



**ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ**  
( ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ )

**BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT**  
(Autonomous Under VTU)

(Accredited By National Assessment & Accreditation Council (NAAC))

(Approved by AICTE, New Delhi & Affiliated to Visvesvaraya Technological University, Belagavi)  
Doddaballapura Main Road, Avalahalli, Yelahanka, Bengaluru-560119

## WEB TECHNOLOGY LABORATORY MANUAL(BCSL504)

[As per Choice Based Credit System (CBCS) scheme]

(Effective from the academic year 2024-2025)

**SEMESTER – V**

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### VISION AND MISSION OF THE CS&E DEPARTMENT

#### **Vision**

To develop technical professionals acquainted with recent trends and technologies of computer science to serve as valuable resource for the nation/society.

#### **Mission:**

Facilitating and exposing the students to various learning opportunities through dedicated academic teaching, guidance and monitoring.

### VISION AND MISSION OF THE INSTITUTE

#### **Vision**

**To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.**

**Mission:**

1. Designing a simple GUI interface to simulate a calculator using HTML to take the input from the user (Operands and operator) and a JavaScript to implement the operations like addition, subtraction, multiplication and division.
2. Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays "TEXTSHRINKING" in BLUE colour. Then the font size decreases to 5pt.
3. Develop an HTML5 file that includes JavaScript to demonstrate the following functions
  - a. Read a string input and find the position of the left-most vowel.
  - b. Read a number with its digits and print it in a reverse order.
4. Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Programme, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.
5. Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.
6. Write a PHP program to display a digital clock which displays the current time of the server.
7. Write a PHP program named states.py that declares a variable states with value "Mississippi Alabama Texas Massachusetts Kansas" write a PHP program that does the following:
  - a. Search for a word in variable states that ends in xas. Store this word in element 0 of a list named states List.
  - a. Search for a word in states that begins with k and ends in s. Perform a case-insensitive comparison. Store this word in element1 of the list.
  - b. Search for a word in states that begins with M and ends in s. Store this word in element2 of the list.
  - c. Search for a word in states that ends in a. Store this word in element3 of the list.
8. Write HTML and PHP program to insert/delete/display student records in the database and display the appropriate message in the web page. (Design HTML interface for getting user choice to create/delete/display).

**Course Outcomes: The students will be able to:**

**CO1:** Apply the concepts of mark-up languages CSS and JavaScript in developing dynamic web pages.

**CO2:** Compare client side and server side concepts and apply server side concepts to create dynamic web pages using PHP.

**CO3:** Develop a web application project using HTML, CSS, JavaScript, PHP and database.

**CO-PO Correlation Mapping**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3												2	
CO-2		3											2	
CO-3			3	3	3			3	3	3	2	3	3	

**Alternate Assessment Tools (AATs) suggested: Mini-Project using appropriate framework.**

Professional Core Course Laboratory (PCCL) Course – 01 Credit			
1	CIA	20 Marks	Record -10 Observation – 5 Viva – 5
2	Internal Assessment Test	15 Marks	Average of 2 test out of 15 Marks
3	Mini-Project	15 Marks	Project Demo with report submission
	<b>Total Marks</b>	<b>50 Marks</b>	

**PROGRAM 1:**

**Desing a simple GUI interface to simulate a calculator using HTML to take the input from the user (Operands and operator) and a JavaScript to implement the operations like addition, subtraction, multiplication and division..**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Program 1</title>
  <style>
    * {
      font-size: 25px;
      padding: 10px;
    }

    table, td, th
    {
      border: 1px solid blue;
      width: 33%;
      text-align: center;
      background-color: darkkhaki;
    }
    table {
      margin: auto;
    }
    input {
      text-align: center;
      width: 300px;
    }
  </style>
</head>
<body>
  <script type="text/javascript">
    function calculate(id)
    {
      var val1 = parseFloat(document.getElementById("value1").value);
      var val2 = parseFloat(document.getElementById("value2").value);
      var result = 0;
      if (isNaN(val1) || isNaN(val2))
```

```

{
    document.getElementById("answer").value = "Error!";
    document.getElementById("answer").style.color = "red";
    document.getElementById("answer").style.backgroundColor = "yellow";
}
else
{
    if (id == "+")
    {
        result = val1 + val2;
    }
    else
        if (id == "-")
        {
            result = val1 - val2;
        }
        else
            if (id == "*")
            {
                result = val1 * val2;
            }
            else
                if (id == "/")
                {
                    result = val1 / val2;
                }

    document.getElementById("answer").style.backgroundColor = "green";
    document.getElementById("answer").style.color = "white";
    document.getElementById("answer").value = result;
}
}
function cls()
{
    document.getElementById("answer").style.backgroundColor = "white";
    clsdis("answer");
    clsdis("value2");
    clsdis("value1");
}

```

**function clsdis(id)**

```

{
    document.getElementById(id).value = "";
}
</script>
<table>
    <tr>
        <th colspan="4">SIMPLE CALCULATOR</th>
    </tr>
    <tr>
        <td>Value 1</td>
        <td><input type="number" id="value1"></td>
    </tr>
    <tr>
        <td>Value 2</td>
        <td><input type="number" id="value2"></td>
    </tr>
    <tr>
        <td><input type="button" value="Addition" id="+"
onclick="calculate(this.id)"></td>
        <td><input type="button" value="Subtraction" id="-"
onclick="calculate(this.id)"></td>
    </tr>
    <tr>
        <td><input type="button" value="Division" id="/"
onclick="calculate(this.id)"></td>
        <td><input type="button" value="Multiplication" id="*"
onclick="calculate(this.id)"></td>
    </tr>
    <tr>
        <td>Answer: </td>
        <td><input type="text" id="answer" value="" disabled></td>
    </tr>
    <tr>
        <td colspan="2"><input type="button" value="Clear Values" id="cls"
onclick="cls()"></td>
    </tr>
</table>
</body> </html>

```

**PROGRAM 2:**

**Write a JavaScript code that displays text “TEXT-GROWING” with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays “TEXTSHRINKING” in BLUE color. Then the font size decreases to 5pt.**

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Program - 3</title>
  <style>
    p {
      position: absolute;
      top: 50%;
      left: 50%;
      transform: translate(-50%, -50%);
    }
  </style>
</head>

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

    var grow = setInterval(growing, 1000);
    var font_size = 5;
    var p = document.getElementById("demo");
    function growing()
    {
      p.innerHTML = "TEXT GROWING";
      p.setAttribute('style', "font-size: " + font_size + "px; color:red");
      font_size += 5;
      if (font_size >= 50)
      {
        clearInterval(grow);
        shrink = setInterval(shrinking, 1000);
      }
    }
    function shrinking()
    {
      font_size -= 5;
      p.innerHTML = 'TEXT SHRINKING';
```

```
        p.setAttribute('style', "font-size:" + font_size + "px; color: blue");
        if (font_size === 5)
        {
            clearInterval(shrink);
            grow = setInterval(growing, 1000);
        }
    }
</script>
</body>
</html>
```



**PROGRAM 3:**

**Develop an HTML5 file that includes JavaScript to demonstrate the following functions**

- a. Read a string input and find the position of the left-most vowel.**
- b. Read a number with its digits and print it in a reverse order**

```

.<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Program - 4</title>
</head>
<body>
  <script type="text/javascript">
    var str = prompt("Enter the Input (either a Number or a String)", "");
    if (!isNaN(str))
    {
      var num, rev = 0, remainder;
      num = parseInt(str);
      while (num != 0)
      {
        remainder = num % 10;
        num = parseInt(num / 10);
        rev = rev * 10 + remainder;
      }
      alert("Reverse of " + str + " is " + rev);
    }
    else
    {
      str = str.toUpperCase();
      for (var i = 0; i < str.length; i++)
      {
        var chr = str.charAt(i);
        if (chr == 'A' || chr == 'E' || chr == 'I' || chr == 'O' || chr == 'U')
          break;
      }
      if (i < str.length)
        alert("The position of the left most vowel is " + (i + 1));
      else
        alert("No vowel found in the entered string: " + str);
    }
  </script>
</body></html>

```

**PROGRAM 4:**

**Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Programme, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.**

**Pro4.css**

```
*{
  display: block; font-size: 20px; margin-left: 15px;
}
USN
{
  color: blue;
  font-size: 30px;
  margin-top: 20px;
  margin-left: -5px;
}
```

**Pro4.xml**

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/css" href="pro5.css"?>
<STUDENTDATA>
  <STUDENT>
    <USN>USN : 1BY18CS404</USN>
    <NAME>NAME : K B HEMANTH RAJ</NAME>
    <COLLEGE>COLLEGE : BMSIT</COLLEGE>
    <BRANCH>BRANCH :CSE</BRANCH>
    <YEAR>YEAR : 2018</YEAR>
    <EMAIL>E-MAIL : futurevisionbie@gmail.com</EMAIL>
  </STUDENT>
  <STUDENT>
    <USN>USN : 1BY18CS413</USN>
    <NAME>NAME : ABDUL</NAME>
    <COLLEGE>COLLEGE : BMSIT</COLLEGE>
    <BRANCH>BRANCH :CSE</BRANCH>
    <YEAR>YEAR : 2018</YEAR>
    <EMAIL>E-MAIL : Abdul@gmail.com</EMAIL>
  </STUDENT>
  <STUDENT>
    <USN>USN : 1BY18CS419</USN>
    <NAME>NAME : PUNITH</NAME>
    <COLLEGE>COLLEGE : BMSIT</COLLEGE>
    <BRANCH>BRANCH :CSE</BRANCH>
    <YEAR>YEAR : 2018</YEAR>
    <EMAIL>E-MAIL : punith@gmail.com</EMAIL>
  </STUDENT>
</STUDENTDATA>
```

## PROGRAM 5:

**Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.**

```
<?php
    echo "<h1> REFRESH PAGE </h1>" ;
    $file = 'count.txt' ;
    $c = file_get_contents($file) ;
    file_put_contents($file, $c+1);
    echo "The number of users visited : ".$c ;
?>
```

**PROGRAM 6:**

**Write a PHP program to display a digital clock which displays the current time of the server.**

```
<head>
  <meta http-equiv="refresh" content="1"/>
  <style>
    p
    {
      color:white;
      font-size:40px;
      position:absolute;
      top: 40%;
      left: 50%;
      transform: translate(-50%, -50%);
    }
    body
    {
      background-color:black;
    }
  </style>
  <p>
    <?php
      date_default_timezone_set("Asia/Calcutta"); //India time (GMT+5:30)
      echo date(" h: i : s A");
    ?>
  </p>
</head>
```

**PROGRAM 7:**

**Write a PHP program named states.py that declares a variable states with value "Mississippi Alabama Texas Massachusetts Kansas". write a PHP program that does the following:**

- Search for a word in variable states that ends in xas. Store this word in element 0 of a list named statesList.**
- Search for a word in states that begins with k and ends in s. Perform a case-insensitive comparison. [Note: Passing re.I as a second parameter to method compile performs a case-insensitive comparison.] Store this word in element1 of statesList.**
- Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list.**
- Search for a word in states that ends in a. Store this word in element 3 of the list.**

```
<html>
<body>
    <?php
        $states = "Mississippi Alabama Texas Massachusetts Kansas";
        $b = explode(' ', $states);
        echo "<br>ORIGINAL ARRAY :<br>";
        foreach ( $b as $i => $value )
            echo "states[$i] = $value<br>";
        foreach ($b as $c)
        {
            $n = strlen($c);
            if($c[$n-1]=='s' && $c[$n-2]=='a' && $c[$n-3]=='x')
                $d[0] = $c;
            if($c[0]=='K' && $c[$n-1]=='s')
                $d[1] = $c;
            if($c[0]=='M' && $c[$n-1]=='s')
                $d[2] = $c;
            if($c[$n-1]=='a')
                $d[3] = $c;
        }
        echo "<br>RESULTANT ARRAY :<br>";
        for ($i=0; $i < count($d); $i++)
            echo "statesList[$i] = $d[$i]<br>";
    ?>
</body>
</html>
    }
```

### **PROGRAM 8:**

Write HTML and PHP program to insert/delete/display student records in the database and display the appropriate message in the web page. (Design HTML interface for getting user choice to create/delete/display).

**WEBLAB:**

```
-- phpMyAdmin SQL Dump
-- version 4.8.5
-- https://www.phpmyadmin.net/
--
-- Host: 127.0.0.1
-- Generation Time: Nov 09, 2020 at 06:05 AM
-- Server version: 10.1.38-MariaDB
-- PHP Version: 7.3.2
```

```
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
SET AUTOCOMMIT = 0;
START TRANSACTION;
SET time_zone = "+00:00";
```

```
/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8mb4 */;
```

```
--
```

```
-- DATABASE: `WEBLAB`
```

```
--
```

```
-- Table structure for table `student`
```

```
--
```

```
CREATE TABLE `student` (
  `usn` varchar(20) NOT NULL,
  `name` varchar(20) NOT NULL,
  `marks` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
--
```

```
-- Dumping data for table `student`
```

```
--
```

```
INSERT INTO `student` (`usn`, `name`, `marks`) VALUES
('1BY18CS404', 'HEMANTH', 39),
('1BY18CS413', 'MD ABDUL', 38),
('1BY18CS419', 'PUNITH', 27),
('1BY18CS425', 'Shah Harsh', 29);
```

COMMIT;

```
/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;  
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;  
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
```