## SRI KRISHNA INSTITUTE OF TECHNOLOGY

(Accredited by NAAC, Approved by A.I.C.T.E. New Delhi, Recognised by Govt. of Karnataka & Affiliated to V.T U., Belagavi) #29, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bengaluru- 560090

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



## LABORATORY MANUAL

## WEB PROGRAMMING (21CSL481)

(Effective from the academic year 2022 -2023)



# Prepared by **Prof. Imran Ulla Khan (PhD)**

Department of Computer Science & Engineering
Sri Krishna Institute of Technology

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#29, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bengaluru -560 090

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## Vision and Mission of the Institution

## Vision

"To create a community of knowledgeable and competent engineers to embody global standards of excellence and drive innovation and progress in industries, businesses, and research organizations around the world."

### Mission

"To facilitate an inclusive and supportive learning environment that fosters collaboration, creativity, and the pursuit of excellence in engineering."

## Vision and Mission of the CSE Department

## Vision

To be in the frontier of Computer Science & Engineering and to create technically competent graduates with ethical, moral values committed to meet Industry and Societal needs.

### Mission

M1: To produce ethical, motivated, and skilled engineers through theoretical knowledge and practical applications.

M2: Inculcate problem solving and team building skills and promote lifelong learning with a sense of societal responsibilities.

M3: To facilitate functional ambience for research, consultancy and entrepreneurship.



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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

	Program Outcomes							
a.	<b>Engineering Knowledge:</b> Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.							
b.	<b>Problem Analysis: Identify,</b> formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences							
c.	<b>Design/ Development of Solutions</b> : Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societaland environmental considerations.							
d.	<b>Conduct investigations of complex problems</b> using research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.							
e.	Modern Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to Complex engineering activities with an under-standing of the limitations.							
f.	The Engineer and Society: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the Consequent responsibilities relevant to professional engineering practice.							
g.	Environment and Sustainability: Understand the impact of professional Engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.							
h.	Ethics: Apply ethical principles and commit to professional ethics and Responsibilities and norms of engineering practice.							
i.	<b>Individual and Team Work:</b> Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.							
j.	<b>Communication:</b> Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.							
k.	<b>Life-long Learning:</b> Recognize the need for and have the preparation and ability to engage in independent and life- long learning in the broadest context of technological change.							
l.	<b>Project Management and Finance:</b> Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in Multi-disciplinary environments.							
Pro	gram Specific Outcomes							
m.	<b>PSO1</b> : Model computational problems by applying mathematical concepts and design solutions using suitable data structures & algorithmic techniques.							
n.	<b>PSO2</b> : Demonstrate basic knowledge of computer science in efficient design of problem solutions of varying complexity.							
0.	<b>PSO3</b> : Create career path to become a successful computer science professional, entrepreneur and relish for higher studies.							

1a. a. Create a page using html tags to accomplish the following:

- i. A paragraph containing text "All that glitters is not gold". Bold face and italicize this text
- ii. Put a background image to a page and demonstrate all attributes of background image
- iii. Create unordered list of 5 fruits and ordered list of 3 flowers
- iv. Create a equation:  $X=1/3(y_1^2+z_1^2)$
- v. Demonstrate different heading tags

<br/>b><i>All that glitters is not gold</i></b>

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release f Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker **<b/>b><i>All that glitters** is not gold **</i>>** including versions of Lorem Ipsum.

>

It is a long established fact that a reader will be distracted by the readable content **<b><i>**All that glitters is not gold**</i>**<**/b>** of a page when looking at its layout. The point of using Lorem Ipsum is that it has a more-or-less normal distribution of letters **<b><i>**All that glitters is not gold**</i>**<**/b>** 

<h1>Unordered list</h1>

```
<h2>Fruits</h2>
\langle ul \rangle
        Apple
        Mango
        Pineapple
        Watermelon
        Orange
<h1>Ordered list </h1>
<h2>Flowers</h2>

    type="i">

        Rose
        Lotus
        Sun flower
\langle i \rangle x \langle /i \rangle = 1/3(\langle i \rangle y \langle /i \rangle \langle sub \rangle 1 \langle /sub \rangle \langle sup \rangle 2 \langle /sup \rangle + \langle i \rangle z \langle /i \rangle \langle sub \rangle 1 \langle /sub \rangle \langle sup \rangle 2 \langle /sup \rangle)
<h1>Welcome to AEC WT</h1>
<h2>Welcome to AEC WT</h2>
<h3>Welcome to AEC WT</h3>
<h4>Welcome to AEC WT</h4>
<h5>Welcome to AEC WT</h5>
<h6>Welcome to AEC WT</h6>
</body>
</html>
```

#### Unordered list

#### Feuits

#### Ordered list

#### Flowers

Welcome to AEC WT

Welcome to AEC WT

Welcome to AEC WT.

Welrome to AEC WE

Welcome to AEC WY



2

## b. Create a following form using HTML and CSS

```
<html>
<head>
<title> Program 1b</title>
<style>
.container{
       background-color: pink;
       width:25%;
       padding:25px;
    }
button {
    background-color: orange;
    width: 40%;
    color: white;
    padding: 15px;
    margin: 10px 0px;
    border: none;
    cursor: pointer;
input[type=text], input[type=password] {
    width: 90%;
    margin: 8px 0;
    padding: 12px 20px;
button:hover {
    opacity: 0.2;
</style>
</head>
<body>
  <form>
    <div class="container">
       <center><h2> Sign up today </h2> </center>
       <label>Name: </label> </br>
       <input type="text"> </br>
       <label>E-mail: </label> </br>
       <input type="text"> </br>
       <label>Password : </label> </br>
       <input type="password"> </br>
       <label>Confirm password : </label> </br>
       <input type="password"> </br>
       <button type="submit">Register</button>
    </div>
```



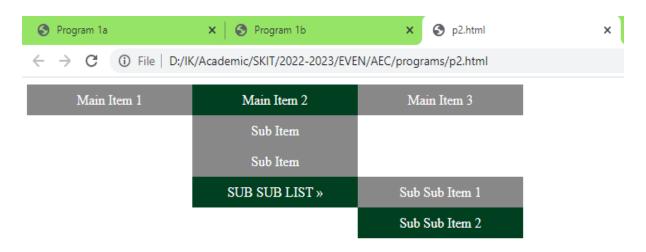
2. How can you create a menu bar in HTML and CSS that displays a hovering submenu when a user hovers over a main menu item, and includes CSS effects such as transitions or animations.

```
<html>
<body>
<style>
#nav {
    list-style: none;
    margin: 0;
    padding: 0;
    text-align: center;
}
#nav ul {
    position: absolute;
    padding: 0;
    left: 0;
    display: none;
}
```

```
#nav li {
    display: block;
    position: relative;
    float: left;
    background: #C8C8C8;
  }
    #nav li a {
    display: block;
    padding: 0;
    text-decoration: none;
    width: 200px;
    line-height: 35px;
    color: #ffffff;
    #nav li:hover {
    background: #003f20;
    #nav li:hover ul {
    display: block;
    #nav li:hover ul ul {
    display: none;
  }
    #nav li li:hover ul {
    display: block;
    margin-left: 200px;
    margin-top: -35px;
  }
</style>
</head>
<a href="#">Main Item 1</a>
  <a href="#">Main Item 2</a>
    ul>
      <a href="#">Sub Item</a>
      <a href="#">Sub Item</a>
      <a href="#">SUB SUB LIST »</a>
        \langle ul \rangle
           <a href="#">Sub Sub Item 1</a>
             <a href="#">Sub Sub Item 2</a>
```

```
<a href="#">Main Item 3</a>

</body>
</html>
```



3. Design a timetable using HTML table elements, and how can you apply CSS styling to improve the visual presentation of the timetable?

```
<html>
<style>
td{
height:50px;
</style>
<body>
   <center><h1>TIME TABLE</h1></center>
   <b>Day/Period</b>
       <b>I<br/>br>9:00-9:55</b>
       <b>II<br/>br>9:55-10:50</b>
       <b>10:50<br>11:00</b>
       <b>III<br/>br>11:00-11:55</b>
       <b>IV<br/>br>11:55-12:50</b>
       <b>12:50 <br>1:30</b>
       <b>V<br>>1:30-2:30</b>
       <br/>b>VI<br/>br>2:30-3:25</b>
       <b>VII<br>>3:25-4:30</b>
```

```
<b>Monday</b>
  <b>Maths</b>
  <b>WT</b>
  <b>T<br>E<br>A<br></b>
  <b>ADA</b>
  <b>OS</b>
  <b>L<br>V<br>V<br>C<br>H<br></b>
  <b>LAB</b>
  <b>Tuesday</b>
  <b>Maths</b>
  <b>WT</b>
  <b>ADA</b>
```

```
<b>OS</b>
 <b>OS</b>
 <b>OS</b>
 <b>ADA</b>
 <b>Wednesday</b>
 <b>Maths</b>
 <b>WT</b>
 <b>ADA</b>
 <b>OS</b>
 <b>ACTIVITY</b>
 <b>Thursday</b>
```

```
<b>Maths</b>
  <b>WT</b>
  <b>LAB</b>
  <b>MATHS</b>
  <b>ADA</b>
 <b>UHV</b>
  <b>Friday</b>
  <b>Maths</b>
 <b>WT</b>
  <b>ADA</b>
  <b>OS</b>
  <b>LAB</b>
```

```
<b>Saturday</b>
   <b>Maths</b>
   <b>WT</b>
   <b>ADA</b>
   <b>OS</b>
   </body>
</html>
```

## TIME TABLE

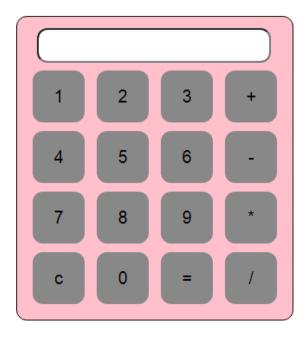
Day/Period	I 9:00-9:55	II 9:55-10:50	10:50 11:00	III 11:00-11:55	IV 11:55-12:50	12:50 1:30	V 1:30-2:30	VI 2:30-3:25	VII 3:25-4:30
Monday	Maths	WT		ADA	os		LAB		
Tuesday	esday Maths WT			ADA	os		os	os	ADA
Wednesday	Maths	WT	T E	ADA	os	L U	ACTIVITY		
Thursday	Maths	WT	A	LAB		N C H	MATHS	ADA	UHV
Friday	Maths	WT		ADA	os		LAB		
Saturday	rday Maths WT		ADA	os					

# 4. Create following calculator design with division tag of HTML, use CSS classes and attributes to style the calculator

```
<html>
<head>
<title>Program 4</title>
<style>
 input[type=button] {
 width: 60px;
 height: 60px;
 margin: 5px;
 background: #888;
 font-size: 20px;
 border:none;
 border-radius:12px;
}
#display {
 width: 270px;
 height: 40px;
 background-color: white;
 border-radius:12px;
 margin-left:10px;
}
table {
 border: 1px solid black;
 border-collapse: separate !important;
 background-color: pink;
 border-radius:12px;
 padding:10px;
}
```

```
</style>
</head>
<body>
>
             <input type="text" id="display"> <br>
      <input type="button" value=" 1 " >
             <input type="button" value=" 2 " >
             <input type="button" value=" 3 " >
             <input type="button" value=" + " >
      <br>>
             <input type="button" value=" 4 " >
             <input type="button" value=" 5 " >
             <input type="button" value=" 6 " >
             <input type="button" value=" - ">
      <br>
             <input type="button" value=" 7 " >
             <input type="button" value=" 8 " >
             <input type="button" value=" 9 " >
             <input type="button" value=" * " >
      <br>
             <input type="button" value=" c " >
             <input type="button" value=" 0 " >
             <input type="button" value=" = " >
```

## **OUTPUT**



5. Create a HTML web page that includes a header, a navigation menu, a main content area, and a footer. The navigation menu should include links to different sections of the webpage. The main content area should be two column, one column should include at least two paragraphs of text, an image, and a table with some sample data. Other column should contain some scrolling text. The footer should include some copyright information and social media links.

6. 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, Branch, 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.

## p6.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/css" href="p6.css"?>
<student_information>
<head1>Student Information</head1>
<head2>First Student Information</head2>
<ad><label>USN:</label><usn>1KT21CS120</usn></ad>
<ad><label>NAME:</label><name>Virat</name></ad>
<ad><label>COLLEGE:</label><college>SKIT</college></ad>
<ad><label>BRANCH:</label><branch>CSE</branch></ad>
<ad><label>YEAR:</label><year>2021</year></ad>
<ad><label>EMAIL:</label><email>virat@gmail.com</email></ad>
<head2>Second Student Information</head2>
<ad><label>USN:</label><usn>1KT21CS121</usn></ad>
<ad><label>NAME:</label><name>Raj Singh</name></ad>
<ad><label>COLLEGE:</label><college>SKIT</college></ad>
<ad><label>BRANCH:</label><branch>CSE</branch></ad>
<ad><label>YEAR:</label><year>2021</year></ad>
<ad><label>EMAIL:</label><email>rajsingh@gmail.com</email></ad>
<head2>Third Student Information</head2>
<ad><label>USN:</label><usn>1KT21CS123</usn></ad>
<ad><label>NAME:</label><name>Mohan Kumar</name></ad>
<ad><label>COLLEGE:</label><college>SKIT</college></ad>
<ad><label>BRANCH:</label><branch>CSE</branch></ad>
```

```
<ad><label>YEAR:</label><year>2021</year></ad>
<ad><label>EMAIL:</label><email>mohan@gmail.com</email></ad>
</student_information>
P6.css
head1{
       font-size:16pt;color:blue;
}
head2{
       display:block;
       font-size:16pt;
       color:green;
       text-decoration:underline;
}
ad{
       display:block;
}
label{
       font-weight:bold;
       color:blue;
}
usn{
       font-size:14pt;
       color:red;
}
name{
       font-size:14pt;
       color:red;
}
college{
       font-size:14pt;
       color:red;
}
branch{
       font-size:14pt;
       color:red;
year{
       font-size:14pt;
       color:red;
}
email{
       font-size:14pt;
```

```
color:red;
```

}

## **OUTPUT**

**Student Information** 

First Student Information

USN:1KT21CS120

NAME: Virat

COLLEGE:SKIT

BRANCH:CSE

YEAR:2021

EMAIL:virat@gmail.com

Second Student Information

USN:1KT21CS121

NAME:Raj Singh

COLLEGE:SKIT

BRANCH:CSE

YEAR:2021

EMAIL:rajsingh@gmail.com

Third Student Information

USN:1KT21CS123

**NAME:**Mohan Kumar

COLLEGE:SKIT

BRANCH:CSE

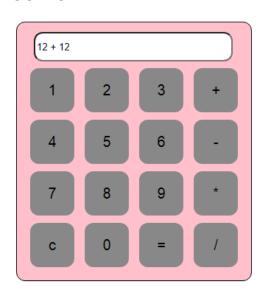
YEAR:2021

EMAIL:mohan@gmail.com

# 7. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

```
<html>
<head>
<title>Program 7</title>
<style>
 input[type=button] {
 width: 60px;
 height: 60px;
 margin: 5px;
 background: #888;
 font-size: 20px;
 border:none;
 border-radius:12px;
}
input[type=button]:hover {
 background: #CCC;
 cursor:pointer;
}
#display {
 width: 270px;
 height: 40px;
 background-color: white;
 border-radius:12px;
 margin-left:10px;
}
table {
 border: 1px solid black;
 border-collapse: separate !important;
```

```
background-color: pink;
 border-radius:12px;
 padding:10px;
</style>
</head>
<body>
<form name="Calculator">
<input type="text" id="display" name="Input">
      <br>>
      <input type="button" value=" 1 " OnClick="Calculator.Input.value += '1"'>
             <input type="button" value=" 2 " OnCLick="Calculator.Input.value += '2"'>
             <input type="button" value=" 3 " OnClick="Calculator.Input.value += '3"'>
             <input type="button" value=" + " OnClick="Calculator.Input.value += ' + "'>
      <br>
             <input type="button" value=" 4 " OnClick="Calculator.Input.value += '4"'>
             <input type="button" value=" 5 " OnClick="Calculator.Input.value += '5"'>
             <input type="button" value=" 6 " OnClick="Calculator.Input.value += '6'">
             <input type="button" value=" - " OnClick="Calculator.Input.value += '-">
      <br/>br>
             <input type="button" value=" 7 " OnClick="Calculator.Input.value += '7'">
              <input type="button" value=" 8 " OnClick="Calculator.Input.value += '8'">
```



8. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.

```
<html>
<head>
      <title>Program 8</title>
<style>
table{
 width:300px;
text-align:center;
 border:2px solid #000;
 background-color:#c8c8c8;
margin:0 auto;
}
td{
height:35px;
}
.wrapper{
text-align:center;
}
</style>
</head>
<body>
<div class="wrapper">
<h2>Squares and Cubes of the numbers from 0 to 10</h2>
<script>
document.write("");
document.write( " Number Square Cube ");
for(var n=0; n<=10; n++)
{
```

```
document.write( "" + n + "" + n*n + "" + n*n*n + "" );

document.write( "" );

</script>
</div>
</body>
</html>
```

## Squares and Cubes of the numbers from 0 to 10

Number	Square	Cube
0	0	0
1	1	1
2	4	8
3	9	27
4	16	64
5	25	125
6	36	216
7	49	343
8	64	512
9	81	729
10	100	1000

## 9. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the

following problems:

a. Parameter: A string

b. Output: The position in the string of the left-most vowel

c. Parameter: A number

d. Output: The number with its digits in the reverse order

```
<html>
<head>
<script>
function vowel(st)
{
       var pos;
       pos=st.search(/[aeiouAEIOU]/);
       if(pos<0)
              alert("pattern not found\n");
       else
              document.write("Position of the left most vowel is ",(pos+1));
}
</script>
<script>
function rev(n)
{
       var temp=0,rev=0;
       while(n>0)
       {
              temp=n%10;
              rev=rev*10+temp;
              n=n/10;
              n=parseInt(n);
       }
```

```
alert("The Reverse number is:"+rev); }
</script>
</head>
<body>
<form>
Enter the text
<input type="text" id="voweltext"/>
<input type="button" value="Click here" onclick="vowel(voweltext.value);"/>
Enter the number
<input type="text" id="revno"/>
<input type="button" value="Click here" onclick="rev(revno.value);"/>
</form>
</body>
</html>
OUTPUT
Enter the text
 skit
                            Click here
Enter the number
                            Click here
```

10. Create a webpage containing 3 overlapping images using HTML, CSS and JS. Further when the mouse is over any image, it should be on the top and fully displayed.

```
.im2 {
       position: absolute;
       left: 30%; top: 30%;
       z-index: 1;
}
.im3 {
       position: absolute;
       left: 50%; top: 50%;
       z-index: 2;
</style>
<script>
       var topIndex = 2;
       function moveToTop(picture) {
       picture.style.zIndex = ++topIndex;
}
</script>
</head>
<body><div>
       <h1>Image Overlap Demo</h1>
       <div id="image-container">
       <img id="im1" class="im1" src="1.jpg" onmouseover="moveToTop(this)" width="</pre>
400" height="300">
       <img id="im2" class="im2" src="2.jpg" onmouseover="moveToTop(this)" width="
400" height="300">
       <img id="im3" class="im3" src="3.jpg" onmouseover="moveToTop(this)"
width="400" height="300">
</div>
</body>
</html>
```

