operation = $_POST["operation"];

    if ($operation == "compare") {
        echo ($str1 == $str2) ? "Strings are equal" : "Strings are
different";
    } elseif ($operation == "uppercase") {
        echo strtoupper($str1);
    } elseif ($operation == "lowercase") {
        echo strtolower($str1);
    }
}
?>
```

Q2: Write a JavaScript code to calculate the sum of odd digits from a given number using function. [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
  <script>
    function sumOddDigits() {
      let num = document.getElementById("num").value;
      let sum = 0;
      for (let digit of num) {
        if (digit % 2 !== 0) sum += parseInt(digit);
      }
      document.getElementById("result").innerText = "Sum of
Odd Digits: " + sum;
    }
  </script>
</head>
<body>
  <input type="text" id="num" placeholder="Enter a number">
  <button onclick="sumOddDigits()">Calculate</button>
  <p id="result"></p>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `parseInt()` function.
 - String iteration in JavaScript.
-

Lab Course 13

Q1: Write a PHP script to display the multiplication table of a given number. [15 Marks]

php

CopyEdit

```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $num = $_POST["num"];
    for ($i = 1; $i <= 10; $i++) {
        echo "$num x $i = " . ($num * $i) . "<br>";
    }
}
?>
<form method="post">
    <input type="number" name="num" placeholder="Enter number">
    <button type="submit">Generate Table</button>
</form>
```

Q2: Write an Android application using Kotlin to display “My College, My Career” Message on Mobile. [15 Marks]

```
kotlin
CopyEdit
import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        val textView = TextView(this)
        textView.text = "My College, My Career"
        textView.textSize = 24f
        setContentView(textView)
    }
}
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `TextView` in Android.
- Activity Lifecycle.

Lab Course 14

Q1: Write a JavaScript code to validate Pin Code. (Handle OnBlur event). [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
    <script>
        function validatePin() {
            let pin = document.getElementById("pin").value;
            let regex = /^[0-9]{6}$/;
            document.getElementById("result").innerText =
regex.test(pin) ? "Valid PIN Code" : "Invalid PIN Code";
        }
    </script>
</head>
<body>
    <input type="text" id="pin" placeholder="Enter PIN Code"
onblur="validatePin()">
    <p id="result"></p>
</body>
</html>
```

Q2: Write an Android application using Kotlin to display a Text Message clicking on a button. [15 Marks]

kotlin

CopyEdit

```
import android.os.Bundle
import android.widget.Button
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
```

```

        val textView: TextView = findViewById(R.id.textView)
        val button: Button = findViewById(R.id.button)

        button.setOnClickListener {
            textView.text = "Button Clicked!"
        }
    }
}

```

(Ensure *activity_main.xml* has *TextView* and *Button* with respective IDs.)

I'll continue with **Lab Course 15 onwards**. Let me know if you need changes! ☐

You said:

nice you going well do remaing

ChatGPT said:

Memory updated

I'll continue with **Lab Course 15 to Lab Course 20**.

Lab Course 15

Q1: Write a PHP script for the following: Design a form to accept two strings from the user.

- a. Find whether the small string appears at the start of the large string.
 - b. Find the position of the small string in the big string.
- [15 Marks]**

html

CopyEdit

```

<form method="post">
    Large String: <input type="text" name="large"><br>
    Small String: <input type="text" name="small"><br>
    <input type="submit" value="Check">
</form>

```


php

CopyEdit

```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $large = $_POST["large"];
    $small = $_POST["small"];

    if (strpos($large, $small) === 0) {
        echo "The small string appears at the start of the large
string.<br>";
    } else {
        echo "The small string does not appear at the start.<br>";
    }

    $position = strpos($large, $small);
    echo "Position of small string in large string: " . ($position
!= false ? $position : "Not found");
}
?>
```

Q2: Write an HTML-CSS script to accept the details of Student (RollNo, SName, Per) and display it in tabular format in red color. [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
    <style>
        table {
            width: 50%;
            border-collapse: collapse;
            color: red;
        }
        th, td {
            border: 1px solid black;
            padding: 10px;
            text-align: left;
        }
    </style>
</head>
```

```

<body>
    <form method="post">
        Roll No: <input type="text" name="roll"><br>
        Name: <input type="text" name="name"><br>
        Percentage: <input type="text" name="per"><br>
        <input type="submit" value="Submit">
    </form>

    <?php
    if ($_SERVER["REQUEST_METHOD"] == "POST") {
        echo "<table><tr><th>Roll
No</th><th>Name</th><th>Percentage</th></tr>";
        echo
" <tr><td>".$_POST['roll']. "</td><td>".$_POST['name']. "</td><td>".$_P
OST['per']. "</td></tr></table>";
    }
    ?>
</body>
</html>

```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `strpos()` function in PHP.
 - CSS table styling.
-

Lab Course 16

Q1: Write a PHP script to display all the prime numbers between 1 to 100 in blue color. [15 Marks]

```

php
CopyEdit
<?php
echo "<p style='color:blue'>";
for ($num = 2; $num <= 100; $num++) {
    $isPrime = true;

```

```
    for ($i = 2; $i < $num; $i++) {
        if ($num % $i == 0) {
            $isPrime = false;
            break;
        }
    }
    if ($isPrime) echo "$num ";
}
echo "</p>";
?>
```

Q2: Write a JavaScript Code to accept Student name and display it in reverse order on the same web page. (Use <div>). [15 Marks]

```
html
CopyEdit
<!DOCTYPE html>
<html>
<head>
    <script>
        function reverseName() {
            let name = document.getElementById("name").value;
            let reversed = name.split("").reverse().join("");
            document.getElementById("result").innerText = "Reversed
Name: " + reversed;
        }
    </script>
</head>
<body>
    <input type="text" id="name" placeholder="Enter Student Name">
    <button onclick="reverseName()">Reverse</button>
    <div id="result"></div>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `split()`, `reverse()`, and `join()` in JavaScript.
-

Lab Course 17

Q1: Write an HTML script to scroll the image right to left continuously on the form. [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
  <style>
    @keyframes scrollImage {
      from { transform: translateX(100%); }
      to { transform: translateX(-100%); }
    }
    img {
      position: absolute;
      width: 200px;
      animation: scrollImage 5s linear infinite;
    }
  </style>
</head>
<body>
  
</body>
</html>
```

Q2: Write a JavaScript code to display alternate alphabets from a given string. [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
  <script>
    function alternateAlphabets() {
```

```

        let str = document.getElementById("inputString").value;
        let result = "";
        for (let i = 0; i < str.length; i += 2) {
            result += str[i];
        }
        document.getElementById("result").innerText = "Alternate
Alphabets: " + result;
    }
</script>
</head>
<body>
    <input type="text" id="inputString" placeholder="Enter a
string">
    <button onclick="alternateAlphabets()">Show</button>
    <p id="result"></p>
</body>
</html>

```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- CSS animations (@keyframes).
-

Lab Course 18

Q1: Write a PHP script to convert the given string to uppercase. [15 Marks]

php

CopyEdit

```

<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    echo strtoupper($_POST["text"]);
}
?>
<form method="post">
    <input type="text" name="text">
    <button type="submit">Convert to Uppercase</button>

```

</form>

Q2: Write a Kotlin application to accept the details of College (ID, Name, Est_Year) and display it. (Use Function). [15 Marks]

kotlin

CopyEdit

```
fun displayCollegeDetails(id: Int, name: String, year: Int) {
    println("College ID: $id")
    println("College Name: $name")
    println("Established Year: $year")
}

fun main() {
    print("Enter College ID: ")
    val id = readLine()?.toInt() ?: 0
    print("Enter College Name: ")
    val name = readLine() ?: ""
    print("Enter Established Year: ")
    val year = readLine()?.toInt() ?: 0
    displayCollegeDetails(id, name, year)
}
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `strtoupper()` in PHP.
-

Lab Course 19

Q1: Write an HTML script to develop a simple static website for the college admission system (Use <frameset> and <a> tag). [15 Marks]

html

CopyEdit

```
<frameset cols="30%,70%">
    <frame src="menu.html">
```

```
<frame name="content">
</frameset>
```

Q2: Write a PHP script to accept the details of Voter (ID, Name, Constituency) and display it on the same page in tabular format. [15 Marks]

```
php
CopyEdit
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    echo "<table
border='1'><tr><th>ID</th><th>Name</th><th>Constituency</th></tr>";
    echo
"<tr><td>".$_POST['id']. "</td><td>".$_POST['name']. "</td><td>".$_POST['constituency']. "</td></tr></table>";
}
?>
<form method="post">
    ID: <input type="text" name="id"><br>
    Name: <input type="text" name="name"><br>
    Constituency: <input type="text" name="constituency"><br>
    <input type="submit" value="Submit">
</form>
```

I'll continue with **Lab Course 20 onwards**. Let me know if you need changes! ☐

You said:

nope great do remaining ones plz

ChatGPT said:

Got it! I'll complete **Lab Course 20 onwards**. Stay tuned! ☐

Lab Course 20

Q1: Write a PHP script to count the number of vowels in a given string. [15 Marks]

```
php
CopyEdit
<?php
```

```

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $str = $_POST["text"];
    $vowelCount = preg_match_all('/[aeiouAEIOU]/', $str);
    echo "Number of vowels: " . $vowelCount;
}
?>
<form method="post">
    <input type="text" name="text" placeholder="Enter a string">
    <button type="submit">Count Vowels</button>
</form>

```

Q2: Write a JavaScript program to check whether a given number is palindrome or not. [15 Marks]

```

html
CopyEdit
<!DOCTYPE html>
<html>
<head>
    <script>
        function checkPalindrome() {
            let num = document.getElementById("num").value;
            let reversed = num.split("").reverse().join("");
            let result = (num === reversed) ? "It is a Palindrome!"
: "Not a Palindrome!";
            document.getElementById("result").innerText = result;
        }
    </script>
</head>
<body>
    <input type="text" id="num" placeholder="Enter a number">
    <button onclick="checkPalindrome()">Check</button>
    <p id="result"></p>
</body>
</html>

```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `preg_match_all()` in PHP.
 - String reversal in JavaScript.
-

Lab Course 21

Q1: Write a PHP script to find the factorial of a given number using recursion. [15 Marks]

```
php
CopyEdit
<?php
function factorial($num) {
    return ($num == 0 || $num == 1) ? 1 : $num * factorial($num -
1);
}

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $num = $_POST["number"];
    echo "Factorial of $num is " . factorial($num);
}
?>
<form method="post">
    <input type="number" name="number" placeholder="Enter a number">
    <button type="submit">Find Factorial</button>
</form>
```

Q2: Write a JavaScript program to swap two numbers without using a third variable. [15 Marks]

```
html
CopyEdit
<!DOCTYPE html>
<html>
<head>
    <script>
        function swapNumbers() {
            let a = parseInt(document.getElementById("num1").value);
            let b = parseInt(document.getElementById("num2").value);
```

```
        a = a + b;
        b = a - b;
        a = a - b;

        document.getElementById("result").innerText = `After
Swap: A = ${a}, B = ${b}`;
    }
</script>
</head>
<body>
    <input type="number" id="num1" placeholder="Enter first number">
    <input type="number" id="num2" placeholder="Enter second
number">
    <button onclick="swapNumbers()">Swap</button>
    <p id="result"></p>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- Recursion in PHP.
 - Swapping numbers without a third variable.
-

Lab Course 22

Q1: Write a PHP script to find the sum of digits of a given number. [15 Marks]

php

CopyEdit

```
<?php
```

```
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $num = $_POST["number"];
    $sum = array_sum(str_split($num));
    echo "Sum of digits: " . $sum;
```

```
}
?>
<form method="post">
    <input type="number" name="number" placeholder="Enter a number">
    <button type="submit">Find Sum</button>
</form>
```

Q2: Write a JavaScript program to generate a Fibonacci series up to N terms. [15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
    <script>
        function fibonacci() {
            let n = parseInt(document.getElementById("num").value);
            let fibSeries = [0, 1];

            for (let i = 2; i < n; i++) {
                fibSeries.push(fibSeries[i - 1] + fibSeries[i - 2]);
            }

            document.getElementById("result").innerText = "Fibonacci
Series: " + fibSeries.join(", ");
        }
    </script>
</head>
<body>
    <input type="number" id="num" placeholder="Enter number of
terms">
    <button onclick="fibonacci()">Generate</button>
    <p id="result"></p>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `str_split()` and `array_sum()` in PHP.
 - Fibonacci sequence logic.
-

Lab Course 23

Q1: Write a PHP script to reverse a given string. [15 Marks]

```
php
CopyEdit
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    echo "Reversed String: " . strrev($_POST["text"]);
}
?>
<form method="post">
    <input type="text" name="text" placeholder="Enter a string">
    <button type="submit">Reverse</button>
</form>
```

Q2: Write a JavaScript program to check if a number is Armstrong or not. [15 Marks]

```
html
CopyEdit
<!DOCTYPE html>
<html>
<head>
    <script>
        function isArmstrong() {
            let num = document.getElementById("num").value;
            let sum = 0;
            let digits = num.length;

            for (let i = 0; i < digits; i++) {
                sum += Math.pow(parseInt(num[i]), digits);
            }
        }
    </script>
</head>
<body>
    <input type="text" id="num" value="153"/>
    <button type="button" value="Check"/>
</body>
</html>
```

```
        let result = (sum == num) ? "It is an Armstrong number!"
: "Not an Armstrong number.";
        document.getElementById("result").innerText = result;
    }
</script>
</head>
<body>
    <input type="text" id="num" placeholder="Enter a number">
    <button onclick="isArmstrong()">Check</button>
    <p id="result"></p>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- `strrev()` in PHP.
 - Armstrong number logic.
-

Lab Course 24

Q1: Write a PHP script to check if a number is prime or not. [15 Marks]

php

CopyEdit

```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $num = $_POST["number"];
    $isPrime = ($num > 1);
    for ($i = 2; $i < $num; $i++) {
        if ($num % $i == 0) {
            $isPrime = false;
            break;
        }
    }
    echo $isPrime ? "It is a prime number!" : "Not a prime number.";
}
```

```
?>
<form method="post">
  <input type="number" name="number" placeholder="Enter a number">
  <button type="submit">Check</button>
</form>
```

Q2: Write a JavaScript program to find the largest number in an array.
[15 Marks]

html

CopyEdit

```
<!DOCTYPE html>
<html>
<head>
  <script>
    function findLargest() {
      let numbers =
document.getElementById("numbers").value.split(",").map(Number);
      let largest = Math.max(...numbers);
      document.getElementById("result").innerText = "Largest
Number: " + largest;
    }
  </script>
</head>
<body>
  <input type="text" id="numbers" placeholder="Enter numbers
separated by commas">
  <button onclick="findLargest()">Find Largest</button>
  <p id="result"></p>
</body>
</html>
```

Q3: Viva / Journal [5 Marks]

Be ready to explain:

- Prime number logic.
- `Math.max()` in JavaScript.