
1. CSS (Cascading Style Sheets):

a) Write a program to develop a website page on CSS.

i. RGB Value

```
<!DOCTYPE html>
<html>
<body>

<h1>Specify colors using RGB values</h1>

<h2 style="background-color:rgb(255, 0, 0);">rgb(255, 0, 0)</h2>
<h2 style="background-color:rgb(0, 0, 255);">rgb(0, 0, 255)</h2>
<h2 style="background-color:rgb(60, 179, 113);">rgb(60, 179, 113)</h2>
<h2 style="background-color:rgb(238, 130, 238);">rgb(238, 130, 238)</h2>
<h2 style="background-color:rgb(255, 165, 0);">rgb(255, 165, 0)</h2>
<h2 style="background-color:rgb(106, 90, 205);">rgb(106, 90, 205)</h2>

</body>
</html>
```

ii. Background color

```
<!DOCTYPE html>
```

```
<html>
<head>
<style>
body {
  background-color: lightblue;
}
</style>
</head>
<body>

<h1>Hello World!</h1>

<p>This page has a light blue background color!</p>

</body>
</html>
```

OUTPUT:

iii. Background colors

```
<!DOCTYPE html>
<html>
<head>
<style>
p.one {
  border-style: solid;
  border-color: red;
}

p.two {
  border-style: solid;
  border-color: green;
}

p.three {
  border-style: dotted;
  border-color: blue;
}
</style>
```

```
</head>
<body>

<h2>The border-color Property</h2>
<p>This property specifies the color of the four borders:</p>

<p class="one">A solid red border</p>
<p class="two">A solid green border</p>
<p class="three">A dotted blue border</p>

<p><b>Note:</b> The "border-color" property does not work if it is used alone. Use the
"border-style" property to set the borders first.</p>

</body>
</html>
```

OUTPUT:

iv. Font icon

```
<!DOCTYPE html>
<html>
<head>
<title>Font Awesome Icons</title>
<meta name="viewport" content="width=device-width, initial-scale=1">
<script src="https://kit.fontawesome.com/a076d05399.js" crossorigin="anonymous"></script>
<!--Get your own code at fontawesome.com-->
</head>
<body>

<h1>Font Awesome icon library</h1>

<p>Some Font Awesome icons:</p>
<i class="fas fa-cloud"></i>
<i class="fas fa-heart"></i>
<i class="fas fa-car"></i>
<i class="fas fa-file"></i>
<i class="fas fa-bars"></i>

<p>Styled Font Awesome icons (size and color):</p>
<i class="fas fa-cloud" style="font-size:24px;"></i>
<i class="fas fa-cloud" style="font-size:36px;"></i>
<i class="fas fa-cloud" style="font-size:48px;color:red;"></i>
<i class="fas fa-cloud" style="font-size:60px;color:lightblue;"></i>

</body>
</html>
```

OUTPUT:

v. Add a border to Table

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
  border: 1px solid;
}
</style>
</head>
<body>

<h2>Add a border to a table:</h2>

<table>
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
  </tr>
  <tr>
    <td>Peter</td>
    <td>Griffin</td>
  </tr>
  <tr>
    <td>Lois</td>
    <td>Griffin</td>
  </tr>
</table>

</body>
</html>
```

OUTPUT:

vi. Image gallery

```
<!DOCTYPE html>
<html>
<head>
<style>
div.gallery {
  margin: 5px;
```

```
border: 1px solid #ccc;
float: left;
width: 180px;
}
```

```
div.gallery:hover {
border: 1px solid #777;
}
```

```
div.gallery img {
width: 100%;
height: auto;
}
```

```
div.desc {
padding: 15px;
text-align: center;
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<div class="gallery">
  <a target="_blank" href="img_5terre.jpg">
    
  </a>
  <div class="desc">Add a description of the image here</div>
</div>
```

```
<div class="gallery">
  <a target="_blank" href="img_forest.jpg">
    
  </a>
  <div class="desc">Add a description of the image here</div>
</div>
```

```
<div class="gallery">
  <a target="_blank" href="img_lights.jpg">
    
  </a>
  <div class="desc">Add a description of the image here</div>
</div>
```

```
<div class="gallery">
  <a target="_blank" href="img_mountains.jpg">
    
  </a>
  <div class="desc">Add a description of the image here</div>
</div>
```

```
</body>
```

```
</html>
```

OUTPUT:

vii. Forms

```
<!DOCTYPE html>
<html>
<head>
<style>
input[type=text] {
  width: 100%;
  padding: 12px 20px;
  margin: 8px 0;
  box-sizing: border-box;
}
</style>
</head>
<body>

<h2>Padded input fields</h2>

<form>
  <label for="fname">First Name</label>
  <input type="text" id="fname" name="fname">
  <label for="lname">Last Name</label>
  <input type="text" id="lname" name="lname">
</form>

</body>
</html>
```

OUTPUT:

viii. Math function

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
#div1 {
```

```
  position: absolute;
```

```
  left: 50px;
```

```
  width: calc(100% - 100px);
```

```
  border: 1px solid black;
```

```
  background-color: yellow;
```

```
  padding: 5px;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1>The calc() Function</h1>
```

```
<p>Create a div that stretches across the window, with a 50px gap between both sides of the div and the edges of the window:</p>
```

```
<div id="div1">Some text...</div>
```

```
</body>
```

```
</html>
```

OUTPUT:

ix. Box model

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
div {
```

```
  background-color: lightgrey;
```

```
  width: 300px;
```

```
  border: 15px solid green;
```

```
  padding: 50px;
```

```
  margin: 20px;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>Demonstrating the Box Model</h2>
```

<p>The CSS box model is essentially a box that wraps around every HTML element. It consists of: borders, padding, margins, and the actual content.</p>

<div>This text is the content of the box. We have added a 50px padding, 20px margin and a 15px green border. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</div>

</body>
</html>

OUTPUT:

x. Links

```
<!DOCTYPE html>
<html>
<head>
<style>
/* unvisited link */
a:link {
  color: red;
}

/* visited link */
a:visited {
  color: green;
}

/* mouse over link */
a:hover {
  color: hotpink;
}

/* selected link */
a:active {
  color: blue;
}
</style>
</head>
<body>
```

<h2>Styling a link depending on state</h2>

<p>This is a link</p>

<p>Note: a: hover MUST come after a: link and a: visited in the CSS definition in order to be effective.</p>

<p>Note: a: active MUST come after a: hover in the CSS definition in order to be effective.</p>

</body>

</html>

OUTPUT:

2. Programs on Java Script.

- i. **Create a simple multiplication table asking the user the number of rows and columns he wants.**

```
<html>
<head>
  <title>Multiplication Table</title>
  <script type="text/javascript">
    var rows = prompt("How many rows for your multiplication table?");
    var cols = prompt("How many columns for your multiplication table?");
    if(rows == "" || rows == null)
      rows = 10;
    if(cols == "" || cols == null)
      cols = 10;
    createTable(rows, cols);
    function createTable(rows, cols)
    {
      var j=1;
      var output = "<table border='1' width='500' cellspacing='0' cellpadding='5'>";
      for(i=1;i<=rows;i++)
      {
        output = output + "<tr>";
        while(j<=cols)
        {
          output = output + "<td>" + i*j + "</td>";
          j = j+1;
        }
        output = output + "</tr>";
        j = 1;
      }
      output = output + "</table>";
      document.write(output);
    }
  </script>
</head>
<body>
</body>
```

</html>

OUTPUT:

ii. Find Average

```
<html>
<head>
  <title>Objects!!!</title>
  <script type="text/javascript">
    var student = new Object();
    student.fName = "John";
    student.lName = "Smith";
    student.id = 5;
    student.markE = 76;
    student.markM = 99;
    student.markS = 87;
    student.calculateAverage = function()
    {
      return (student.markE + student.markM + student.markS)/3;
    };
    student.displayDetails = function()
    {
      document.write("Student Id: " + student.id + "<br />");
      document.write("Name: " + student.fName + " " + student.lName + "<br />");
      var avg = student.calculateAverage();
      document.write("Average Marks: " + avg);
    };
    student.displayDetails();
  </script>
</head>
<body>
</body>
</html>
```

OUTPUT:

iii. Find Average of different Students

```
<html>
<head>
  <script type="text/javascript">
    function Student(first, last, id, english, maths, science)
    {
      this.fName = first;
```

```

        this.lName = last;
        this.id = id;
        this.markE = english;
        this.markM = maths;
        this.markS = science;
        this.calculateAverage = function()
        {
            return (this.markE + this.markM + this.markS)/3;
        }

        this.displayDetails = function()
        {
            document.write("Student Id: " + this.id + "<br />");
            document.write("Name: " + this.fName + " " + this.lName + "<br />");
            var avg = this.calculateAverage();
            document.write("Average Marks: " + avg + "<br /><br />");
        }
    }

    var st1 = new Student("John", "Smith", 15, 85, 79, 90);
    var st2 = new Student("Hannah", "Turner", 23, 75, 80, 82);
    var st3 = new Student("Kevin", "White", 4, 93, 89, 90);
    var st4 = new Student("Rose", "Taylor", 11, 55, 63, 45);
    st1.displayDetails();
    st2.displayDetails();
    st3.displayDetails();
    st4.displayDetails();
</script>
</head>
<body>
</body>
</html>

```

OUTPUT:

iv. The window.location.assign() method loads a new document.

```

<html>
<head>
<script>
function newDoc() {
    window.location.assign("https://jafarsadiqweb.netlify.app/")
}
</script>
</head>
<body>

<input type="button" value="Load new document" onclick="newDoc()">

</body>

```

</html>

OUTPUT:

v. Google chart

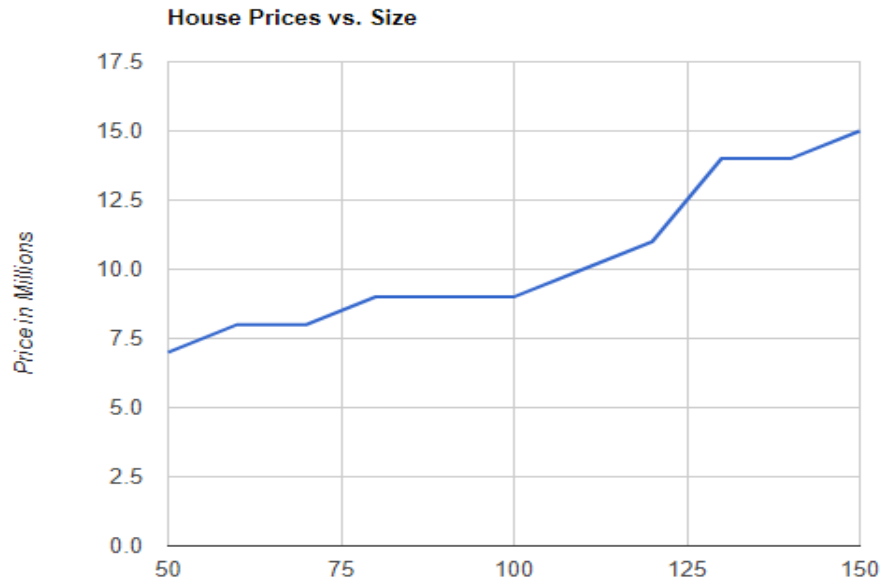
```
<!DOCTYPE html>
<html>
<script type="text/javascript" src="https://www.gstatic.com/charts/loader.js"></script>
<body>
<div id="myChart" style="width:100%; max-width:600px; height:500px;"></div>

<script>
google.charts.load('current',{packages:['corechart']});
google.charts.setOnLoadCallback(drawChart);

function drawChart() {
// Set Data
var data = google.visualization.arrayToDataTable([
  ['Price', 'Size'],
  [50,7],[60,8],[70,8],[80,9],[90,9],
  [100,9],[110,10],[120,11],
  [130,14],[140,14],[150,15]
]);
// Set Options
var options = {
  title: 'House Prices vs. Size',
  hAxis: {title: 'Square Meters'},
  vAxis: {title: 'Price in Millions'},
  legend: 'none'
};
// Draw
var chart = new google.visualization.LineChart(document.getElementById('myChart'));
chart.draw(data, options);
}
</script>

</body>
</html>
```

OUTPUT:



vi. Canvas

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<canvas id="myCanvas" width="400" height="400" style="border:1px solid grey"></canvas>
```

```
<script>
```

```
const canvas = document.getElementById("myCanvas");
```

```
const ctx = canvas.getContext("2d");
```

```
canvas.height = canvas.width;
```

```
ctx.transform(1, 0, 0, -1, 0, canvas.height)
```

```
const xArray = [50,60,70,80,90,100,110,120,130,140,150];
```

```
const yArray = [7,8,8,9,9,9,10,11,14,14,15];
```

```
ctx.fillStyle = "red";
```

```
for (let i = 0; i < xArray.length-1; i++) {
```

```
  let x = xArray[i]*400/150;
```

```
  let y = yArray[i]*400/15;
```

```
  ctx.beginPath();
```

```
  ctx.ellipse(x, y, 3, 3, 0, 0, Math.PI * 2);
```

```
  ctx.fill();
```

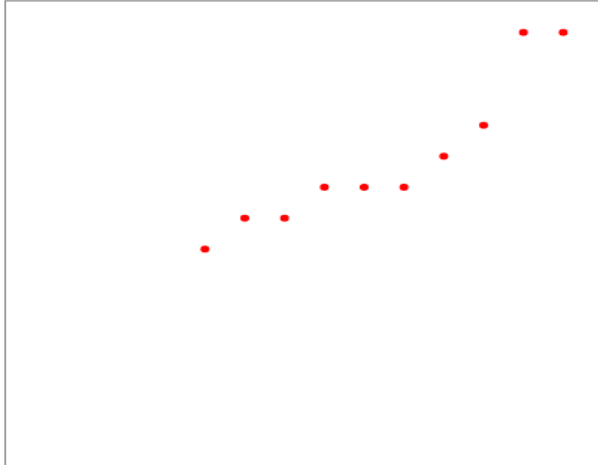
```
}
```

```
</script>
```

```
</body>
```

```
</html>
```

OUTPUT:



vii. Validation

```
<!DOCTYPE html>
<html>
<body>

<h2>JavaScript Validation</h2>

<p>Enter a number and click OK:</p>

<input id="id1" type="number" min="100" max="300" required>
<button onclick="myFunction()">OK</button>

<p>If the number is less than 100 or greater than 300, an error message will be displayed.</p>

<p id="demo"></p>

<script>
function myFunction() {
  const inpObj = document.getElementById("id1");
  if (!inpObj.checkValidity()) {
    document.getElementById("demo").innerHTML = inpObj.validationMessage;
  } else {
    document.getElementById("demo").innerHTML = "Input OK";
  }
}
</script>

</body>
</html>
```

3. PHP programs:

i. Even Odd Program

```
<?php
$number=1233456;
if($number%2==0)
{
    echo "$number is Even Number";
}
else
{
    echo "$number is Odd Number";
}
?>
```

OUTPUT:

1233456 is Even Number

ii. Area of Triangle

```
<?php
$base = 10;
$height = 15;
echo "area with base $base and height $height= " . ($base * $height) / 2;
?>
```

OUTPUT:

area with base 10 and height 15= 75

iii. Palindrome Number

```
<?php
function palindrome($n){
    $number = $n;
    $sum = 0;
    while(floor($number)) {
        $rem = $number % 10;
        $sum = $sum * 10 + $rem;
        $number = $number/10;
    }
    return $sum;
}
$input = 1235321;
$num = palindrome($input);
if($input==$num){
    echo "$input is a Palindrome number";
} else {
    echo "$input is not a Palindrome";
}
?>
```

OUTPUT:

1235321 is a Palindrome number

iv. Fibonacci Series

```
<?php
$num = 0;
$n1 = 0;
$n2 = 1;
echo "<h3>Fibonacci series for first 12 numbers: </h3>";
echo "\n";
echo $n1.' '.$n2.' ';
while ($num < 10 )
{
    $n3 = $n2 + $n1;
    echo $n3.' ';
    $n1 = $n2;
    $n2 = $n3;
    $num = $num + 1;
}
?>
```

OUTPUT:

Fibonacci series for first 12 numbers:

0 1 1 2 3 5 8 13 21 34 55 89

v. Armstrong Number

```
<?php
$num=407;
$total=0;
$x=$num;
while($x!=0)
{
    $rem=$x%10;
    $total=$total+$rem*$rem*$rem;
    $x=$x/10;
}
if($num==$total)
{
    echo "Yes it is an Armstrong number";
}
else
{
    echo "No it is not an Armstrong number";
}
?>
```

OUTPUT:

Yes it is an Armstrong number

vi. Prime Number

```
<?php
$count = 0;
$num = 2;
while ($count < 15 )
{
    $div_count=0;
    for ( $i=1; $i<=$num; $i++)
    {
        if (($num%$i)==0)
        {
            $div_count++;
        }
    }
    if ($div_count<3)
    {
        echo $num." , ";
        $count=$count+1;
    }
    $num=$num+1;
}
?>
```

OUTPUT:

2 , 3 , 5 , 7 , 11 , 13 , 17 , 19 , 23 , 29 , 31 , 37 , 41 , 43 , 47 ,

3. Executing basic SQL queries: Insert, Delete, Search, Update:

- i. Design a database using MYSQL to insert and delete entries of an application based management system.**

```

Create DATABASE IF NOT EXISTS jafu CHARACTER SET latin1 COLLATE
latin1_swedish_ci;
SHOW DATABASES;
Use jafu;
CREATE TABLE IF NOT EXISTS `Employee` ( `emp_id` INT auto_increment ,
`full_name` VARCHAR(150) NOT NULL , `gender` VARCHAR(6) , `date_of_birth` DATE ,
`physical_address` VARCHAR(255) , `postal_address` VARCHAR(255) , `contact_number`
VARCHAR(75) , `email` VARCHAR(255) , PRIMARY KEY (`emp_id`) )ENGINE =
InnoDB;
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_nu
mber`,`email`)VALUES(8,'Anil','Male',DATE('1987-12-
16'),'Mandya','Amarvathi','9880621815','anil.test@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_nu
mber`,`email`)VALUES(9,'Radhika','Female',DATE('1986-10-
09'),'Mandya','Kallahalli','9880621815','radhika@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_nu
mber`,`email`)VALUES(3,'Ullas','male',DATE('1986-10-
09'),'Mandya','Kallahalli','9880621815','ullas@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_nu
mber`,`email`)VALUES(11,'Chethan','male',DATE('1986-10-
09'),'Mandya','Kallahalli','9880621815','chethan@test.com');

```

Delete from employee where emp_id=1;

ii. Design a database using MYSQL to search for specified entries in an application based data management system.

```

Create DATABASE IF NOT EXISTS data_management CHARACTER SET latin1
COLLATE latin1_swedish_ci;
SHOW DATABASES;
usedata_management;
CREATE TABLE IF NOT EXISTS `Employee` ( `emp_id` INT auto_increment ,
`full_name` VARCHAR(150) NOT NULL , `gender` VARCHAR(6) , `date_of_birth` DATE ,
`physical_address` VARCHAR(255) , `postal_address` VARCHAR(255) , `contact_number`
VARCHAR(75) , `email` VARCHAR(255) , PRIMARY KEY (`emp_id`) ) ENGINE =
InnoDB;
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_nu
mber`,`email`)VALUES(1,'Anil','Male',DATE('1987-12-
16'),'Mandya','Amarvathi','9880621815',
'anil.test@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_nu
mber`,`email`)VALUES(2,'Radhika','Female',DATE('1986-10-
09'),'Mandya','Kallahalli','9880621815','radhika@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_nu

```

```
mber`,`email`)VALUES(3,'Ullas','male',DATE('1990-10-09'),'Mandya','Kallahalli','9880621815','ullas@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_number`,`email`)VALUES(4,'Chethan','male',DATE('1989-10-09'),'Mandya','Kallahalli','9880621815','chethan@test.com');
```

SELECT * FROM data_management.employee where full_name like '%ull%';

SELECT * FROM data_management.employee where emp_id = 4;

SELECT * FROM data_management.employee where date_of_birth =Date('1986-10-09');

iii. Design a database using to update/ over write entries in an application based management system.

```
Create DATABASE IF NOT EXISTS data_management CHARACTER SET latin1
COLLATE latin1_swedish_ci;
SHOW DATABASES;
usedata_management;
CREATE TABLE IF NOT EXISTS `Employee` ( `emp_id` INT auto_increment ,
`full_name` VARCHAR(150) NOT NULL , `gender` VARCHAR(6) , `date_of_birth` DATE ,
`physical_address` VARCHAR(255) , `postal_address` VARCHAR(255) , `contact_number`
VARCHAR(75) , `email` VARCHAR(255) , PRIMARY KEY (`emp_id`) ) ENGINE =
InnoDB;
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_number`,`email`)VALUES(1,'Anil','Male',DATE('1987-12-16'),'Mandya','Amarvathi','9880621815','anil.test@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_number`,`email`)VALUES(2,'Radhika','Female',DATE('1986-10-09'),'Mandya','Kallahalli','9880621815','radhika@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_number`,`email`)VALUES(3,'Ullas','male',DATE('1990-10-09'),'Mandya','Kallahalli','9880621815','ullas@test.com');
INSERT INTO `data_management`.`employee`
(`emp_id`,`full_name`,`gender`,`date_of_birth`,`physical_address`,`postal_address`,`contact_number`,`email`)VALUES(4,'Chethan','male',DATE('1989-10-09'),'Mandya','Kallahalli','9880621815','chethan@test.com');
```

UPDATE `data_management`.`employee` SET `physical_address` = 'Mysore' WHERE (`emp_id` = '2');