

## **INDEX**

S. No.	Program Names	Page No.
1.	Create a time table using HTML and CSS.	02
2.	Create a static website for an online business which includes a registration page.	09
3.	Create a static webpage for an online bookstore which contains a catalogue of available books.	24
4.	Write a Javascript program to convert numbers to Roman numerals.	39
5.	Write a Javascript program to validate a form.	40
6.	Write a Javascript program to demonstrate pop-up boxes.	50
7.	Create a simple calculator.	58
8.	Create a portfolio website.	63
9	Write a Javascript program which takes an input of a number from a text box and converts it to words.	70
10.	Write a program to implement Typescript classes with inheritance.	73

## 1. Create a time table using HTML and CSS.

### index.html

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

<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <link rel="stylesheet" href="styles.css">
  <title>Timetable</title>
</head>

<body>
  <header>
    <h1>Timetable</h1>
    <h2>1st Year, <a href="https://www.sjc.ac.in/computerdepartment.php"
      target="_blank">M.Sc. Computer Science</a>, 2022-2024</h2>
  </header>

  <main>

    <table>

      <tr>
        <th>
          Day/Time
        </th>
        <td>
          9:15AM-10:05AM
        </td>
        <td>
          10:10AM-11:00AM
        </td>
        <td>
          11:05AM-11:55AM
        </td>
        <td>
          12PM-12:55PM
        </td>
        <td>
          12:55PM-1:50PM
        </td>
      </tr>
```

<td>&lt;td&gt;</td> <td>1:50PM-2:40PM</td>	<td>	1:50PM-2:40PM
</td>		
<td>	2:45PM-3:35PM	
</td>		
<td>	3:35PM-4:30PM	
</td>		

</tr>

&lt;tr&gt;
&lt;th&gt;
Monday
&lt;/th&gt;
&lt;td&gt;
AWT/ADBMS Lab
&lt;/td&gt;
&lt;td&gt;
AWT/ADBMS Lab
&lt;/td&gt;
&lt;td&gt;
AWT/ADBMS Lab
&lt;/td&gt;
&lt;td&gt;
AWT
&lt;/td&gt;
&lt;td&gt;
L
&lt;/td&gt;
&lt;td&gt;
ADBMS
&lt;/td&gt;
&lt;td&gt;
SPM
&lt;/td&gt;
&lt;td&gt;
ML
&lt;/td&gt;
&lt;/tr&gt;

&lt;tr&gt;
&lt;th&gt;
Tuesday
&lt;/th&gt;

```

        <td>
            ML Lab
        </td>
        <td>
            ML Lab
        </td>
        <td>
            ML Lab
        </td>
        <td>
            CD
        </td>
        <td>
            U
        </td>
        <td>
            ML
        </td>
        <td>
            ADBMS
        </td>
        <td>
            Library
        </td>
    </tr>

    <tr>
        <th>
            Wednesday
        </th>
        <td>
            AWT/ADBMS Lab
        </td>
        <td>
            AWT/ADBMS Lab
        </td>
        <td>
            AWT/ADBMS Lab
        </td>
        <td>
            SPM
        </td>
        <td>
            N
        </td>
    </tr>

```

```
<td>
    CD
</td>
<td>
    AWT
</td>
<td>
    ML
</td>
</tr>
```

```
<tr>
    <th>
        Thursday
    </th>
    <td>
        ML Lab
    </td>
    <td>
        ML Lab
    </td>
    <td>
        ML Lab
    </td>
    <td>
        CD
    </td>
    <td>
        C
    </td>
    <td>
        AWT
    </td>
    <td>
        SPM
    </td>
    <td>
        Library
    </td>
</tr>
```

```
<tr>
    <th>
        Friday
    </th>
```

```

        <td>
            ADBMS
        </td>
        <td>
            ML
        </td>
        <td>
            AWT
        </td>
        <td>
            SPM
        </td>
        <td>
            H
        </td>
        <td>
            ADBMS
        </td>
        <td>
            CD
        </td>
        <td>
            Library
        </td>
    </tr>

</table>

</main>

</body>

</html>

```

## styles.css

```
body {
    font-family: 'Lucida Sans', 'Lucida Sans Regular', 'Lucida Grande', 'Lucida Sans
Unicode', Geneva, Verdana, sans-serif;
    margin: auto;
}

header {
    padding: 5px;
    text-align: center;
    box-shadow: 10px 10px 8px #83dada;
}

table {
    width: 100%;
    max-width: 1500px;
    margin: 0 auto;
    box-shadow: 10px 10px 8px #5ca299;
}

table, th, td {
    border: 1px solid black;
    border-collapse: collapse;
    padding: 5px 3px;
    text-align: center;
}

a:default {
    color:rgb(14, 14, 85);
}

a:visited {
    color: #5ca299;
}

a:hover {
    color:rgb(189, 125, 169);
}
```

## Output

### Timetable

1st Year, [M.Sc. Computer Science](#), 2022-2024

Day/Time	9:15AM-10:05AM	10:10AM-11:00AM	11:05AM-11:55AM	12PM-12:55PM	12:55PM-1:50PM	1:50PM-2:40PM	2:45PM-3:35PM	3:35PM-4:30PM
Monday	AWT/ADBMS Lab	AWT/ADBMS Lab	AWT/ADBMS Lab	AWT	L	ADBMS	SPM	ML
Tuesday	ML Lab	ML Lab	ML Lab	CD	U	ML	ADBMS	Library
Wednesday	AWT/ADBMS Lab	AWT/ADBMS Lab	AWT/ADBMS Lab	SPM	N	CD	AWT	ML
Thursday	ML Lab	ML Lab	ML Lab	CD	C	AWT	SPM	Library
Friday	ADBMS	ML	AWT	SPM	H	ADBMS	CD	Library



**2. Create a static website for an online business which includes a registration page, which contains these:**

**(a) Home (At least 3 div elements)**

**(b) Login (A Form)**

**(c) Registration Page (A Form)**

**index.html**

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="preconnect" href="https://fonts.googleapis.com" />
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
    <link rel="stylesheet" href="styles.css" />
    <link
      href="https://fonts.googleapis.com/css2?family=Source+Serif+Pro&display=swap"
      rel="stylesheet"
    />
    <link
      href="https://fonts.googleapis.com/css2?family=Montserrat:wght@300&display=swap"
      rel="stylesheet">
    <link href="https://fonts.googleapis.com/css2?family=Philosopher&display=swap"
      rel="stylesheet">
    <title>Wholesome Bakes</title>
  </head>
  <body>
    <header>
      <div id="navbar">
        <h1 id="nav-logo">Wholesome Bakes</h1>
        <ul id="nav-list">
          <li><a href="#home">Home</a></li>
          <li><a href="#products">Products</a></li>
          <li><a href="#register">Register</a></li>
          <li><a href="#contact-us">Contact Us</a></li>
          <li><a href="login.html" target="_blank">Login</a></li>
        </ul>
      </div>
    </header>
  </body>
</html>
```

```

    </div>
</header>
<main>
  <section id="home">
    <div id="home-header">
      <h2>Fresh, Delicious, Homely.</h2>
      <h3>We are committed to quality services, everywhere, all the
time.</h3>
      <figure>
        
        <figcaption>Photo by <a
href="https://unsplash.com/fr/@blsnki?utm_source=unsplash&utm_med
ium=referral&utm_content=creditCopyText">Yeh Xintong</a> on <a
href="https://unsplash.com/photos/go3DT3PpIw4?utm_source=unsplash
&utm_medium=referral&utm_content=creditCopyText">Unsplash</a>
        </figcaption>
      </figure>
    </div>

  </section>
  <section id="about-us">
  </section>
  <section id="products">
  </section>

  <section id="register">
    <div>
      <h3>Register now!</h3>
      <form action="submitted.html" method="post" onsubmit="validate()">
        <section id="personal-details">
          <label for="name">
            >Enter your name:
            <br />
            <input type="text" name="name" id="name" placeholder="Enter
your name..." required />
          </label>
          <label for="email">
            >Enter your email:
            <br />
            <input type="email" name="email" id="email"
placeholder="Enter your email..."required />

```

```

</label>
<label for="dob">
  >Enter your date of birth:
  <br />
  <input type="date" name="dob" id="dob" required />
</label>
</section>

<section id="gender-details">
  <label for="gender-choices">Select your gender:</label>
  <ul>
    <li>
      <input type="radio" name="gender" id="gender-f" value="f"
        />F
    </li>
    <li>
      <input type="radio" name="gender" id="gender-m" value="m"
        />M
    </li>
    <li>
      <input
        type="radio"
        name="gender"
        id="gender-o"
        value="other"
      />Other
    </li>
  </ul>
</section>

<section id="source-section">
  <label for="sources">Where did you hear about us?</label>
  <br />
  <select name="" id="">
    <option value="">(select one)</option>
    <option value="instagram">Instagram</option>
    <option value="twitter">Twitter</option>
    <option value="facebook">Facebook</option>
    <option value="website">Our Official Website</option>
  </select>
</section>

```

```

<section id="comment-box">
  <label for="comments">Any suggestions/comments for us?</label>
  <br />
  <textarea
    name="comments-area"
    id="comments"
    cols="30"
    rows="5"
    placeholder="Enter your comments here..."
  ></textarea>
</section>

<section>
  <label for="password-box">Enter your password</label>
  <br />
  <input
    type="password"
    id="password-box"
    name="password-box"
    placeholder="Enter your password..."
    required
  />
</section>
<br />

<section>
  <label for="confirm-pwd">Re-enter your password</label>
  <br />
  <input type="password" id="confirm-pwd" name="confirm-pwd"
    placeholder="Enter your password..." />
</section>
<br />

<section id="submit-section">
  <input type="submit" name="" id="submit-btn" value="Submit" />
</section>
</form>
</div>

</section>

```

```
</main>
<footer>
  <section id="contact-us">
    </section>
  </footer>
</body>
</html>
```

## login.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="preconnect" href="https://fonts.googleapis.com" />
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
    <link rel="stylesheet" href="styles.css" />
    <link
      href="https://fonts.googleapis.com/css2?family=Source+Serif+Pro&display=swap"
      rel="stylesheet"
    />
    <link
      href="https://fonts.googleapis.com/css2?family=Montserrat:wght@300&display=swap"
      rel="stylesheet"
    />
    <link
      href="https://fonts.googleapis.com/css2?family=Philosopher&display=swap"
      rel="stylesheet"
    />
    <title>Login</title>
  </head>
  <body>
    <header id="login-header">
      <h1>Welcome to Wholesome Bakes!</h1>
    </header>
    <main>
      <section id="login-screen">
        <section id="login">
          <div>
            <h3>Log In</h3>
            <form action="submitted.html" method="post" onsubmit="validate()">
              <section id="personal-details">
                <label for="email">
                  >Enter your email:
                <br />
                <input
```

```
        type="email"
        name="email"
        id="email"
        placeholder="Enter your email..."
        required
    />
</label>
</section>
<br />
<section>
    <label for="password-box">Enter your password</label>
    <br />
    <input
        type="password"
        id="password-box"
        name="password-box"
        placeholder="Enter your password..."
        required
    />
</section>
<br />

    <section id="submit-section">
        <input type="submit" name="" id="submit-btn" value="Submit" />
    </section>
</form>
</div>
</section>
</section>
</main>
</body>
</html>
```

## styles.css

```
* {  
  box-sizing: border-box;  
}  
  
html,  
::before,  
::after {  
  box-sizing: inherit;  
}  
  
body {  
  margin: 0;  
  font-family: "Philosopher", sans-serif;  
  background-color: #3a071b;  
}  
  
#navbar {  
  display: grid;  
  grid-template-columns: auto auto;  
  align-items: center;  
  background-color: #3a071b;  
  background-size: cover;  
  position: fixed;  
  height: 12vh;  
  width: 100vw;  
  max-width: 100%;  
}  
  
#navbar #nav-logo {  
  padding: 0 0.5rem 0 0.5rem;  
  text-transform: uppercase;  
  color: #ecd4f1;  
  font-size: clamp(0.5rem, 10rem, 2rem);  
}  
  
#navbar #nav-list {  
  display: flex;  
  flex-direction: row;
```



```
    justify-content: space-evenly;
    align-items: center;
}

#nav-list li {
    list-style-type: none;
    text-transform: uppercase;
    font-size: clamp(0.2rem, 5rem, 1.1rem);
    font-weight: bold;
}

#nav-list a {
    text-decoration: none;
    color: #ecd4f1;
}

#nav-list a:hover {
    text-shadow: 1px 0.1px 5px rgba(255, 255, 255, 0.541);
}

#home {
    height: 110vh;
    width: 100vw;
    max-width: 100%;
    padding-top: 4.5rem;
    background-color: #d1bcd6;
}

#home #home-header {
    display: flex;
    flex-direction: column;
    text-align: center;
    font-family: "Source Serif Pro", serif;
}

#home-header h2,
#home-header h3 {
    margin: 0;
}

#home-header h2 {
```

```

padding-top: 1rem;
text-shadow: 1px 0.1px 5px #ffffff;
}

#home-header h3 {
padding-top: 0.4rem;
padding-bottom: 0.2rem;
text-shadow: 1px 0.1px 5px #ffffff;
}

#home figure figcaption {
font-family: "Source Serif Pro", serif;
font-family: "Philosopher", sans-serif;
font-size: clamp(0.1rem, 1rem, 0.6rem);
color: rgba(0, 0, 0, 0.432);
}

#home figure figcaption a {
color: rgba(0, 0, 0, 0.432);
text-decoration: none;
}

#register {
height: 120vh;
background: #a36e84;
}

#register div,
#login div {
display: flex;
flex-direction: column;
align-items: center;
}

#register div h3,
#login div h3 {
text-transform: uppercase;
font-size: clamp(1rem, 6rem, 2rem);
text-shadow: 1px 0.5px 3px #ecd4f1;
}

```

```
form {
  background-color: rgba(25, 0, 0, 0.5);
  color: rgb(255, 255, 255);
  border: 1px solid #3a071b8e;
  border-radius: 13px;
  display: block;
  margin: 0 auto;
  width: 500px;
  padding: 1rem 1rem;
  font-family: "Source Serif Pro", serif;
  font-family: "Philosopher", sans-serif;
}

input {
  font-family: "Montserrat", sans-serif;
}

#personal-details label {
  display: block;
  padding-bottom: 5px;
}

#personal-details input {
  width: 150px;
}

#gender-details {
  margin-top: 5px;
}

#gender-details label {
  display: block;
  margin-bottom: -10px;
}

#gender-details ul {
  padding-left: 0;
}

#gender-details li {
  list-style-type: none;
}
```

```
}

#class-details {
  margin-top: -7px;
}

#class-details label {
  display: block;
  margin-bottom: -10px;
}

#class-details ul {
  padding-left: 0;
}

#class-details li {
  list-style-type: none;
}

#source-section {
  display: block;
  margin-top: -5px;
  margin-bottom: 15px;
}

#source-section select {
  font-family: "Montserrat", sans-serif;
}

#source-section option {
  font-family: "Montserrat", sans-serif;
  color: black;
  font-weight: 600;
}

#comment-box {
  margin-top: -5px;
  margin-bottom: 5px;
}

#comment-box textarea {
```

```
    font-family: "Montserrat", sans-serif;
    color: black;
}
```

```
#submit-btn {
    background: #3a071b;
    background-size: cover;
    background-repeat: no-repeat;
    color: aliceblue;
    border: 1px solid #d1bcd6;
    border-radius: 10px;
    width: 7vw;
    height: 4vh;
    text-transform: uppercase;
}
```

```
#submit-btn:hover {
    background-size: cover;
    background-repeat: no-repeat;
    color: #3a071b;
    background-color: #d1bcd6;
    border: 1px solid #3a071b;
}
```

```
#login-header,
#login-screen {
    display: flex;
    flex-direction: column;
    /* background: #a36e84; */
    align-items: center;
}
```

```
#login-header {
    color: #ecd4f1;
}
```

```
#login-header h1 {
    text-transform: uppercase;
}
```

```
#login-screen #yum {
```

```
    color:#ecd4f1;
}

#login-screen #login-msg {
    color: #3a071b;
}

#login {
    height: 60vh;
    width: 100vw;
    background-color: #d1bcd6;
}
```

## Output

WHOLESOME BAKES

HOMEPRODUCTSREGISTERCONTACT USLOGIN

Fresh, Delicious, Homely.

We are committed to quality services, everywhere, all the time.




Photo by Yoh Xintong on Unplash

REGISTER NOW!

Enter your name:  
Enter your name...

Enter your email:  
Enter your email...

Enter your date of birth:  
dd-mm-yyyy

Select your gender:  
☐ F  
☐ M  
☐ Other

Where did you hear about us?  
Select one

Any suggestions/comments for us?  
Enter your comments here...

Enter your password  
Enter your password...

Re-enter your password  
Enter your password...

SUBMIT

WELCOME TO WHOLESOME BAKES!

LOG IN

Enter your email:  
Enter your email...

Enter your password  
Enter your password...

SUBMIT

Page / 23

### **3. Create a static webpage for an online bookstore which contains a catalogue of available books.**

#### **index.html**

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="preconnect" href="https://fonts.googleapis.com" />
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
    <link rel="stylesheet" href="styles.css" />
    <link
      href="https://fonts.googleapis.com/css2?family=Montserrat:wght@300&display=swap"
      rel="stylesheet"
    />
    <link
      href="https://fonts.googleapis.com/css2?family=IBM+Plex+Mono:wght@200&display=swap"
      rel="stylesheet"
    />
    <link
      href="https://fonts.googleapis.com/css2?family=Rokkitt:wght@100&display=swap"
      rel="stylesheet"
    />
    <link href="https://fonts.googleapis.com/css2?family=Roboto+Mono&display=swap"
      rel="stylesheet">
    <title>Bookworm</title>
  </head>
  <body>
    <header>
      <div id="navbar">
        <h1 id="nav-logo">Bookworm</h1>
        <ul id="nav-list">
          <li><a href="#home">Home</a></li>
          <li><a href="#books">Books</a></li>
          <li><a href="#register">Register</a></li>
          <li><a href="#contact-us">Contact Us</a></li>
          <li><a href="login.html" target="_blank">Login</a></li>
        </ul>
      </div>
    </header>
  </body>
</html>
```



```

        </ul>
    </div>
</header>
<main>
    <section id="home">
        <div id="home-header">
            <figure>
                
                <figcaption>
                    Photo by
                    <a
                        href="https://unsplash.com/@ninjason?utm_source=unsplash&utm_medium=r
                        eferred&utm_content=creditCopyText"
                    >Jason Leung</a>
                >
            </figcaption>
        </figure>
        <h2>Enter a world, of your choice...</h2>
    </div>
</section>
<section id="about-us"></section>
<section id="books">
    <div>
        <ul>
            <li>
                <figure>
                    
                    <figcaption>The Year of the Ladybird, Graham Joyce</figcaption>
                </figure>
            </li>

```

```

<li>
  <figure>
    
    <figcaption>Inception (The Marked Saga Book 1), Bianca
      Scardoni</figcaption>
  </figure>
</li>
<li><figure>
  
  <figcaption>The Loser, Thomas Bernhard</figcaption>
</figure></li>
</ul>
</div>
<div>
  <ul>
    <li><figure>
      
      <figcaption>Atonement, Ian McEwan</figcaption>
    </figure></li>
    <li><figure>
      
      <figcaption>Gilead, Marilynne Robinson</figcaption>
    </figure></li>
    <li><figure>
      
    <figcaption>The Fire Eternal, Chris d'Lacey</figcaption>
</figure></li>
</ul>
</div>
<div>
    <ul>
        <li><figure>
            
            <figcaption>Ringworld, Larry Niven</figcaption>
        </figure></li>
        <li><figure>
            
            <figcaption>History Is All You Left Me, Adam Silvera</figcaption>
        </figure></li>
        <li><figure>
            
            <figcaption>Trainspotting, Irvine Welsh</figcaption>
        </figure></li>
    </ul>
</div>
</section>
<section id="register">
    <div>
        <h3>Register now!</h3>
        <form action="submitted.html" method="post" onsubmit="validate()">

```

```

<section id="personal-details">
  <label for="name"
    >Enter your name:
  <br />
  <input
    type="text"
    name="name"
    id="name"
    placeholder="Enter your name..."
    required
  />
</label>
<label for="email"
  >Enter your email:
  <br />
  <input
    type="email"
    name="email"
    id="email"
    placeholder="Enter your email..."
    required
  />
</label>
<label for="dob"
  >Enter your date of birth:
  <br />
  <input type="date" name="dob" id="dob" required />
</label>
</section>

<section id="gender-details">
  <label for="gender-choices">Select your gender:</label>
  <ul>
    <li>
      <input type="radio" name="gender" id="gender-f" value="f" />F
    </li>
    <li>
      <input type="radio" name="gender" id="gender-m" value="m" />M
    </li>
    <li>
      <input

```

```

        type="radio"
        name="gender"
        id="gender-o"
        value="other"
    />Other
</li>
</ul>
</section>

<section id="source-section">
    <label for="sources">Where did you hear about us?</label>
    <br />
    <select name="" id="">
        <option value="">(select one)</option>
        <option value="instagram">Instagram</option>
        <option value="twitter">Twitter</option>
        <option value="facebook">Facebook</option>
        <option value="website">Our Official Website</option>
    </select>
</section>

<section id="comment-box">
    <label for="comments">Any suggestions/comments for us?</label>
    <br />
    <textarea
        name="comments-area"
        id="comments"
        cols="30"
        rows="5"
        placeholder="Enter your comments here..."
    ></textarea>
</section>

<section>
    <label for="password-box">Enter your password</label>
    <br />
    <input
        type="password"
        id="password-box"
        name="password-box"
        placeholder="Enter your password..."
    >

```

```
        required
    />
</section>
<br />

<section>
    <label for="confirm-pwd">Re-enter your password</label>
    <br />
    <input
        type="password"
        id="confirm-pwd"
        name="confirm-pwd"
        placeholder="Enter your password..."
    />
</section>
<br />

<section id="submit-section">
    <input type="submit" name="" id="submit-btn" value="Submit" />
</section>
</form>
</div>
</section>
</main>
<footer>
    <section id="contact-us"></section>
</footer>
</body>
</html>
```

## styles.css

```
* {  
  box-sizing: border-box;  
}  
  
html,  
::before,  
::after {  
  box-sizing: inherit;  
}  
  
body {  
  margin: 0;  
  font-family: 'IBM Plex Mono', monospace;  
  background-color: #7591ec;  
}  
  
#navbar {  
  display: grid;  
  grid-template-columns: auto auto;  
  align-items: center;  
  background-color: #07153a;  
  background-size: cover;  
  position: fixed;  
  height: 13vh;  
  width: 100vw;  
  max-width: 100%;  
}  
  
#navbar #nav-logo {  
  padding: 0 0.5rem 0 0.5rem;  
  text-transform: uppercase;  
  color: #ffffff;  
  font-size: clamp(0.5rem, 10rem, 2rem);  
}  
  
#navbar #nav-list {  
  display: flex;  
  flex-direction: row;  
  justify-content: space-evenly;
```

```

    align-items: center;
}

#nav-list li {
    list-style-type: none;
    text-transform: uppercase;
    font-size: clamp(0.2rem, 5rem, 1.1rem);
    font-weight: bold;
}

#nav-list a {
    text-decoration: none;
    color: #ffffff;
}

#nav-list a:hover {
    text-shadow: 1px 0.1px 5px rgba(255, 255, 255, 0.541);
}

#home {
    height: 105vh;
    width: 100vw;
    max-width: 100%;
    padding-top: 4.5rem;
    background-color: #bfccf7;
}

#home #home-header {
    display: flex;
    flex-direction: column;
    text-align: center;
    font-family: 'IBM Plex Mono', monospace;
    font-style: italic;
    letter-spacing: 0.2rem;
    /* font-family: 'Rokkitt', serif; */
}

#home-header h2,
#home-header h3 {
    margin: 0;
    font-weight: 600;
}

```



```

}

#home figure {
  margin-bottom: 0;
  padding-bottom: 1.4rem;
}

#home figure figcaption {
  font-family: 'Rokkitt', serif;
  font-size: clamp(0.1rem, 1rem, 0.7rem);
  font-weight: 600;
  color: #00000085;
}

#home figure figcaption a {
  color: rgba(0, 0, 0, 0.774);
  text-decoration: none;
}

#books {
  display: grid;
  grid-template-columns: auto auto auto;
  height: 150vh;
  padding-top: 1rem;
  background-color: #07153a;
}

#books li {
  list-style-type: none;
}

#books figure {
  display: flex;
  flex-direction: column;
  align-items: center;
}

#books figure figcaption{
  padding-top: 0.1rem;
  color: #b0c1f8;
}

```

```
    font-size: clamp(0.2rem, 1rem, 0.7rem);
    font-family: 'Roboto Mono', monospace;
    font-style: italic;
    letter-spacing: 0.5px;
}

#books img {
    height: 40vh;
    width: fit-content;
}

#register {
    height: 120vh;
    background-color: #7591ec;
}

#register div,
#login div {
    display: flex;
    flex-direction: column;
    align-items: center;
}

#register div h3,
#login div h3 {
    text-transform: uppercase;
    font-size: clamp(1rem, 6rem, 2rem);
    text-shadow: 1px 0.5px 3px #07153abd;
}

form {
    background-color: #07153abd;
    color: rgb(255, 255, 255);
    border: 1px solid #07153ac2;
    border-radius: 13px;
    display: block;
    margin: 0 auto;
    width: 500px;
    padding: 1rem 1rem;
    font-family: 'Rokkitt', serif;
```

```
    font-weight: 500;
    font-size: clamp(0.5rem,3rem,1.2rem);
}

input {
    font-family: "Montserrat", sans-serif;
}

#personal-details label {
    display: block;
    padding-bottom: 5px;
}

#personal-details input {
    width: 150px;
}

#gender-details {
    margin-top: 5px;
}

#gender-details label {
    display: block;
    margin-bottom: -10px;
}

#gender-details ul {
    padding-left: 0;
}

#gender-details li {
    list-style-type: none;
}

#class-details {
    margin-top: -7px;
}

#class-details label {
    display: block;
    margin-bottom: -10px;
}
```

```
}

#class-details ul {
  padding-left: 0;
}

#class-details li {
  list-style-type: none;
}

#source-section {
  display: block;
  margin-top: -5px;
  margin-bottom: 15px;
}

#source-section select {
  font-family: "Montserrat", sans-serif;
}

#source-section option {
  font-family: "Montserrat", sans-serif;
  color: black;
  font-weight: 600;
}

#comment-box {
  margin-top: -5px;
  margin-bottom: 5px;
}

#comment-box textarea {
  font-family: "Montserrat", sans-serif;
  color: black;
}

#submit-btn {
  background: #07153a;
  background-size: cover;
  background-repeat: no-repeat;
  color: aliceblue;
```

```

    border: 1px solid #7591ec;
    border-radius: 10px;
    width: 7vw;
    height: 4vh;
    text-transform: uppercase;
}
#submit-btn:hover {
    background-size: cover;
    background-repeat: no-repeat;
    color: #07153a;
    background-color: #7591ec;
    border: 1px solid #07153a;
}
#login-header,
#login-screen {
    display: flex;
    flex-direction: column;
    /* background: #a36e84; */
    align-items: center;
}
#login-header {
    color: #ecd4f1;
}

#login-header h1 {
    text-transform: uppercase;
}

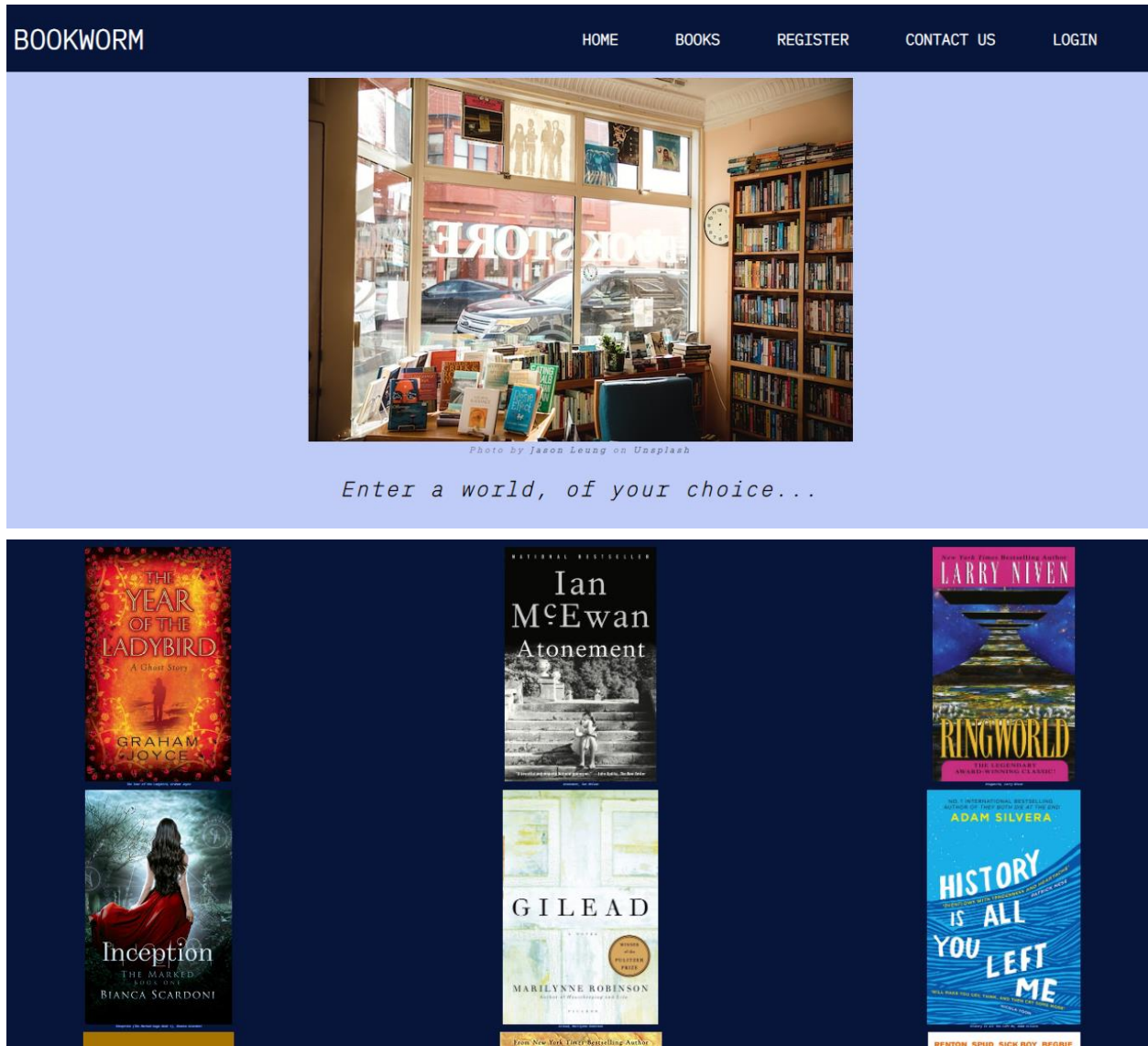
#login-screen #yum {
    color: #ecd4f1;
}

#login-screen #login-msg {
    color: #3a071b;
}

#login {
    height: 60vh;
    width: 100vw;
    background-color: #d1bcd6;
}

```

## Output



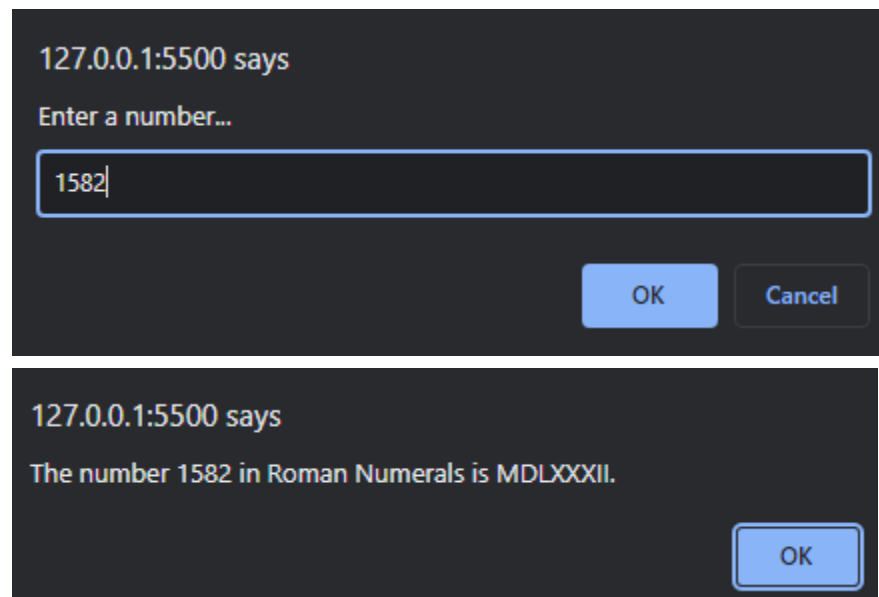
#### 4. Write a Javascript program to convert numbers to Roman numerals.

##### convert.js

```
function convertToRoman(num) {  
    var l = [1000,900,500,400,100,90,50,40,10,9,5,4,1];  
    var sym = ['M','CM','D','CD','C','XC','L','XL','X','IX','V','IV','I'];  
    var str = "";  
    let i = 0;  
    while(num>0){  
        if(l[i]<=num){  
            str+=sym[i];  
            num-=l[i];  
        }  
        else{  
            i++;  
        }  
    }  
    return str;  
}
```

```
console.log(convertToRoman(36));
```

##### Output



**5. Write a Javascript program to validate a form, which satisfies the conditions:**

- (a) Name should only contain alphabets.
- (b) Password should not be less than 6 characters length.
- (c) E-mail id must follow the pattern name@domain.com.
- (d) Phone number should contain 10 digits only.
- (e) Last Name and Address should not be empty.

**index.html**

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="stylesheet" href="styles.css" />
    <link rel="preconnect" href="https://fonts.googleapis.com" />
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
    <link
      href="https://fonts.googleapis.com/css2?family=Nunito&display=swap"
      rel="stylesheet"
    />
    <link
      rel="shortcut icon"
      href="https://cdn-icons-png.flaticon.com/512/9318/9318633.png"
      type="image/x-icon"
    />
    <title>Webvy</title>
    <script>
      const validate = () =>{
        const phVal = document.getElementById('number').value;
        const pwdVal = document.getElementById('pwd').value;
        const fnameVal = document.getElementById('name').value;
        if (String(phVal).length !== 10){
          alert("Phone no. should have 10 digits");
          return false;
        }

        if (fnameVal.length < 7){
          alert("First name has to be 6 charaters long!");
        }
      }
    </script>
  </head>
  <body>
```



```

        return false;
    }

    if (!/^[a-zA-z]*$/g.test(fnameVal)){
        alert("First name has to be characters only!");
        return false;
    }

    if(pwdVal.length < 7){
        alert("Password should be greater than 6 characters!");
        return false;
    }
    return true;
}
</script>
</head>
<body>
    <main>
        <div id="form-heading">
            <h1 id="title">Webvy Registration</h1>
            <p id="description">For Students</p>
        </div>

        <form action="#index.html" id="survey-form" method="post" onsubmit="return
        validate()">
            <div id="form-body">
                <fieldset id="personal-details">
                    <h2>Personal Details</h2>
                    <hr>
                    <label id="name-label" for="name">
                        >First Name
                        <input
                            id="name"
                            type="text"
                            placeholder="Enter your first name"
                            required
                        />
                    </label>
                    <label id="lname-label" for="lname">
                        >Last Name
                        <input

```

```

        id="lname"
        type="text"
        placeholder="Enter your last name"
        required
    />
</label>
<label id="email-label" for="email">
    >Email
    <input
        id="email"
        type="email"
        placeholder="Enter your email"
        required
    />
</label>
<label id="number-label" for="number">
    >Phone No.
    <input
        id="phone"
        type="phone"
        placeholder="Enter your number"
        required
    />
</label>
<label id="pwd-label" for="pwd">
    >Password
    <input
        id="pwd"
        type="password"
        placeholder="Enter your password"
        required
    />
</label>
</fieldset>

<fieldset id="learning-details">
    <h2>Learning Progress</h2>
    <hr>
    <label id="radio-buttons" class="learning-q">
        Are you currently learning web development?
        <label for="yes-web">

```

```

        <input type="radio" name="recs" id="yes-adopt" value="yes" />
        Yes
    </label>
    <label for="no-web">
        <input type="radio" name="recs" id="no-adopt" value="no" />
        No
    </label>
</label>

<label id="checkbox-options" class="learning-q">
    What have you learnt so far?
    <label for="html-skill">
        <input
            type="checkbox"
            name="skill-set"
            id="html-skill"
            value="html-skill"
        />
        HTML
    </label>
    <label for="css-skill">
        <input
            type="checkbox"
            name="skill-set"
            id="css-skill"
            value="css-skill"
        />
        CSS
    </label>
    <label for="js-skill">
        <input
            type="checkbox"
            name="skill-set"
            id="js-skill"
            value="js-skill"
        />
        Javascript
    </label>
    <label for="frameworks">
        <input
            type="checkbox"

```

```

        name="skill-set"
        id="frameworks"
        value="frameworks"
    />
    Frameworks(Bootstrap, React, etc..)
</label>
</label>
<label for="dropdown" class="learning-q">
    What do you find most difficult to learn?
    <select id="dropdown" name="dropdown" >
        <option value="" name="options">(select one)</option>
        <option value="1" name="options">The Box Model</option>
        <option value="3" name="options">Grid and Flexbox</option>
        <option value="2" name="options">Javascript programming</option>
        <option value="2" name="options">None of the above</option>
    </select>
</label>
</fieldset>
<fieldset id="student-feedback">
    <h2>About Me</h2>
    <hr>
    <label for="feedback">
        Please tell us about yourself and how got into web development
        <textarea
            name="feedback"
            id="feedback"
            cols="45"
            rows="10"
            placeholder="Enter your feedback here..."
            required
        ></textarea>
    </label>
</fieldset>
<fieldset id="submit-button"><button id="submit" type="submit">
    Submit</button>
</fieldset>
</div>
</form>
</main>
</body>
</html>

```

## styles.css

```
html {  
  box-sizing: border-box;  
}  
  
*,  
::before,  
::after {  
  box-sizing: inherit;  
}  
  
body {  
  background-image: linear-gradient(  
    90deg,  
    #1c3c6b 0%,  
    #7ebffc 35%,  
    #7ebffc 50%,  
    #7ebffc 70%,  
    #1c3c6b 100%  
  );  
  background-color: white;  
  background-size: cover;  
  margin: 0;  
  font-family: "Nunito", sans-serif;  
  color: white;  
}  
  
#form-heading {  
  text-align: center;  
  margin: 0 auto;  
}  
  
#form-heading h1 {  
  margin-top: -0.1rem;  
  font-size: 2.3rem;  
  color: white;  
  text-shadow: 1px 0.1px 20px #ffffffe1;  
}
```

```
#form-heading p {
  margin-top: -1.7rem;
  font-size: 1.3rem;
  font-weight: 600;
  color: #ffffffe1;
}

#form-body {
  margin-top: -1.5rem;
  background: #1c3c6b70;
  border-radius: 5px;
}

form {
  width: 50vw;
  max-width: 500px;
  min-width: 350px;
  margin: 0 auto;
  padding: 1% 0;
}

form h2 {
  margin-top: 1px;
  margin-bottom: 0;
}

form hr {
  width: 45%;
  margin: 0 0 5px 0;
  opacity: 45%;
}

fieldset {
  border: none;
  padding: 0.7rem 0.5rem;
  border-bottom: 1px solid rgba(226, 215, 175, 0.5);
}

label {
  display: block;
  margin: 0.5rem 0;
```

```

}

input,
select,
textarea {
    font-size: small;
    font-style: italic;
    margin: 10px 0 0 0;
    font-family: "Nunito", sans-serif;
    border-radius: 5px;
    border: 1px solid transparent;
}

#name,
#lname,
#email,
#phone,
#pwd {
    display: block;
    width: 55%;
    padding-bottom: 1%;
}

#learning-details .learning-q {
    padding-top: 15px;
}

select#dropdown {
    display: block;
    background: #1c3c6b70;
    color: white;
    width: 57%;
    border: none;
    font-family: "Nunito", sans-serif;
}

#submit-button {
    border-bottom: none;
}

#submit {

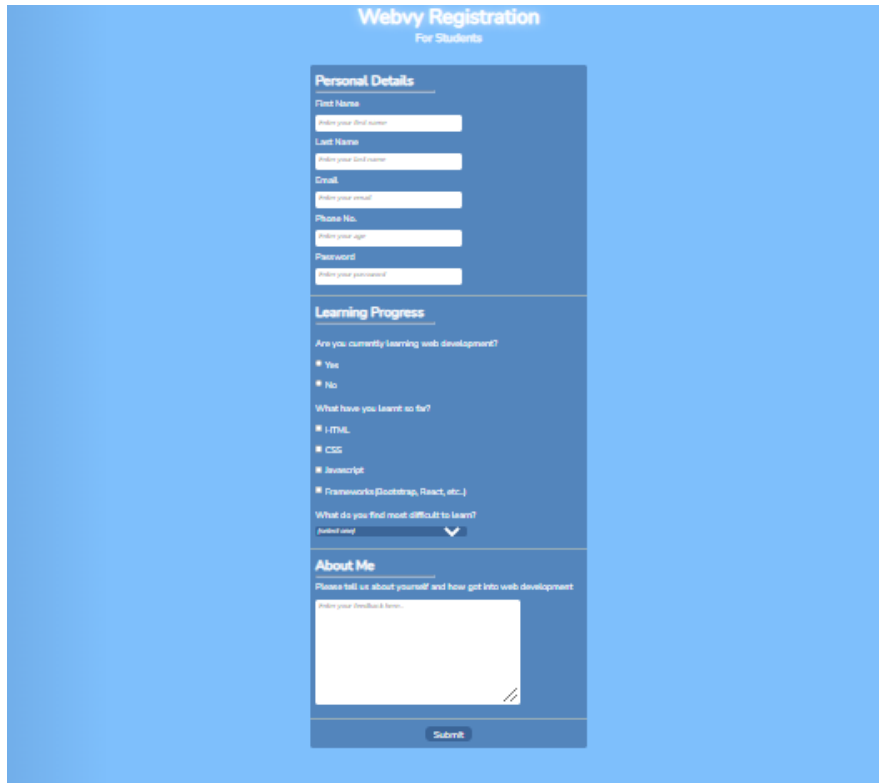
```

```
border: none;
display: block;
height: 20%;
width: 85px;
text-align: center;
margin: 0 auto;
font-family: "Nunito", sans-serif;
background: #1c3c6b70;
color: white;
font-size: 17px;
border-radius: 10px;
}
```

```
button#submit:hover {
  background: #7ebffc;
}
```



## Output



The image shows a registration form titled "Webvy Registration For Students" on a light blue background. The form is divided into three main sections: "Personal Details", "Learning Progress", and "About Me".

- Personal Details:** Contains input fields for First Name, Last Name, Email, Phone No., and Password. Each field has a placeholder text indicating what to enter.
- Learning Progress:** Includes a question "Are you currently learning web development?" with radio buttons for "Yes" and "No". Below it is a question "What have you learnt so far?" with a list of checkboxes for "HTML", "CSS", "JavaScript", and "Frameworks (Bootstrap, React, etc.)". There is also a question "What do you find most difficult to learn?" with a dropdown menu.
- About Me:** Includes a text area for "Please tell us about yourself and how you got into web development" and a "Submit" button at the bottom.

127.0.0.1:5500 says

First name has to be characters only!

OK

Email

no



Please include an '@' in the email address. 'no' is missing an '@'.

127.0.0.1:5500 says

Phone no. should have 10 digits

OK

**6. Write a Javascript program to demonstrate pop-up boxes, for the following:**

- (a) Display date**
- (b) Factorial of a number**
- (c) A multiplication table of numbers from 1 to 10**
- (d) Sum of n numbers**

**popupboxes.html**

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="stylesheet" href="styles.css" />
    <link rel="preconnect" href="https://fonts.googleapis.com" />
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
    <link
      href="https://fonts.googleapis.com/css2?family=Anonymous+Pro&display=swap"
      rel="stylesheet"
    />
    <title>Pop Up Box Demo</title>
  </head>

  <body>
    <header>
      <h1>Random Operations 4 Fun <sup>Javascript</sup></h1>
    </header>

    <main>
      <div>
        <button onclick="displayDate()">Today's Date</button>
        <button onclick="promtDemo()">Factorial of a number</button>
        <button onclick="alertDemo()" onmouseout="mouseOut()">
          Multiplication table
        </button>
        <button onclick="confirmDemo()" onmouseout="mouseOut()">
          Sum of 2 numbers
        </button>
      </div>
    </main>
```

```

<script>
  const displayDate = () => {
    date = new Date();
    day = date.getDate();
    month = date.getMonth() + 1;
    year = date.getFullYear();
    window.alert(`Today's date is ${day}/${month}/${year}.`);
  };

  const promptDemo = () => {
    let n = window.prompt("Enter a number...");
    console.log("your number is " + n);
    let fact = 1;
    for (let i = n; i > 1; i--) {
      fact *= i;
    }
    window.alert(" The factorial of " + n + " is " + fact + ".");
  };

  const alertDemo = () => {
    let n = window.prompt("Enter a number...");
    str = "";
    for (let i = 1; i <= 10; i++) {
      str += `${n} x ${i} = ${n * i} \n`;
    }
    window.alert("Multiplication table of " + parseInt(n) + "\n" + str);
  };

  const confirmDemo = () => {
    let num1 = window.prompt("Enter number 1");
    if (
      window.confirm(
        "Press OK if number 2 = 10\nPress Cancel if number 2 = 20"
      )
    ) {
      num2 = 10;
    } else {
      num2 = 20;
    }
    let num3 = window.prompt("Enter number 3");
  };

```

```
    num1 = parseInt(num1);  
    num2 = parseInt(num2);  
    num3 = parseInt(num3);  
    window.alert(  
        num1 + " + " + num2 + " + " + num3 + " = " + (num1 + num2 + num3)  
    );  
};  
</script>  
</body>  
</html>
```

## styles.css

```
* {  
  box-sizing: border-box;  
}  
  
html,  
::before,  
::after {  
  box-sizing: inherit;  
}  
  
body {  
  background: linear-gradient(  
    180deg,  
    #a4ff4fcc,  
    #f3c80686 70.71%  
  ),  
  linear-gradient(127deg, #00ff4ccc, #0099ff00 70.71%),  
  linear-gradient(  
    336deg,  
    #11ff45cc,  
    #ff00f200 70.71%  
  );  
  background-attachment: fixed;  
  margin: 0;  
  font-family: "Anonymous Pro", monospace;  
  padding: 1rem;  
}  
  
header {  
  display: flex;  
  flex-direction: row;  
  justify-content: center;  
}  
  
header h1 {  
  font-size: clamp(1rem, 4rem, 2rem);  
  color: #063d01;  
  text-shadow: 1px 0.5px 1px #90ff11cc, 1px 0.5px 1px #063d01;
```

```

}

header sup {
  vertical-align: top;
  font-size: clamp(0.2rem, 2rem, 1rem);
  position: relative;
  top: -0.7em;
  color: #063d01;
  text-shadow: 1px 0.5px 1px #90ff11cc;
  text-transform: uppercase;
  letter-spacing: 1.5px;
}

main div {
  padding: 1rem;
  display: grid;
  grid-template-columns: auto auto auto auto;
  gap: 2rem;
  justify-content: center;
}

main div button {
  width: 15vw;
  height: 10vh;
  background-color: #268f1da8;
  border: 1px solid #32bb2660;
  border-radius: 3px 8px;
  box-shadow: 1px 0.5px 8px #90ff11cc;
  font-family: "Anonymous Pro", monospace;
  font-weight: 600;
  color: #acffa6;
  text-transform: uppercase;
  font-size: clamp(0.5rem, 3rem, 1rem);
}

main div button:hover {
  background-color: #90ff11cc;
  border: 1px solid #5eff004f;
  color: #1f6e18;
  box-shadow: 1px 0.1px 10px #5eff00;
}

```

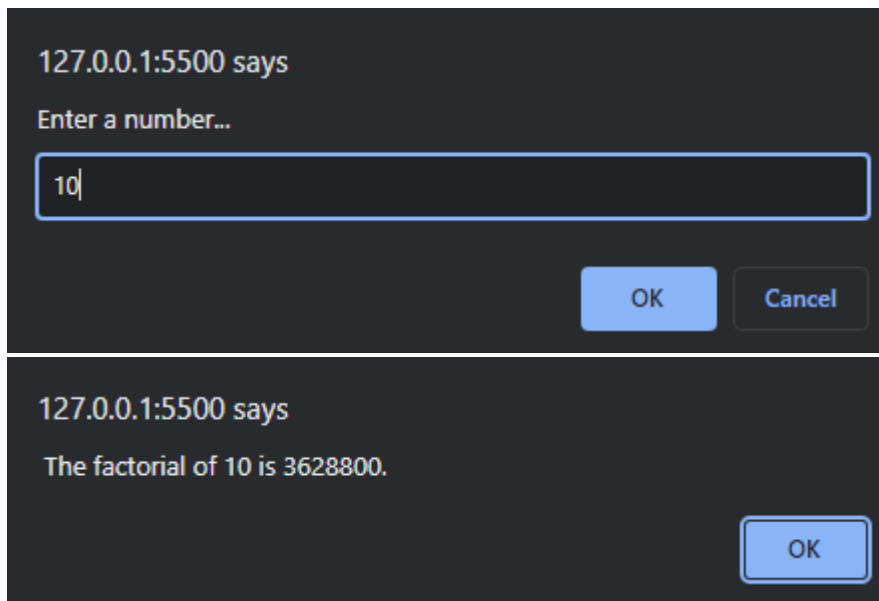
## **Output**



Today's Date



Factorial of a number



Multiplication Table

127.0.0.1:5500 says

Enter a number...

OK Cancel

127.0.0.1:5500 says

Multiplication table of 121

121 x 1 =	121
121 x 2 =	242
121 x 3 =	363
121 x 4 =	484
121 x 5 =	605
121 x 6 =	726
121 x 7 =	847
121 x 8 =	968
121 x 9 =	1089

OK

Sum of numbers



127.0.0.1:5500 says

Enter number 1

OK

Cancel

127.0.0.1:5500 says

Press OK if number 2 = 10

Press Cancel if number 2 = 20

OK

Cancel

127.0.0.1:5500 says

Enter number 3

OK

Cancel

**calculator.html**

Page / 58

```

#display {
  display: inline-block;
  background-color: white;
  padding: 8px;
  text-align: end;
  margin: 4px 2px;
  border-radius: 2px;
  color: black;
  width: calc(12em + 4px);
}
</style>
</head>

<body>
  <div class="container">
    <div id="calculator">
      <div>
        <div id="display">0</div>
        <button type="button" class="last" id="clear">C</button>
      </div>
      <div>
        <button type="button">1</button>
        <button type="button">2</button>
        <button type="button">3</button>
        <button type="button" class="last">/</button>
      </div>
      <div>
        <button type="button">4</button>
        <button type="button">5</button>
        <button type="button">6</button>
        <button type="button" class="last">-</button>
      </div>
      <div>
        <button type="button">7</button>
        <button type="button">8</button>
        <button type="button">9</button>
        <button type="button" class="last">+</button>
      </div>
      <div>
        <button type="button">.</button>
        <button type="button">0</button>
        <button type="button" id="equals">=</button>
        <button type="button" class="last">*</button>
      </div>
    </div>
  </div>
</body>
</html>

```

```

var buttons = Array.prototype.slice.call(
    document.getElementsByTagName("button")
);
var display = document.getElementById("display");
var operation = undefined;
var first = undefined;
var second = undefined;
var result = undefined;
const handler = (event) => {
    let value = event.target.innerHTML;
    if (isNaN(value)) {
        if (first !== undefined)
            switch (value) {
                case "+":
                case "-":
                case "/":
                case "*":
                    operation = value;
                    break;
                case "C":
                    operation = undefined;
                    first = undefined;
                    second = undefined;
                    result = undefined;
                    break;
                case ".":
                    display.innerHTML = operation === undefined ? (first * 1.0) : (second
* 1.0);

                    break;
                case "=":
                    if (
                        first !== undefined &&
                        second !== undefined &&
                        operation !== undefined
                    ) {
                        switch (operation) {
                            case "*":
                                result = first * second;
                                break;
                            case "/":
                                result = first / second;
                                break;
                            case "+":
                                result = first + second;
                                break;
                            case "-":
                                result = first - second;

```

```

        break;
    }
}

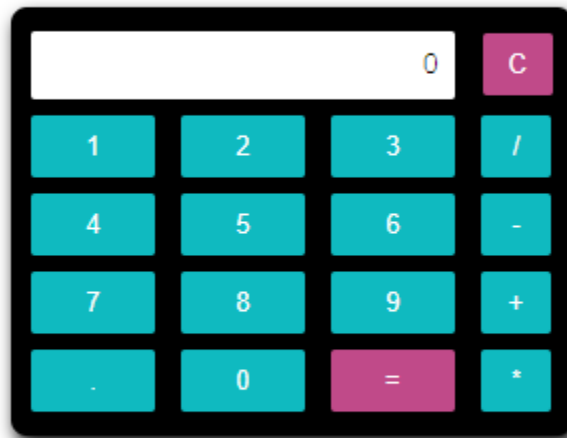
    break;
default:
    console.warn(value);
    break;
}
} else {
    if (operation === undefined) {
        if (first === undefined) first = parseInt(value);
        else first = parseInt(first + value);
    } else {
        if (second === undefined) second = parseInt(value);
        else second = parseInt(second + value);
    }
}

if (first === undefined) {
    display.innerHTML = 0;
} else if (first !== undefined && operation === undefined)
    display.innerHTML = first;
else if(second !== undefined) {
    display.innerHTML = second;
}
if(result !== undefined) {
    display.innerHTML = result;
}

};
buttons.forEach((button) => {
    button.addEventListener("click", handler);
    button.addEventListener("touch", handler);
});
</script>
</body>
</html>

```

## Output



## 8. Create a portfolio website. Demonstrate use of inline, internal and external CSS stylesheets.

### index.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="stylesheet" href="styles.css" />
    <link rel="preconnect" href="https://fonts.googleapis.com" />
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
    <link
      href="https://fonts.googleapis.com/css2?family=Montserrat&display=swap"
      rel="stylesheet"
    />
    <link
      href="https://fonts.googleapis.com/css2?family=Unbounded&display=swap"
      rel="stylesheet"
    />
    <title>Portfolio</title>
  </head>
  <body>
    <!-- HEADER -->
    <header>
      <nav id="navbar">
        <ul id="nav-list">
          <li><a href="#welcome-section" class="nav-link">About</a></li>
          <li><a href="#projects-section" class="nav-link">Projects</a></li>
          <li><a href="#contact-section" class="nav-link">Contact</a></li>
        </ul>
      </nav>
    </header>

    <!-- MAIN -->
    <main>
      <!-- ABOUT ME -->
      <section id="welcome-section">
        <h1>Hi! I'm Ady.</h1>
        <h2>An aspiring <span class="special-text">web developer</span>.</h2>
      </section>
      <!-- PROJECTS -->
      <section id="projects-section">
        <h2>These are some of my projects.</h2>
        <div id="project-grid">
          <a
            href="https://codepen.io/codeyady/full/YzjYXwm"
            target="_blank"
            class="project-tile"
          >
            
          </a>
        </div>
      </section>
    </main>
  </body>
</html>
```

```

    <p>FCC Documentation Page</p>
  </a>
  <a
    href="https://codepen.io/codeyady/full/ZEjvwqj"
    target="_blank"
    class="project-tile"
    >
    <p>FCC Survey Form</p>
  </a>
  <a
    href="https://codepen.io/codeyady/full/VwBzmqM"
    target="_blank"
    class="project-tile"
    >
    <p>Silly Cat Page</p>
  </a>
</div>

<div id="codepen-box">
  <a href="https://codepen.io/codeyady" id="codepen-link">Show all</a>
</div>
</section>
<!-- CONTACT ME -->

<section id="contact-section">
  <h2>Find me on...</h2>
  <div id="profile-list">
    <a
      href="https://github.com/adelicia-js"
      class="profile-link"
      target="_blank"
      > </a>
    >
    <a
      href="https://codepen.io/codeyady"
      class="profile-link"
      target="_blank"
      > </a>
    >
  </div>
</section>
</main>
</body>
</html>

```



## styles.css

```
html {
  box-sizing: border-box;
}

*, ::before, ::after {
  box-sizing: inherit;
}

body {
  margin: 0;
  padding: 0;
  font-family: 'Montserrat', sans-serif;
  background: rgba(9, 183, 252, 0.1);
  width: 100%;
  height: auto;
  background-size: cover;
}

/* NAV BAR */
#navbar {
  display: flex;
  justify-content: center;
  position: fixed;
  top: 0;
  left: 0;
  width: 100%;
  background-color: #201136;
  z-index: 10;
  overflow: hidden;
}

#nav-list {
  display: flex;
  gap: 25rem;
}

#nav-list li {
  list-style-type: none;
  margin-right: 1rem;
  font-weight: 600;
  padding-left: 0;
}

.nav-link {
  font-size: 1.2rem;
  color: rgb(255, 255, 255);
  text-decoration: none;
  text-transform: uppercase;
  letter-spacing: 0.3rem;
}

.nav-link:hover {
```

```

        color: #9f80cf;
        text-shadow: 1px 0.1px 5px #201136, 0 0 2px #201136, 0 0 2px #ffffff;
    }

    /* MAIN */

    /* WELCOME */
    #welcome-section {
        display: flex;
        width: 100%;
        height: 100vh;
        flex-direction: column;
        justify-content: center;
        align-items: center;
        background-color: black;
        /* background-image: #9f80cf; */
        background-image: linear-gradient(62deg, #9f80cf 0%, #9f80cf 50%, #9f80cf 100%);
        padding: 5rem;
        margin: 0;
    }

    #welcome-section h1, #welcome-section h2 {
        font-family: 'Unbounded', sans-serif;
        text-align: center;
    }

    #welcome-section h1 {
        font-size: 3rem;
        color: white;
        margin-bottom: 0;
    }

    #welcome-section h2 {
        font-size: 2rem;
        font-style: oblique;
        color: #201136;
        margin-top: 0.1rem;
    }

    /* PROJECTS */
    #projects-section {
        /* width: 100%; */
        /* height: 70vh; */
        text-align: center;
        padding: 2rem 1rem;
        background-color: rgb(0, 0, 0);
        background-image: linear-gradient(62deg, #c2a9e9 0%, #dad3e7 50%, #9c7ad4 100%);
    }

    #projects-section h2 {
        color: white;
        /* text-shadow: 1px 0.1px 10px #ffae00; */
        text-shadow: 1px 0.1px 10px #201136;
        font-family: 'Unbounded', sans-serif;
        padding-bottom: 0.5rem;
    }

```

```

}

#project-grid {
  display: grid;
  width: 100%;
  max-width: 1500px;
  margin: 0;
  margin-bottom: 1rem;
  grid-template-columns: repeat(auto-fit, minmax(350px, 1fr));
  gap: 2rem;
  padding-bottom: 0.5rem;
}

.project-tile {
  background-color: #201136;
  border-radius: 5px;
  text-decoration: none;
}

.project-tile img {
  width: 100%;
  height: 87%;
  object-fit: cover;
  border-radius: 5px 5px 0 0;
  color: rgba(255, 255, 255, 0.801);
}

.project-tile p {
  color: white;
  text-decoration: none;
  margin: 0;
  font-weight: 600;
  font-family: 'Unbounded', sans-serif;
  /* font-style: ; */
  font-weight: normal;
}

.project-tile:hover {
  box-shadow: 1px 0.1px 40px #4d3177;
}

#codepen-box {
  padding-top: 1rem;
  padding-bottom: 2rem;
}

#codepen-link {
  background: #ffffff;
  padding: 0.5rem 1rem;
  border-radius: 5px;
  color: #201136;
  text-decoration: none;
}

#codepen-link:hover {
  background: #201136;

```

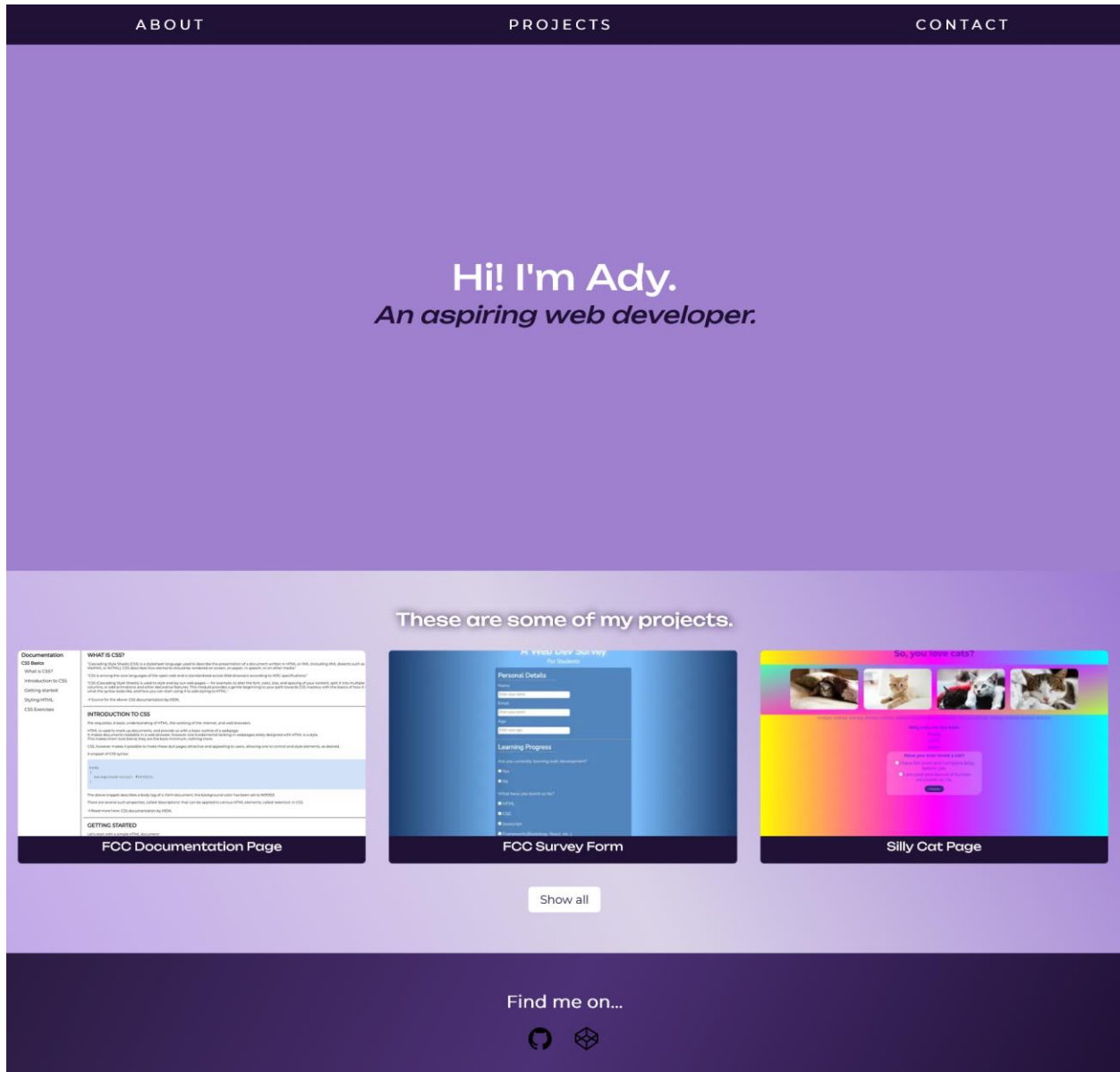
```
        color: #ffffff;
        box-shadow: 1px 0.1px 10px #4d3177;
    }

    /* CONTACT */
    #contact-section {
        width: 100%;
        text-align: center;
        padding: 2rem 1rem;
        background-color: rgb(0, 0, 0);
        background-image: linear-gradient(118deg, #2b1b42 0%, #4d3177 50%, #201136 100%);
        color: white;
    }

    #profile-list {
        display: flex;
        flex-direction: row;
        flex-wrap: wrap;
        justify-content: center;
        align-items: center;
        gap: 2rem;
        width: 100%;
        max-width: 1500px;
    }

    .profile-link img {
        width: 2rem;
        height: auto;
        max-width: 20vw;
        object-fit: cover;
    }
```

## Output



**9. Write a Javascript program which takes an input of a number from a text box and converts it to words.**

**index.html**

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Digits to words</title>
  </head>
  <body>
    <div>
      <input id="number" type="number" />
      <div id="words"></div>
    </div>
  </body>
  <script>
    var a = [
      "",
      "one ",
      "two ",
      "three ",
      "four ",
      "five ",
      "six ",
      "seven ",
      "eight ",
      "nine ",
      "ten ",
      "eleven ",
      "twelve ",
      "thirteen ",
      "fourteen ",
      "fifteen ",
      "sixteen ",
      "seventeen ",
      "eighteen ",
      "nineteen ",
    ];
    var b = [
      "",
      "",
      "twenty",
      "thirty",
      "forty",
    ];
```

```

    "fifty",
    "sixty",
    "seventy",
    "eighty",
    "ninety",
];

function inWords(num) {
    if ((num = num.toString()).length > 9) return "overflow";
    n = ("000000000" + num)
        .substr(-9)
        .match(/^(\\d{2})(\\d{2})(\\d{2})(\\d{1})(\\d{2})$/);
    if (!n) return;
    var str = "";
    str +=
        n[1] != 0
        ? (a[Number(n[1])] || b[n[1][0]] + " " + a[n[1][1]]) + "crore "
        : "";
    str +=
        n[2] != 0
        ? (a[Number(n[2])] || b[n[2][0]] + " " + a[n[2][1]]) + "lakh "
        : "";
    str +=
        n[3] != 0
        ? (a[Number(n[3])] || b[n[3][0]] + " " + a[n[3][1]]) + "thousand "
        : "";
    str +=
        n[4] != 0
        ? (a[Number(n[4])] || b[n[4][0]] + " " + a[n[4][1]]) + "hundred "
        : "";
    str +=
        n[5] != 0
        ? (str != "" ? "and " : "") +
          (a[Number(n[5])] || b[n[5][0]] + " " + a[n[5][1]]) +
          "only "
        : "";
    return str;
}

document.getElementById("number").onkeyup = function () {
    document.getElementById("words").innerHTML = inWords(
        document.getElementById("number").value
    );
};
</script>
</html>

```

## Output

2015

two thousand and fifteen only



## 10. Write a program to implement Typescript classes with inheritance.

### BankAccount.ts

```
class BankAccount {
    balance: number;
    constructor() {
        this.balance = 0;
    }
    deposit(amount: number) {
        this.balance += amount;
    }
    withdraw(amount: number) {
        if (this.balance > amount)
            this.balance -= amount;
    }
    transfer(amount: number, toAccount: BankAccount) {
        this.balance -= amount;
        toAccount.balance += amount;
    }
}
```

```
const adyAccount = new BankAccount();
const celAccount = new BankAccount();
```

```
adyAccount.deposit(5500);
celAccount.deposit(2000);
```

```
celAccount.transfer(2500, adyAccount);
```

```
console.log(adyAccount.balance);
console.log(celAccount.balance);
```

### Output

```
PS C:\Users\Adelicia\Documents\Projects\msc-sem-2\AWT-Lab\Bank-Operations> npx tsc BankAccount.ts
PS C:\Users\Adelicia\Documents\Projects\msc-sem-2\AWT-Lab\Bank-Operations> node BankAccount.js
● 8000
-500
```