

SACRED HEART COLLEGE
(AUTONOMOUS)



B.Sc. COMPUTER APPLICATIONS

PRACTICAL RECORD

*Name*_____

*Class*_____ *Roll No.* _____

*Reg. No.*_____ *Year*_____

Certified that this is a bonafide record of practical work done in
_____ *of B.Sc. Computer Application Course during the*
*period*_____.

(Office Seal)

Lecture in charge

*Submitted for the University Practical Examination held on*_____ *20*__

Date:

External Examiner

Contents

1	Simple Html Page	4
1.1	Aim	4
1.2	Code	4
1.3	Output	6
2	Time Table	7
2.1	Aim	7
2.2	Code	7
2.3	Output	9
3	css	10
3.1	aim	10
3.2	code	10
3.3	output	12
4	form	13
4.1	aim	13
4.2	Code	13
4.3	Output	14
5	Semester Re-registration Webpage	15
5.1	Aim	15
5.2	Code	15
5.3	Output	16
6	Profit or Loss	17
6.1	Aim	17
6.2	Code	17
6.3	Output	18
7	Electrical Connection Form	19
7.1	Aim	19
7.2	Code	19
7.3	Output	20
8	Word Search	21
8.1	Aim	21
8.2	Code	21
8.3	Output	22
9	Prime and Armstrong	23
9.1	Aim	23
9.2	Code	23
9.3	Output	24
10	Prime and Armstrong	25
10.1	Aim	25
10.2	Code	25
10.3	Output	26
11	Fibonacci Series	27
11.1	Aim	27
11.2	Code	27
11.3	Output	27

12 University Login	28
12.1 Aim	28
12.2 Code	28
12.3 Output	29
13 First Vowel	30
13.1 Aim	30
13.2 Code	30
13.3 Output	30
14 Basic Calculator	31
14.1 Aim	31
14.2 Code	31
14.3 Output	32

1 Simple Html Page

1.1 Aim

- Design a webpage for your department.
- Utilize paragraphs and lists.
- Create links of the words Wifi and LAN to their respective wikipedia pages
- Insert an image that redirects to the college website
- Change the background color and create a link at the bottom to return to the top

1.2 Code

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>
5        Simple Html Page
6      </title>
7      <style>
8        body {
9          font-family: Arial, Helvetica, sans-serif;
10         background: #eff1f5;
11         color: #4c4f69;
12         font-size: 1.3em;
13       }
14       body::-webkit-scrollbar { display: none;}
15       .container {
16         display: flex;
17         flex-direction: column;
18         justify-content: center;
19         align-items: center;
20         background-color: #e6e9ef;
21         border-radius: 8px;
22         padding: 0.5em;
23         gap: 3px;
24       }
25       .dark {
26         background-color: #dce0e8;
27       }
28       a {
29         color: #dc8a78;
30       }
31       #college-img {
32         background-image: url('https://www.shcollege.ac.in/wp-content/uploads/2020/11_
33           ↪ /mc-scaled.jpg');
34         background-repeat: no-repeat;
35         background-position: center;
36         width: 90vw;
37         height: 50vh;
38         border-radius: inherit;
39       }
40       li {
41         margin-right: 0.9em;
42       }
43     </style>
```

```

43 </head>
44 <body>
45   <a id="top"></a>
46   <div class="container">
47     <h1>
48       <u>The Computer Science Department</u>
49     </h1>
50     <p>
51       The <b>Computer Science Department</b> of Sacred Heart College, Thevara was
52       ↳ established in 2001.
53       And since have molded industry leading professionals. Orientations are held
54       ↳ periodically to discuss advancements and
55       rising trends in the field enabling understanding of cutting-edge
56       ↳ technologies. Students are provided with campus wide
57       <a href="https://en.wikipedia.org/wiki/Wi-Fi">Wi-Fi</a> available to their
58       ↳ portable devices and Computer Systems
59       constituting a <a
60       ↳ href="https://en.wikipedia.org/wiki/Local_area_network">Local Area
61       ↳ Network</a>
62     </p>
63     <p style="font-weight: 550;">
64       The Department offers the following programs:
65       <div class="container dark">
66         <ul>
67           <li><b>B.Sc. Computer Applications</b> (Triple Main incl. Mathematics &
68           ↳ Statistics)</li>
69           <li><b>B. Computer Applications</b> (BCA: Mobile Applications and Cloud
70           ↳ technologies)</li>
71           <li><b>M. Sc. Integrated Computer Science</b> (Data Science)</li>
72         </ul>
73       </div>
74     </p>
75     <a id="college-img" href="https://www.shcollege.ac.in/">
76     </a>
77     <a href="#top" style="margin-top: 10px;">Back to top</a>
78   </div>
79 </body>
80 </html>

```

1.3 Output

The Computer Science Department

The **Computer Science Department** of Sacred Heart College, Thevara was established in 2001. And since have molded industry leading professionals. Orientations are held periodically to discuss advancements and rising trends in the field enabling understanding of cutting-edge technologies. Students are provided with campus wide [Wi-Fi](#) available to their portable devices and Computer Systems constituting a [Local Area Network](#)

The Department offers the following programs:

- **B.Sc. Computer Applications** (Triple Main incl. Mathematics & Statistics)
- **B. Computer Applications** (BCA: Mobile Applications and Cloud technologies)
- **M. Sc. Integrated Computer Science** (Data Science)



[Back to top](#)

2 Time Table

2.1 Aim

- Design the class time table in HTML using table tag

2.2 Code

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>
5        time table
6      </title>
7      <style>
8        :root { --flamingo: #dd7878; }
9        body {
10          font-family: Arial, Helvetica, sans-serif;
11          background: #eff1f5;
12          color: #4c4f69;
13          font-size: 1.3em;
14        }
15        table {
16          overflow: none;
17          border-collapse: collapse;
18          border-color: var(--flamingo);
19        }
20        th, td, tr {
21          padding: 10px;
22          border-top: solid;
23          border-left: solid;
24          border-right: solid;
25          border-width: 2px;
26        }
27        tr, td {
28          border-bottom: solid;
29          text-align: center;
30          border-color: inherit;
31          color: var(--flamingo);
32          background-color: #eff1f5;
33        }
34        .flamingo {
35          background-color: var(--flamingo);
36          color: snow;
37        }
38        .center {
39          width: 100%;
40          height: 98vh;
41          display: flex;
42          flex-direction: column;
43          justify-content: center;
44          align-items: center;
45        }
46        .down {
47          writing-mode: vertical-lr;
48          text-orientation: upright;
49          font-size: 1.4em;
50          letter-spacing: 8px;
```

```

51     color: snow;
52     background-color: var(--flamingo);
53 }
54 </style>
55 </head>
56 <body>
57     <div class="center">
58         <table>
59             <th colspan="7"> B.Sc. Computer Application S4</th>
60             <tr>
61                 <td class="flamingo">Monday</td>
62                 <td>Differential</td>
63                 <td>DBMS</td>
64                 <td>AWT</td>
65                 <td rowspan="5" class="down">BREAK</td>
66                 <td>Stat</td>
67                 <td>Sampling</td>
68             </tr>
69             <tr>
70                 <td class="flamingo">Tuesday</td>
71                 <td>Sampling</td>
72                 <td>Differential</td>
73                 <td>Sampling</td>
74                 <td>AWT</td>
75                 <td>Stat</td>
76             </tr>
77             <tr>
78                 <td class="flamingo">Wednesday</td>
79                 <td>Stat</td>
80                 <td>DBMS</td>
81                 <td>AWT</td>
82                 <td>Sampling</td>
83                 <td>Sampling</td>
84             </tr>
85             <tr>
86                 <td class="flamingo">Thursday</td>
87                 <td>Differential</td>
88                 <td>Differential</td>
89                 <td>DBMS</td>
90                 <td>Stat</td>
91                 <td>AWT</td>
92             </tr>
93             <tr>
94                 <td class="flamingo">Friday</td>
95                 <td>Stat</td>
96                 <td>DBMS</td>
97                 <td>Differential</td>
98                 <td>LAB</td>
99                 <td>LAB</td>
100             </tr>
101         </table>
102     </div>
103 </body>
104 </html>

```

2.3 Output

B.Sc. Computer Application S4						
Monday	Differential	DBMS	AWT	B R E A K	Stat	Sampling
Tuesday	Sampling	Differential	Sampling		AWT	Stat
Wednesday	Stat	DBMS	AWT		Sampling	Sampling
Thursday	Differential	Differential	DBMS		Stat	AWT
Friday	Stat	DBMS	Differential		LAB	LAB

3 CSS

3.1 aim

- utilize inline css for appending styles to html elements
- utilize an external css stylesheet

3.2 code

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>
5       Cascading Style Sheets
6     </title>
7     <link rel="stylesheet" href="./styles.css">
8   </head>
9   <body>
10    <div class="container">
11      <h1 style="color: #dc8a78;"> <u>Cats are the best</u> </h1>
12      <p class="rose">
13        Cats, with their enigmatic grace and independent spirit, have captivated human
14        ↪ hearts for millennia. Their slender
15        bodies adorned with sleek fur, often in a myriad of colors and patterns, exude
16        ↪ elegance and agility. From the regal
17        posture of a Siamese to the fluffy charm of a Maine Coon, each breed carries
18        ↪ its own unique allure. Their eyes, like
19        orbs of liquid gold or emerald pools, reflect an intelligence and curiosity
20        ↪ that seem to pierce through the soul,
21        hinting at the depths of their mysterious nature.
22        
25      </p>
26      <p class="pink">
27        
30        Beyond their physical beauty, cats possess a remarkable array of behaviors and
31        ↪ characteristics that further endear them
32        to humans. Their unparalleled agility and reflexes make them formidable
33        ↪ hunters, capable of executing acrobatic feats
34        with precision and stealth. Yet, juxtaposed with this predatory prowess is
35        ↪ their gentle and affectionate side. Cats have
36        an innate ability to form deep bonds with their human companions, often
37        ↪ displaying acts of loyalty and companionship
38        that defy their reputation for aloofness.
39      </p>
40      <p class="lavender">
41        One of the most fascinating aspects of cats is their complex communication
42        ↪ system. From the subtle twitch of an ear to
43        the melodious purr of contentment, they have mastered the art of conveying
44        ↪ their emotions without uttering a single
45        word. Their repertoire of vocalizations, ranging from plaintive meows to
46        ↪ thunderous yowls, serves as a means of
47        expressing desires, seeking attention, or issuing warnings. Furthermore, their
48        ↪ body language, including tail flicks,
```

```

33     kneading paws, and arched backs, provides additional insight into their mood
    ↪ and intentions.
34     
35     </p>
36     <p class="maroon">
37     
38     In addition to their charm and charisma, cats also offer a plethora of
    ↪ benefits to their human counterparts. Numerous
39     studies have highlighted the positive impact of cat ownership on mental
    ↪ health, with their soothing presence and
40     affectionate companionship serving as sources of comfort and stress relief.
    ↪ Furthermore, their playful antics and
41     inquisitive nature bring joy and laughter into the lives of their owners,
    ↪ fostering a sense of happiness and well-being.
42     Whether curled up contentedly in a sunbeam or engaged in a spirited game of
    ↪ chase, cats have a remarkable ability to
43     enrich the lives of those fortunate enough to share their company.
44     </p>
45     </div>
46     </body>
47     </html>

```

external stylesheet

```

1  body {
2    font-family: Arial, Helvetica, sans-serif;
3    background: #eff1f5;
4    color: #4c4f69;
5    font-size: 1.3em;
6  }
7  body::-webkit-scrollbar { display: none;}
8  .container {
9    display: flex;
10   flex-direction: column;
11   justify-content: center;
12   align-items: center;
13   padding: 5px;
14   gap: 15px;
15 }
16 p {
17   all: unset;
18   background-color: #e6e9ef;
19   border-radius: 8px;
20   display: flex;
21   align-items: center;
22   padding: 10px;
23   gap: 15px;
24 }
25 .rose {
26   box-shadow: 5px 6px 5px #dc8a78;
27 }
28 .pink {
29   box-shadow: 5px 6px 5px #ea76cb;
30 }

```

```

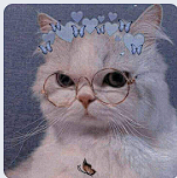
31 .lavender {
32   box-shadow: 5px 6px 5px #7287fd;
33 }
34 .maroon {
35   box-shadow: 5px 6px 5px #e64553;
36 }

```

3.3 output

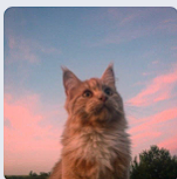
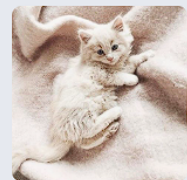
Cats are the best

Cats, with their enigmatic grace and independent spirit, have captivated human hearts for millennia. Their slender bodies adorned with sleek fur, often in a myriad of colors and patterns, exude elegance and agility. From the regal posture of a Siamese to the fluffy charm of a Maine Coon, each breed carries its own unique allure. Their eyes, like orbs of liquid gold or emerald pools, reflect an intelligence and curiosity that seem to pierce through the soul, hinting at the depths of their mysterious nature.



Beyond their physical beauty, cats possess a remarkable array of behaviors and characteristics that further endear them to humans. Their unparalleled agility and reflexes make them formidable hunters, capable of executing acrobatic feats with precision and stealth. Yet, juxtaposed with this predatory prowess is their gentle and affectionate side. Cats have an innate ability to form deep bonds with their human companions, often displaying acts of loyalty and companionship that defy their reputation for aloofness.

One of the most fascinating aspects of cats is their complex communication system. From the subtle twitch of an ear to the melodious purr of contentment, they have mastered the art of conveying their emotions without uttering a single word. Their repertoire of vocalizations, ranging from plaintive meows to thunderous yowls, serves as a means of expressing desires, seeking attention, or issuing warnings. Furthermore, their body language, including tail flicks, kneading paws, and arched backs, provides additional insight into their mood and intentions.



In addition to their charm and charisma, cats also offer a plethora of benefits to their human counterparts. Numerous studies have highlighted the positive impact of cat ownership on mental health, with their soothing presence and affectionate companionship serving as sources of comfort and stress relief. Furthermore, their playful antics and inquisitive nature bring joy and laughter into the lives of their owners, fostering a sense of happiness and well-being. Whether curled up contentedly in a sunbeam or engaged in a spirited game of chase, cats have a remarkable ability to enrich the lives of those fortunate enough to share their company.

4 form

4.1 aim

- Create a simple form
- with fields name age address etc.
- include radio buttons checkboxes and a password field

4.2 Code

```
1 <html>
2   <head>
3     <title>Form</title>
4     <script src="https://cdn.tailwindcss.com"></script>
5   </head>
6   <body>
7     <section class="w-full h-screen flex flex-col justify-center items-center">
8       <h1 class="text-3xl text-blue-400 font-semibold mb-2"> Form </h1>
9       <form class="bg-slate-100 flex flex-col p-3 rounded-lg gap-1">
10        <div class="flex flex-row justify-between">
11          Full name:
12          <input type="text" name="fullname"
13            class="text-center"
14          />
15        </div>
16
17        <div class="flex flex-row justify-between">
18          <p class="self-start">Gender: </p>
19          <div class="flex flex-row gap-3 justify-evenly">
20            <input type="radio" name="gender" value="male" class="">male</input>
21            <input type="radio" name="gender" value="female">female</input>
22            <input type="radio" name="gender" value="other">other</input>
23          </div>
24        </div>
25
26        <div class="flex flex-row justify-between">
27          Date of Birth:
28          <input type="date" name="dob"/>
29        </div>
30
31        <div class="flex flex-row justify-between">
32          Address:
33          <input type="text" name="address"
34            class="text-center"/>
35        </div>
36
37        <div class="flex flex-row justify-between gap-3">
38          Favourite Language:
39          <input type="checkbox" name="sub" value="Java">Java</input>
40          <input type="checkbox" name="sub" value="PHP">C</input>
41          <input type="checkbox" name="sub" value="Rust">Rust</input>
42        </div>
43
44        <div class="flex flex-row justify-between">
45          Favourite Singer:
46          <input type="text" name="singer"
47            class="text-center"
48          />
49        </div>
50      </form>
51    </section>
52  </body>
53 </html>
```

```

43     />
44 </div>

45 <div class="flex flex-row justify-between">
46     Favourite Movie:
47     <input type="text" name="movie"
48         class="text-center"
49     />
50 </div>

51 <div class="flex flex-row justify-between">
52     Email Id:
53     <input type="email" name="email"
54         class="text-center"
55     />
56 </div>

57 <div class="flex flex-row justify-between">
58     Password:
59     <input type="password" name="pasw"
60         class="text-center"
61     />
62 </div>

63 <input
64     class="bg-slate-300 hover:bg-slate-200 p-3 mt-2 rounded-md cursor-pointer"
65     type="submit" value="Submit"
66 >
67 </form>
68 </section>
69 <script>
70 </script>
71 </body>
72 </html>

```

4.3 Output

Form

Full name:

Gender: ☒ male ☐ female ☐ other

Date of Birth:

Address:

Favourite Language: ☐ Java ☐ C ☒ Rust

Favourite Singer:

Favourite Movie:

Email Id:

Password:

5 Semester Re-registration Webpage

5.1 Aim

- Design a form with the following entries
- Enrolment No.
- Regional Centre Code (Drop-down)
- Study Centre Code (Drop-down)
- Semester (Drop-down)
- Email Id

5.2 Code

```
1 <html>
2   <head>
3     <title>Re-registration Form</title>
4     <script src="https://cdn.tailwindcss.com"></script>
5   </head>
6   <body>
7     <section class="w-full h-screen flex flex-col justify-center items-center">
8       <h1 class="text-3xl text-blue-400 font-semibold mb-2">Semester Re-register</h1>
9       <form class="bg-slate-100 flex flex-col p-3 rounded-lg gap-1 drop-shadow-md">
10        <div class="flex flex-row justify-between gap-3">
11          Enrollment number:
12          <input type="text" required class="text-center">
13        </div>
14        <div class="flex flex-row justify-between gap-3">
15          Regional centre code:
16          <select name="rcc" required>
17            <option value="1001">1001</option>
18            <option value="1002">1002</option>
19            <option value="1003">1003</option>
20          </select>
21        </div>
22
23        <div class="flex flex-row justify-between gap-3">
24          Study centre code:
25          <select name="scc" required>
26            <option value="s1">s1</option>
27            <option value="s2">s2</option>
28            <option value="s3">s3</option>
29          </select>
30        </div>
31
32        <div class="flex flex-row justify-between gap-3">
33          Semester:
34          <select name="semester" required>
35            <option value=1>1</option>
36            <option value=2>2</option>
37            <option value=3>3</option>
38          </select>
39        </div>
40
41        <div class="flex flex-row justify-between gap-3">
42          Email-id:
```

```

40         <input type="email" required class="text-center">
41     </div>
42     <input type="submit"
43         class="bg-slate-300 hover:bg-slate-200 w-fit p-3 self-center rounded-md mt-2
44         ↩ cursor-pointer"
45     />
46 </form>
47 </section>
48 </body>
49 </html>

```

5.3 Output

Semester Re-register

Enrollment number:

Regional centre code:

Study centre code:

Semester:

Email-id:

6 Profit or Loss

6.1 Aim

- Write a JavaScript solution for the following
- Accept the cost price and selling price with a button
- Create a button to calculate the loss or profit and display it

6.2 Code

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>Profit Calculator</title>
5      <script src="https://cdn.tailwindcss.com"></script>
6    </head>
7    <body>
8      <section class="w-full h-screen flex flex-col justify-center items-center">
9        <h1 class="text-orange-400 text-3xl font-semibold mb-2">Profit Calculator</h1>
10       <div class="bg-slate-100 flex flex-col p-4 gap-1 rounded-lg">
11         <div class="flex flex-row justify-evenly gap-2 w-52">
12           <button
13             type="button" onclick="get()"
14             class="bg-slate-300 rounded-lg p-3 hover:bg-slate-200 active:bg-slate-400"
15           >
16             Input
17           </button>
18           <button
19             type="button" onclick=profit()
20             class="bg-slate-300 rounded-lg p-3 hover:bg-slate-200 active:bg-slate-400"
21           >
22             Output
23           </button>
24         </div>
25         <p
26           id="output"
27           class="text-orange-400 text-xl text-center font-semibold font-sans"
28         ></p>
29       </div>
30     </section>
31     <script>
32       var profit_amt = 0;
33       var sell_price = 0;
34       var cost_price = 0;
35
36       function profit() {
37         profit_amt = ((sell_price - cost_price)/cost_price ) * 100;
38         let result = "";
39         if (profit_amt > 0) {
40           result = "Your profit is " + profit_amt + "%"
41         } else {
42           result = "Your loss is " + profit_amt + "%"
43         }
44         document.getElementById("output").innerHTML = result;
45
46       function get() {
```

```

46     cost_price = prompt("Enter Cost Price");
47     sell_price = prompt("Enter Selling Price");
48 }
49 </script>
50 </body>
51 </html>

```

6.3 Output

Profit Calculator

Input

Output

This page says

Enter Cost Price

OK Cancel

This page says

Enter Selling Price

OK Cancel

Profit Calculator

Input

Output

Your profit is 34%

7 Electrical Connection Form

7.1 Aim

- Create a form with the following fields
- Permanent or temporary connection (radio button)
- Government or Private house (radio button)
- Name and Email

7.2 Code

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>Electric Form</title>
5      <script src="https://cdn.tailwindcss.com"></script>
6    </head>
7    <body>
8      <section class="w-full h-screen flex flex-col justify-center items-center">
9        <h1 class="mb-2 text-3xl text-orange-400 font-semibold">
10          Electrical Connection Form
11        </h1>
12        <form
13          class="bg-slate-100 flex flex-col p-4 gap-1 rounded-lg"
14          id="myform"
15          onsubmit=validate()
16        >
17          <p class="font-semibold">
18            Specify Connection Type:
19          </p>
20          <div class="flex flex-row gap-3">
21            <input name="connection" type="radio" value="temp" >
22              temporary
23            </input>
24            <input name="connection" type="radio" value="perm" >
25              permanent
26            </input>
27          </div>
28
29          <p class="font-semibold">
30            Specify House Type:
31          </p>
32          <div class="flex flex-row gap-3">
33            <input name="house" type="radio" value="gov" >
34              government house
35            </input>
36            <input name="house" type="radio" value="private" >
37              private house
38            </input>
39          </div>
40          <div class="flex flex-row justify-between">
41            <p class="font-semibold">Name:</p>
42            <input
43              class="w-3/4 rounded-md text-center"
44              type="text"
45              placeholder=" Enter your name"
```

```

45     />
46 </div>
47 <div class="flex flex-row justify-between">
48   <p class="font-semibold">Email:</p>
49   <input
50     class="w-3/4 rounded-md text-center"
51     type="email"
52     placeholder=" Enter your email"
53   />
54 </div>
55 <input
56   class="bg-slate-300 w-fit self-center p-2 rounded-l mt-3 font-semibold
57   ↪ cursor-pointer hover:bg-slate-200"
58   type="submit" value="Submit"
59 />
60 </form>
61 </section>
62 <script>
63   function validate() {
64     let form = document.getElementById("myform");
65     for (let input of form.elements) {
66       if (input.value == "") {
67         alert("Kindly fill all values");
68         return;
69       }
70     }
71     alert("Form Submitted Succesfully");
72   }
73 </script>
74 </body>
</html>

```

7.3 Output

Electrical Connection Form

Specify Connection Type:

☐ temporary
 ☒ permanent

Specify House Type:

☐ government house
 ☒ private house

Name:

Email:

8 Word Search

8.1 Aim

- Write a JavaScript Program to search for a word in a sentence
- the search should be performed when a appropriate button is clicked

8.2 Code

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>Word Finder</title>
5      <script src="https://cdn.tailwindcss.com"></script>
6    </head>
7    <body>
8      <section class="w-full h-screen flex flex-col justify-center items-center">
9        <h1 class="text-pink-400 font-semibold text-3xl text-center mb-2">
10          Word Finder
11        </h1>
12        <div class="bg-slate-100 flex flex-col p-4 gap-1 rounded-lg w-96">
13          <p class="font-semibold">Enter your sentence</p>
14          <input type="text" id="sentence" class="text-center"/>
15          <p class="font-semibold">Enter the word to search</p>
16          <input type="text" id="word" class="text-center text-orange-400"/>
17
18          <button
19            class="p-2 bg-slate-300 hover:bg-slate-200 w-32 self-center rounded-md mt-3
20              ↪ text-xl"
21            onclick=result()
22          > Find </button>
23
24          <p id="output" class="text-xl text-center mt-2"></p>
25        </div>
26      </section>
27      <script>
28        function result() {
29          let sentence = document.getElementById("sentence").value.trim();
30          let search_word = document.getElementById("word").value.trim();
31
32          let output = document.getElementById("output");
33          for (let word of sentence.split(" ")) {
34            if (word == search_word) {
35              output.innerHTML = "The word <a class='text-orange-400'"
36                + word +
37                "</a> is found in the string";
38              return;
39            }
40          }
41          output.innerHTML = "Could not find the word inside string";
42        }
43      </script>
44    </body>
45  </html>
```

8.3 Output

Word Finder

Enter your sentence

Once upon a time there lived a cute cat

Enter the word to search

cat

Find

The word cat is found in the string

9 Prime and Armstrong

9.1 Aim

- Write a program to determine whether a number is Armstrong or Prime

9.2 Code

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>Prime or Armstrong?</title>
5      <script src="https://cdn.tailwindcss.com"></script>
6    </head>
7    <body>
8      <section class="w-full h-screen flex flex-col justify-center items-center">
9        <h1 class="text-pink-400 font-semibold text-3xl text-center mb-2">
10          Prime or Armstrong
11        </h1>
12        <div class="bg-slate-100 flex flex-col p-4 gap-1 rounded-lg w-96">
13          <div class="flex flex-row p-2 gap-1 justify-around">
14            <p class="font-semibold">Enter a number</p>
15            <input type="number" id="number" class="text-center"/>
16          </div>
17          <div class="flex flex-row p-2 gap-3 justify-center">
18            <button
19              class="p-2 bg-slate-300 hover:bg-slate-200 w-32 rounded-md text-xl"
20              onclick=is_prime()
21            > Prime? </button>
22            <button
23              class="p-2 bg-slate-300 hover:bg-slate-200 w-32 rounded-md text-xl"
24              onclick=is_armstrong()
25            > Armstrong? </button>
26          </div>
27
28          <p id="output" class="text-xl text-center mt-2"></p>
29        </div>
30      </section>
31      <script>
32        let output = document.getElementById("output");
33
34        function is_prime() {
35          let num = document.getElementById("number").value;
36          for (let i = 2; i < num/2; i++) {
37            if (num % i == 0) {
38              output.innerHTML = num + " is NOT prime";
39              return;
40            }
41          }
42          output.innerHTML = "<a class='text-pink-400 font-semibold'>" + num + " is
43            ↪ PRIME </a>";
44        }
45
46        function is_armstrong() {
47          let num = document.getElementById("number").value;
48          let str_num = String(num);
49          let exponent = str_num.length;
```

```

46     let result = 0;

47     for (let ch of str_num.split("")) {
48         result += Number(ch) ** exponent;
49     }

50     if (result == num) {
51         output.innerHTML = "<a class='text-pink-400 font-semibold'>" + num + " is
↵      ARMSTRONG</a>";
52     } else {
53         output.innerHTML = num + " is NOT armstrong</a>";
54     }
55 }
56 </script>
57 </body>
58 </html>

```

9.3 Output

Prime or Armstrong

Enter a number

153 is ARMSTRONG

Prime or Armstrong

Enter a number

153 is NOT prime

10 Prime and Armstrong

10.1 Aim

- Write a program to determine whether a number is Armstrong or Prime

10.2 Code

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>Prime or Armstrong?</title>
5      <script src="https://cdn.tailwindcss.com"></script>
6    </head>
7    <body>
8      <section class="w-full h-screen flex flex-col justify-center items-center">
9        <h1 class="text-pink-400 font-semibold text-3xl text-center mb-2">
10          Prime or Armstrong
11        </h1>
12        <div class="bg-slate-100 flex flex-col p-4 gap-1 rounded-lg w-96">
13          <div class="flex flex-row p-2 gap-1 justify-around">
14            <p class="font-semibold">Enter a number</p>
15            <input type="number" id="number" class="text-center"/>
16          </div>
17          <div class="flex flex-row p-2 gap-3 justify-center">
18            <button
19              class="p-2 bg-slate-300 hover:bg-slate-200 w-32 rounded-md text-xl"
20              onclick=is_prime()
21            > Prime? </button>
22            <button
23              class="p-2 bg-slate-300 hover:bg-slate-200 w-32 rounded-md text-xl"
24              onclick=is_armstrong()
25            > Armstrong? </button>
26          </div>
27
28          <p id="output" class="text-xl text-center mt-2"></p>
29        </div>
30      </section>
31      <script>
32        let output = document.getElementById("output");
33
34        function is_prime() {
35          let num = document.getElementById("number").value;
36          for (let i = 2; i < num/2; i++) {
37            if (num % i == 0) {
38              output.innerHTML = num + " is NOT prime";
39              return;
40            }
41          }
42          output.innerHTML = "<a class='text-pink-400 font-semibold'>" + num + " is
43            ↪ PRIME </a>";
44
45        function is_armstrong() {
46          let num = document.getElementById("number").value;
47          let str_num = String(num);
48          let exponent = str_num.length;
```

```

46     let result = 0;

47     for (let ch of str_num.split("")) {
48         result += Number(ch) ** exponent;
49     }

50     if (result == num) {
51         output.innerHTML = "<a class='text-pink-400 font-semibold'>" + num + " is
↵      ARMSTRONG</a>";
52     } else {
53         output.innerHTML = num + " is NOT armstrong</a>";
54     }
55 }
56 </script>
57 </body>
58 </html>

```

10.3 Output

Prime or Armstrong

Enter a number

153 is ARMSTRONG

Prime or Armstrong

Enter a number

153 is NOT prime

11 Fibonacci Series

11.1 Aim

- Write a program to display the first n terms of the Fibonacci series

11.2 Code

```
1 <html>
2   <head>
3     <title>Fibonacci Series</title>
4     <script src="https://cdn.tailwindcss.com"></script>
5   </head>
6   <body>
7     <section class="w-full h-screen flex flex-col justify-center items-center">
8       <h1 class="text-pink-400 font-semibold text-3xl text-center mb-2">
9         Fibonacci Series
10      </h1>
11      <div class="bg-slate-100 flex flex-col p-3 gap-2 rounded-lg w-96">
12        <div class="flex flex-row justify-evenly">
13          <p class="font-semibold">Enter the number of terms</p>
14          <input class="text-center w-32" type="number" id="number"/>
15        </div>
16        <button
17          class="p-2 bg-slate-300 hover:bg-slate-200 w-32 self-center rounded-md
18            ↪ text-xl"
19          onclick=getseries()
20          > Find </button>
21        <p id="output" class="text-xl text-center"></p>
22      </div>
23    </section>
24    <script>
25      function getseries() {
26        let output = "";
27        let number = document.getElementById("number").value;
28        for (let i = 0; i < number; i++) {
29          output += fibo(i) + " ";
30        }
31        document.getElementById("output").innerHTML = output;
32      }
33      function fibo(num) {
34        return (num < 2)? num : fibo(num-1) + fibo(num-2);
35      }
36    </script>
37  </body>
</html>
```

11.3 Output

Fibonacci Series

Enter the number of terms

0 1 1 2 3 5 8 13

12 University Login

12.1 Aim

- Create a login page
- with fields name and enrollment number
- After submitting information, redirect to a welcome page

12.2 Code

index.html

```
1 <html>
2   <head>
3     <title>University Login</title>
4     <script src="https://cdn.tailwindcss.com"></script>
5   </head>
6   <body>
7     <section class="w-full h-screen flex flex-col justify-center items-center">
8       <h1 class="mb-2 text-3xl text-lime-400 font-semibold">
9         Login
10      </h1>
11      <form
12        class="bg-slate-100 flex flex-col p-4 gap-1 rounded-lg"
13        action=login.html
14        method="get"
15      >
16        <div class="flex flex-row justify-between">
17          <p class="font-semibold">Name:</p>
18          <input
19            class="w-3/4 rounded-md text-center"
20            name="name"
21            type="text" required
22          />
23        </div>
24        <div class="flex flex-row justify-between">
25          <p class="font-semibold">Enrollment No.:</p>
26          <input
27            class="w-2/4 rounded-md text-center"
28            type="number" required
29          />
30        </div>
31        <input
32          class="bg-slate-300 w-fit self-center p-2 rounded-md mt-3 font-semibold
33            ↵ cursor-pointer hover:bg-slate-200"
34          type="submit" value="Submit"
35        />
36      </form>
37    </section>
38  </body>
</html>
```

login.html

```
1 <html>
2   <head>
3     <title>University Login</title>
4     <script src="https://cdn.tailwindcss.com"></script>
5   </head>
6   <body>
7     <section class="w-full h-screen flex flex-col justify-center items-center">
8       <h1 class="mb-2 text-6xl text-slate-800 font-semibold">
9         Welcome <a class="text-lime-300" id="name"></a>
10      </h1>
11      <h1 class="mb-2 text-xl text-slate-700 font-semibold">
12        Login Successful
13      </h1>
14    </section>
15    <script>
16      let url = window.location.href;
17      url = url
18        .split('?')[1]
19        // regex for removing + from GET
20        .split('=')[1].replace(/\+/g, ' ');
21      document.getElementById("name").innerHTML = url;
22    </script>
23  </body>
24 </html>
```

12.3 Output

Login

Name:

Enrollment No.:

Welcome Zid Heart
Login Successful

13 First Vowel

13.1 Aim

- Write a JavaScript program to find the first vowel in a string

13.2 Code

```
1 <html>
2   <head>
3     <title>First Vowel</title>
4     <script src="https://cdn.tailwindcss.com"></script>
5   </head>
6   <body>
7     <section class="w-full h-screen flex flex-col justify-center items-center">
8       <h1 class="text-3xl font-semibold text-purple-400 mb-2">First Vowel</h1>
9       <div class="bg-slate-100 flex flex-col p-4 gap-1 rounded-lg">
10        <div class="flex flex-row">
11          <input
12            class="text-center"
13            placeholder="Enter a String"
14            id="input"
15          />
16          <button
17            class="bg-slate-300 hover:bg-slate-200 p-3"
18            onclick=firstvowel()
19          > Find </button>
20        </div>
21        <p id="output" class="text-xl font-semibold text-center mt-2"></p>
22      </div>
23    </section>
24    <script>
25    function firstvowel() {
26      let input = document.getElementById("input").value;
27      let output = document.getElementById("output");
28      let style = "<a class='text-purple-400'>";
29
29      for (let ch of input.split("")) {
30        if ("aeiouAEIOU".includes(ch)) {
31          output.innerHTML = "first vowel is " + style + ch + "</a>";
32          return;
33        }
34      }
35      output.innerHTML = "No vowels found";
36    }
37    </script>
38  </body>
39 </html>
```

13.3 Output

First Vowel

Find

first vowel is u

14 Basic Calculator

14.1 Aim

- Write a JavaScript program implementing a Simple Calculator

14.2 Code

```
1 <html>
2   <head>
3     <title>Basic Calculator</title>
4     <script src="https://cdn.tailwindcss.com"></script>
5   </head>
6   <body>
7     <section class="w-full h-screen flex flex-col justify-center items-center">
8       <h1 class="text-3xl font-semibold text-teal-400 mb-2">Calculator</h1>
9       <div class="bg-slate-100 flex flex-col p-4 gap-1 rounded-lg">
10        <div class="flex flex-row rounded-md overflow-hidden">
11          <input
12            class="text-center"
13            placeholder="Enter Expression"
14            id="input"
15          />
16          <button
17            class="bg-slate-300 hover:bg-slate-200 p-3 active:bg-slate-400"
18            onclick=compute()
19          > Find </button>
20        </div>
21        <p id="output" class="text-xl text-center mt-2"></p>
22      </div>
23    </section>
24    <script>
25    function compute() {
26      let input = document.getElementById("input")
27        .value.trim().split(' ');
28      let output = document.getElementById("output");
29
30      let style = "<a class='text-teal-400'>";
31      let result = input[0] + " " + input[1] + " " + input[2] + " = " + style;
32
33      if (input.length != 3) { output.innerHTML = "Invalid Expression"; return; }
34      switch (input[1]) {
35        case "+": result += (Number(input[0]) + Number(input[2])); break;
36        case "-": result += Number(input[0]) - Number(input[2]); break;
37        case "*": result += Number(input[0]) * Number(input[2]); break;
38        case "/": result += Number(input[0]) / Number(input[2]); break;
39        default: output.innerHTML = "Invalid Expression"; break;
40      }
41
42      output.innerHTML = result + "</a>";
43    }
44  </script>
45 </body>
46 </html>
```

14.3 Output

Calculator

Enter Expression Find

1 + 2 Find

1 + 2 = 3

Calculator

70 - 1 Find

70 - 1 = 69

Calculator

23 * 3 Find

23 * 3 = 69

Calculator

480 / 2 Find

480 / 2 = 240