1. **Write the JavaScript to take input as student's age and check whether given student can be eligible for driving a bike or not**

```
<!DOCTYPE html>

<html>

<head>

  <title>Bike Driving Eligibility</title>

</head>

<body>

  <label>Enter Student Age: </label>

  <input type="number" id="age">

  <button onclick="checkEligibility()">Check</button>

  <p id="result"></p>



  <script>

    function checkEligibility() {

      let age = document.getElementById('age').value;

      let msg = (age >= 18) ? "Eligible for driving a bike" : "Not eligible for
driving a bike";

      document.getElementById('result').innerText = msg;

    }

  </script>

</body>

</html>
```

2.Design a HTML form to accept a string. Write a PHP script for the following. a) Write a function to count the total number of Vowels from the script. b) Show the occurrences of each Vowel from the script

HTML Form:

```
<form action="vowel.php" method="post">
  Enter a string: <input type="text" name="input_str">
  <input type="submit" value="Submit">
</form>
```

vowel.php:

```
<?php
$str = strtolower($_POST['input_str']);

function countVowels($s) {
  return preg_match_all('/[aeiou]/', $s);
}

function vowelOccurrences($s) {
  $vowels = ['a', 'e', 'i', 'o', 'u'];
  foreach ($vowels as $v) {
    $count = substr_count($s, $v);
    echo "Vowel '$v' occurs $count times<br>";
  }
}
```

```
echo "Total vowels: " . countVowels($str) . "<br>";

vowelOccurrences($str);

?>
```

3.Write HTML code to display following output.

- **Tea**
  - **Hot tea**
  - **Black tea**
- **Coffee**
  - **Cold coffee**
  - **Hot coffee**

```
<ul>
  <li>Tea
    <ul>
      <li>Hot tea</li>
      <li>Black tea</li>
    </ul>
  </li>
  <li>Coffee
    <ul>
      <li>Cold coffee</li>
      <li>Hot coffee</li>
    </ul>
  </li>
```

```
    </ul>
```

4. Write a PHP script to accept details of Employee (Name, Salary, Designation, Address) and display it on next page.

Form Page (form.html):

```
<form action="employee.php" method="post">
  Name: <input type="text" name="name"><br>
  Salary: <input type="number" name="salary"><br>
  Designation: <input type="text" name="designation"><br>
  Address: <textarea name="address"></textarea><br>
  <input type="submit" value="Submit">
</form>
```

employee.php:

```
<?php
echo "<h3>Employee Details:</h3>";
echo "Name: " . $_POST['name'] . "<br>";
echo "Salary: " . $_POST['salary'] . "<br>";
echo "Designation: " . $_POST['designation'] . "<br>";
echo "Address: " . $_POST['address'] . "<br>";
?>
```

5.Write a PHP script to create a Class shape and its subclass triangle, square and display area of the selected shape. (use the concept of Inheritance) Display menu (use radio button) a) Triangle

b) Square

c) Rectangle

d) Circle

```
<?php
abstract class Shape {
  abstract function area();
}

class Triangle extends Shape {
  public $b, $h;
  function __construct($b, $h) {
    $this->b = $b;
    $this->h = $h;
  }
  function area() {
    return 0.5 * $this->b * $this->h;
  }
}

class Square extends Shape {
  public $side;
  function __construct($side) {
    $this->side = $side;
  }
  function area() {
```

```
    return $this->side * $this->side;
  }
}

class Rectangle extends Shape {
  public $l, $w;
  function __construct($l, $w) {
    $this->l = $l;
    $this->w = $w;
  }
  function area() {
    return $this->l * $this->w;
  }
}

class Circle extends Shape {
  public $r;
  function __construct($r) {
    $this->r = $r;
  }
  function area() {
    return 3.14 * $this->r * $this->r;
  }
```

```
}

// Sample usage
$shape = new Square(4);
echo "Area: " . $shape->area();
?>
```

6.Write a PHP Script to accept customer Name from user and do the following a) Transform Customer Name all Upper case latter. b) Make First character to Upper Case.

```
<?php
$name = $_POST['customer'];
echo "Uppercase: " . strtoupper($name) . "<br>";
echo "First character uppercase: " . ucfirst(strtolower($name));
?>
```

7.Write a PHP script to generate an XML in the following format in php.<? Xml version=’1.0’encoding=’’ISO-8859-1’?>

<Book Store>
<Books>
<PHP>
<Title> Programming in PHP </ Title>
<Publication>O’RELLY<Publication>
</PHP>
<PHP>
<Title> Beginners PHP</ Title>
<Publication> WORX</Publication>
</PHP></Books>
</Book Store>

```
<?php

$xml = "<?xml version='1.0' encoding='ISO-8859-1'?>\n";

$xml .= "<BookStore>\n<Books>\n";



$xml .= "<PHP>\n<Title>Programming in
PHP</Title>\n<Publication>O'RELLY</Publication>\n</PHP>\n";

$xml .= "<PHP>\n<Title>Beginners
PHP</Title>\n<Publication>WORX</Publication>\n</PHP>\n";



$xml .= "</Books>\n</BookStore>";



header("Content-Type: text/xml");

echo $xml;

?>
```

8.**Write a PHP script to accept Employee details (eno, ename, address) on first page. On second page accept earning (Basic, Da, HRA). On third page print Employee information(eno, ename, Address, BASIC, DA, HRA, TOTAL) [Hint: Use Session]**

page1.php:

```
php

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<?php session_start(); ?>

<form action="page2.php" method="post">

  ENo: <input type="text" name="eno"><br>

  Name: <input type="text" name="ename"><br>
```

```
  Address: <input type="text" name="address"><br>
  <input type="submit" value="Next">
</form>
```

page2.php:

```
php
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<?php session_start();
$_SESSION['eno'] = $_POST['eno'];
$_SESSION['ename'] = $_POST['ename'];
$_SESSION['address'] = $_POST['address'];
?>
<form action="page3.php" method="post">
  Basic: <input type="text" name="basic"><br>
  DA: <input type="text" name="da"><br>
  HRA: <input type="text" name="hra"><br>
  <input type="submit" value="Submit">
</form>
```

page3.php:

```
php
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<?php
session_start();
$total = $_POST['basic'] + $_POST['da'] + $_POST['hra'];
```

```
echo "<h3>Employee Info:</h3>";

echo "Eno: " . $_SESSION['eno'] . "<br>";

echo "Name: " . $_SESSION['ename'] . "<br>";

echo "Address: " . $_SESSION['address'] . "<br>";

echo "Basic: " . $_POST['basic'] . "<br>";

echo "DA: " . $_POST['da'] . "<br>";

echo "HRA: " . $_POST['hra'] . "<br>";

echo "TOTAL: $total";

?>
```

9. Design a admission form. which should contains : text box, multiline text box, a table which shows your academic record, radio button, check box, submit button etc.

```
<form method="post" action="submit.php">

  Name: <input type="text" name="name"><br>

  Address:<br><textarea name="address"></textarea><br>


  <table border="1">

    <tr><th>Class</th><th>Percentage</th></tr>

    <tr><td>10th</td><td><input type="text" name="tenth"></td></tr>

    <tr><td>12th</td><td><input type="text"
name="twelfth"></td></tr>
```

```
</table>

Gender:<br>
<input type="radio" name="gender" value="Male"> Male
<input type="radio" name="gender" value="Female"> Female<br>

Hobbies:<br>
<input type="checkbox" name="hobbies[]" value="Reading">
Reading
<input type="checkbox" name="hobbies[]" value="Sports">
Sports<br>

<input type="submit" value="Submit">
</form>
```

10. Write a PHP script for the following:

a) Design a form to accept two numbers from the users.
b) Give option to choose an arithmetic operation (use Radio Button).
c) Display the result on next form.
d) Use concept of default parameter.

index.html:

```
<form action="calc.php" method="post">
  Number 1: <input type="text" name="num1"><br>
  Number 2: <input type="text" name="num2"><br>

  <input type="radio" name="op" value="add" checked> Add
  <input type="radio" name="op" value="sub"> Subtract
```

```
  <input type="radio" name="op" value="mul"> Multiply
  <input type="radio" name="op" value="div"> Divide<br>

  <input type="submit" value="Calculate">
</form>
```

calc.php:

```
<?php
function calculate($a, $b, $op = 'add') {
  switch ($op) {
    case 'add': return $a + $b;
    case 'sub': return $a - $b;
    case 'mul': return $a * $b;
    case 'div': return $b != 0 ? $a / $b : "Cannot divide by zero";
    default: return "Invalid operation";
  }
}

$num1 = $_POST['num1'];
$num2 = $_POST['num2'];
$op = $_POST['op'];

echo "Result: " . calculate($num1, $num2, $op);
?>
```

11.Write a PHP script to display source code of a webpage.

```
<?php
highlight_file("filename.php"); // Replace with actual filename
?>
```

12.Write a PHP script to accept the number from user and Write a PHP function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument.

```
<?php
function factorial($n) {
    if ($n <= 1) return 1;
    return $n * factorial($n - 1);
}
echo factorial(5);
?>
```

13.Write a Calculator class that can accept two values, then add them, subtract them, multiply them together, or divide them on request.

```
<?php
class Calculator {
    function add($a, $b) { return $a + $b; }
    function sub($a, $b) { return $a - $b; }
    function mul($a, $b) { return $a * $b; }
    function div($a, $b) { return $b != 0 ? $a / $b : "Cannot divide by zero"; }
}
?>
```

14. Write external CSS program to display with background color sky blue with blue colored text.

```
/* style.css */

body {

    background-color: skyblue;

    color: blue;

}
```

15. Write a PHP program to create a class temperature which contains data members as Celsius and Fahrenheit . Create and Initialize all values of temperature object by using parameterized constructor . Convert Celsius to Fahrenheit and Convert Fahrenheit to Celsius using member functions. Display conversion on next page.

```
<?php

class Temperature {

    public $celsius, $fahrenheit;



    function __construct($c, $f) {

        $this->celsius = $c;

        $this->fahrenheit = $f;

    }



    function toFahrenheit() {

        return ($this->celsius * 9/5) + 32;

    }
```

```
    function toCelsius() {
        return ($this->fahrenheit - 32) * 5/9;
    }
}
?>
```

16. Write a script to create XML file 'University.xml'. The element details of 'University.xml'

Are as follows:

<Univ>
<Uname>----------</Uname>
<CITY>----------</CITY>
<Rank>----------<</Rank>
</Univ>

a) Store the details of at least 3 universities.

b) Link the 'University.xml' file to CSS and get well formatted output as given below.

i) Uname : Color:black;
Font-family: copperplate G0thic Light;
Font size: 16pt; Font:Bold; ii) City and Rank Color:Yellow;
Font-family: Arial;
Font-size : 12pt;
Font: Bold;

University.xml

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<?xml-stylesheet type="text/css" href="style.css"?>
<Universities>
    <Univ>
        <Uname>ABC University</Uname>
        <CITY>Pune</CITY>
```

```
        <Rank>1</Rank>
    </Univ>
    <Univ>
        <Uname>XYZ University</Uname>
        <CITY>Mumbai</CITY>
        <Rank>2</Rank>
    </Univ>
</Universities>
```

style.css

```
css
CopyEdit
Uname {
    color: black;
    font-family: "Copperplate Gothic Light";
    font-size: 16pt;
    font-weight: bold;
}
CITY, Rank {
    color: yellow;
    font-family: Arial;
    font-size: 12pt;
    font-weight: bold;
}
```

17.Write the JavaScript to print table of first n numbers in proper format.

```
<script>
let n = 5;
for (let i = 1; i <= n; i++) {
   document.write(`<h4>Table of ${i}</h4>`);
   for (let j = 1; j <= 10; j++) {
      document.write(`${i} × ${j} = ${i * j}<br>`);
   }
}
</script>
```

18.Write a menu driven program to perform the following operations on associative arrays: a) Merge the given arrays.
b) Find the intersection of two arrays.
c) Find the union of two arrays.
d) Find set difference of two arrays.

```
<?php
$a = ["a" => 1, "b" => 2];
$b = ["b" => 2, "c" => 3];

$merge = array_merge($a, $b);
$intersect = array_intersect_assoc($a, $b);
$union = $a + $b;
```

```
$difference = array_diff_assoc($a, $b);

?>
```

19.Write a PHP script to create a Class shape and its subclass triangle, square and display area of the selected shape.(use the concept of Inheritance) Display menu (use radio button)
a) Triangle
b) Square c) Rectangle d) Circle

(Same as Q5)

20.Write a PHP script to display following information using super global variable. a) Client IP Address.
b) Browser detection/information.
C) To check whether the page is called from 'https' or 'http'.

```
<?php

echo "IP: " . $_SERVER['REMOTE_ADDR'] . "<br>";

echo "Browser: " . $_SERVER['HTTP_USER_AGENT'] . "<br>";

echo "Protocol: " . ($_SERVER['HTTPS'] ? 'https' : 'http');

?>
```

21.Write the JavaScript to calculate simple interest.

```
<script>

let p = 1000, r = 5, t = 2;

let si = (p * r * t) / 100;

document.write("Simple Interest: " + si);

</script>
```

22.Write a AJAX program to read contact. Dat file and print the contain of a file in a Tabular form when the user clicks on print button.

Contact.dat file contain srno, name, residence number, mobile number, context/ relation. [Enter at least 3 record in contact.dat file]

```
<button onclick="loadData()">Print</button>

<div id="result"></div>



<script>

function loadData() {

   let xhr = new XMLHttpRequest();

   xhr.open("GET", "contact.dat", true);

   xhr.onload = function() {

      let rows = xhr.responseText.trim().split("\n");

      let html = "<table border='1'>";

      rows.forEach(r => {

         let cols = r.split(",");

         html += "<tr>" + cols.map(c => `<td>${c}</td>`).join("") +
"</tr>";

      });

      html += "</table>";

      document.getElementById("result").innerHTML = html;

   }

   xhr.send();

}
```

```
</script>
```

23.Divide a screen in four equal part . Each frame shows : list of different activities conducted by your department.

```
<style>

.container { display: grid; grid-template-columns: 1fr 1fr; grid-template-rows: 1fr 1fr; height: 100vh; }

.box { border: 1px solid black; padding: 10px; }

</style>



<div class="container">

  <div class="box">Activity 1</div>

  <div class="box">Activity 2</div>

  <div class="box">Activity 3</div>

  <div class="box">Activity 4</div>

</div>
```

24.Write a PHP script to change the preference of your web page like font style, font, size, font color, background color using cookie.
Display selected settings on next page and actual implementation (with new settings) on third page.
Page 1:

```
php

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

Font Color: <input name="color"><br>

<input type="submit" value="Save">
```

```
</form>
```

set.php

```
php
CopyEdit
<?php
setcookie("color", $_POST['color'], time() + 3600);
header("Location: apply.php");
?>
```

apply.php

```
php
CopyEdit
<?php
$color = $_COOKIE['color'] ?? 'black';
echo "<body style='color: $color;'>This is your setting!</body>";
?>
```

25.Write a JavaScript program to check whether given candidate is eligible for voting or not.

```
<script>
let age = prompt("Enter your age:");
alert(age >= 18 ? "Eligible to vote" : "Not eligible");
</script>
```

26.Write a program to accept ‘n’ integers from the user & store them in an Array List collection. Display the elements of Array List.

```
<?php

$values = [];

for ($i = 0; $i < 5; $i++) {

   $values[] = readline("Enter number: ");

}

print_r($values);

?>
```

27.Write the JavaScript to accept the week day as number from user and display Monday to Sunday.

```
<script>

let day = parseInt(prompt("Enter 1-7:"));

let days =
["Sunday","Monday","Tuesday","Wednesday","Thursday","Friday","Saturday
"];

alert(days[day - 1]);

</script>
```

28. **Consider the following entities and their relationship.**
    Student (stud_id, name, class)
    Competition(c_no,c_name, type)
    a) Relationship between student and competition In many-many with attributes rank and year.
    b) Create a RDB in 3NF for above and solve the following.
    c) Using above database write a script in PHP to accept a competition from user and display information of student who has secured 1st rank in that competition.

    Tables:

- Student(stud_id, name, class)
- Competition(c_no, c_name, type)
- Participation(stud_id, c_no, rank, year)

```
SELECT s.name FROM Student s
JOIN Participation p ON s.stud_id = p.stud_id
JOIN Competition c ON c.c_no = p.c_no
WHERE c.c_name = 'Coding' AND p.rank = 1;
```

29. Write the JavaScript to WAP to check whether a given number is prime number.

```
<script>
let n = parseInt(prompt("Enter number:"));
let isPrime = true;
for (let i = 2; i < n; i++) {
   if (n % i === 0) { isPrime = false; break; }
}
alert(isPrime ? "Prime" : "Not Prime");
</script>
```

30.Write a AJAX program to search Student name according to the character typed and display list using array.

```
<input type="text" onkeyup="searchName(this.value)">
<div id="result"></div>

<script>
let names = ["Amit", "Anjali", "Ravi", "Ramesh"];
function searchName(char) {
  let filtered = names.filter(n =>
n.toLowerCase().startsWith(char.toLowerCase()));
```

```
  document.getElementById("result").innerHTML = filtered.join("<br>");
}
</script>
```