

**RAJALAKSHMI ENGINEERING COLLEGE**  
**[AUTONOMOUS]**  
**RAJALAKSHMI NAGAR, THANDALAM - 602105**



**Laboratory Record Note Book**

Name : .....

Year / Branch / Section : .....

Register No : .....

College Roll No : .....

Semester : .....

Academic Year : .....

**RAJALAKSHMI ENGINEERING COLLEGE**  
**RAJALAKSHMI NAGAR, THANDALAM - 602105**

**BONAFIDE CERTIFICATE**

Name : \_\_\_\_\_

Academic Year : \_\_\_\_\_ Semester : \_\_\_\_\_ Branch : \_\_\_\_\_

Register No :

Certified that is the bonafide record of work done by the

above student in the \_\_\_\_\_

Laboratory during the year 20 - 20

Signature of Faculty in-charge

Submitted for the practical examination held on \_\_\_\_\_

Internal Examiner

External Examiner

## INDEX

Reg. No. :

Name : \_\_\_\_\_

Year : \_\_\_\_\_

Branch : \_\_\_\_\_

Sec : \_\_\_\_\_

S. No.	Date	Title	Page No.	Teacher's Signature / Remarks
1		Create a web page to embed a map along with hot spot AND links		
2		Create a web page using an embedded, external, and inline CSS file		
3		Create a registration page along with validations		
4a		JSP - Library Management System		
4b		Servlet - Bank Application		
5		PHP – Employee Details to connect database and execute queries to retrieve and update data. Prepare report for single and group of employees based on the end user needs		
6		Bootstrap – Web Page		
7		Design a Web page with Navigation menu, Inline editor, Order form, Instant Search & Switchable Grid.		
8		Angular JS – Single Page Application		

EXPT NO:     **Create a web page to embed a map along with hot spot**

DATE:

**AIM:**

To create a web page which includes a map and display the related information when a hot spot is clicked in the map.

**PROCEDURE:**

1. Create a html file with map tag.
2. Set the source attribute of the img tag to the location of the image and also set the use map attribute.
3. Specify an area with name, shape and href set to the appropriate values.
4. Repeat step 3 as many hot spots you want to put in the map.
5. Create html files for each and every hot spot the user will select.

**Code:**

**ImageMap.html**

```
<HTML>
```

```
<HEAD>
```

```
<TITLE>Image Map</TITLE> </HEAD>
```

```
<BODY>
```

```
 <map  
name="metroid"
```

```
id="metroid">
```

```
<area href="TamilNadu.html" shape="circle" coords="208,606,50"  
title="TamilNadu"/>
```

```
<area href="Karnataka.html" shape="rect" coords = "130,531,164,535" title  
="Karnataka" />
```

```
<area href="AndhraPradesh.html" shape="poly" coords =
```

```
"227,490,238,511,230,536,198,535,202,503" title ="Andhra Pradesh" />
```

```
</BODY>
```

## **TamilNadu.html**

```
<HTML><HEAD>
<TITLE>About Tamil Nadu</TITLE>
</HEAD>
<BODY>
<CENTER><H1>Tamil Nadu</H1></CENTER> <HR>
<UL>
<LI>Area : 1,30,058 Sq. Kms.</LI>
<LI>Capital : Chennai</LI>
<LI>Language : Tamil</LI>
<LI>Population : 6,21,10,839</LI> </UL><hr>
<a href='ImageMap.html'>India Map</a>
</BODY>
</HTML>
```

## **Karnataka.html**

```
<HTML>
<HEAD>
<TITLE>About Karnataka</TITLE> </HEAD>
<BODY>
<CENTER><H1>Karnataka</H1></CENTER>
<HR>
5
<UL>
<LI>Area : 1,91,791 Sq. Kms</LI>
<LI>Capital : Bangalore</LI>
<LI>Language : Kannada</LI>
```

```
<LI>Population : 5,27,33,958</LI>
</UL>
<hr>
<a href='ImageMap.html'>India Map</a>
</BODY>
</HTML>
```

### **AndhraPradesh.html**

```
<HTML>
<HEAD>
<TITLE>About Andhra Pradesh</TITLE> </HEAD>
<BODY>
<CENTER><H1>Andhra Pradesh</H1></CENTER> <HR>
<UL>
<LI>Area : 2,75,068 Sq. Kms</LI>
<LI>Capital : Hyderabad</LI>
<LI>Language : Telugu</LI>
</UL>
<hr>
<a href='ImageMap.html'>India Map</a>
</BODY>
</HTML>
```

## Output:



Tamil Nadu, located in the southern part of India, is rich in history, culture, and natural beauty. Here are some of the best tourist spots in Tamil Nadu: 1. **Mahabalipuram (Mamallapuram)**: Known for its ancient rock-cut temples and monuments, including the famous Shore Temple and the Five Rathas. 2. **Chennai**: The capital city of Tamil Nadu, offering attractions such as Marina Beach, Kapaleswarar Temple, Fort St. George, and the Government Museum. 3. **Madurai**: Famous for the Meenakshi Amman Temple, one of the most significant and oldest temples in India, along with the Thirumalai Nayakkar Mahal. 4. **Rameswaram**: A holy pilgrimage site known for the Rameswaram Temple, which is one of the twelve Jyotirlinga temples. 5. **Kanyakumari**: The southernmost tip of mainland India, renowned for its breathtaking sunset and sunset views, Vivekananda Rock Memorial, and Thiruvallur Statue. 6. **Ooty (Udagamandalam)**: A picturesque hill station nestled in the Nilgiri Hills, offering scenic landscapes, botanical gardens, tea estates, and the Nilgiri Mountain Railway. 7. **Coimbatore**: Known as the Manchester of South India, famous for its textile industry, and serving as a gateway to popular hill stations like Ooty and Coonoor. 8. **Thanjavur**: Home to the Brihadeeswarar Temple, a UNESCO World Heritage Site, showcasing remarkable Dravidian architecture, and the Thanjavur Maratha Palace. 9. **Kodaikanal**: Another beautiful hill station renowned for its serene lakes, scenic viewpoints, lush greenery, and opportunities for trekking and boating. 10. **Tiruchirappalli (Trichy)**: Famous for the Sri Ranganatha Temple in Srirangam, and the Rockfort Temple complex, offering panoramic views of the city. 11. **Vercand**: A lesser-known hill station in the Eastern Ghats, offering tranquil surroundings, pleasant weather, and attractions like the Vercand Lake and Lady's Seat viewpoint. 12. **Pondicherry (Puducherry)**: Although not technically part of Tamil Nadu, this former French colony is a popular tourist destination known for its colonial architecture, beaches, and spiritual retreats. These are just a few highlights, and Tamil Nadu has much more to offer in terms of culture, heritage, cuisine, and natural beauty.

## RESULT:

Thus the creation of a web page which includes a map and display the related in-formation when a hot spot is clicked in the map was executed successfully.

EXPT NO: Create a web page using an embedded, external, and inline CSS file.

DATE:

**AIM:**

To create a web page that displays college information using various style sheet.

**PROCEDURE:**

1. Create a web page with frame sets consisting two frames
2. In the first frame include the links
3. In the second frame set display the web page of the link
4. Create a external style sheets
5. Create a embedded style sheets
6. Create a inline and internal style sheets and make it link to the external style sheets

**Code:**

**Index.html:**

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<title>BATMAN TRILOGY</title>
```

```
<style>  body {
```

```
font-family: Arial, sans-
```

```
serif;  margin: 0;
```

```
padding: 0;
```

```
}
```



```
    header {      background-color:#0a0202;
color: #fff;
    padding: 20px;
text-align: center;
    }
```

```
    nav {
    background-color: #353434;
padding: 10px;
    }
```

```
    nav ul {      list-
style-type: none;
margin: 0;
padding: 0;
text-align: center;
    }
```

```
    nav ul li {
display: inline;
margin-right:
20px;
    }
```

```
    nav ul li a {
color: #fff;
    text-decoration: none;
    }
```

```
    nav ul li a:hover {      text-  
decoration: underline;  
    }
```

```
    main {  
padding: 20px;  
    }
```

```
    footer {  
        background-color: #0a0202;  
        color: #fff;  
        padding: 10px;  
text-align: center;  
position: fixed;  
width: 100%;  
bottom: 0;  
    }
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<header>
```

```
<h1>TRIOLOGY</h1>
```

```
</header>
```

```
<nav>
```

```
<ul>
```

<li><a href="index.html">HOME</a></li>

<li><a href="batman begins.html">BATMAN BEGINS</a></li>

<li><a href="the dark knight.html">THE DARK KNIGHT</a></li>

<li><a href="the dark knight rises.html">THE DARK KNIGHT RISES</a></li>

</ul>

</nav>

<main>

<h2 align="center">The dark knight rises</h2>

<p align="center">The Dark Knight Rises is a 2012 superhero film directed by Christopher Nolan, who co-wrote the screenplay with his brother Jonathan Nolan, and the story with David S. Goyer.[5] Based on the DC Comics character Batman, it is the final installment in Nolan's The Dark Knight trilogy, and the sequel to The Dark Knight (2008). The film stars Christian Bale as Bruce Wayne / Batman, alongside Anne Hathaway, Gary Oldman, Tom Hardy, Morgan Freeman, Marion Cotillard, Joseph Gordon-Levitt, and Michael Caine. Eight years after the events of The Dark Knight, the terrorist Bane forces Bruce Wayne to resume his role as Batman and save Gotham City from nuclear destruction.</p>

<div align="center">

<iframe width="560" height="315"  
src="https://www.youtube.com/embed/g8evyE9TuYk?si=fEef4d0dfMTCLNuk"  
title="YouTube video player" frameborder="0" allow="accelerometer; autoplay;  
clipboard-write; encrypted-media; gyroscope; picture-in-picture; web-share"  
allowfullscreen></iframe> </div>

</main>

<footer>

</footer>

</body>

</html>

## <BATMAN BEGINS.HTML>

!DOCTYPE html>

<html lang="en">

<head>

<title>Triology </title>

<style> body {

font-family: Arial, sans-

serif; margin: 0;

padding: 0;

}

header {

background-color:

#0a0202;

color: #fff;

padding: 20px;

text-align: center;

}

nav {

background-color: #353434;

padding: 10px;

}

nav ul { list-

style-type: none;

margin: 0;

```
padding: 0;
text-align: center;
}
```

```
nav ul li {
display: inline;
margin-right:
20px;
}
```

```
nav ul li a {
color: #fff;    text-
decoration: none;
}
```

```
nav ul li a:hover {    text-
decoration: underline;
}
```

```
main {
padding: 20px;
}
```

```
footer {
background-color: #0a0202;
color: #fff;
padding: 10px;
text-align: center;
```

```
position: fixed;
```

```
width: 100%;
```

```
bottom: 0;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<header>
```

```
<h1>TRIOLOGY</h1>
```

```
</header>
```

```
<nav>
```

```
<ul>
```

```
<li><a href="index.html">HOME</a></li>
```

```
<li><a href="batman begins.html">BATMAN BEGINS</a></li>
```

```
<li><a href="the dark knight.html">THE DARK KNIGHT</a></li>
```

```
<li><a href="the dark knight rises.html">THE DARK KNIGHT RISES</a></li>
```

```
</ul>
```

```
</nav>
```

```
<main>
```

```
<h2 align="center">Batman begins</h2>
```

```
<p align="center">Batman Begins is a 2005 superhero film directed by Christopher Nolan and written by Nolan and David S. Goyer. Based on the DC Comics character Batman, it stars Christian Bale as Bruce Wayne / Batman, with Michael Caine, Liam Neeson, Katie Holmes, Gary Oldman, Cillian Murphy, Tom Wilkinson, Rutger Hauer, Ken Watanabe, and Morgan Freeman in supporting roles. The film reboots the Batman film series, telling the origin story of Bruce Wayne from the death of his parents to his journey to become Batman and his fight to stop Ra's al Ghul and the Scarecrow from plunging Gotham City into chaos.</p>
```

```
<div align="center">

    <iframe width="560" height="315"
src="https://www.youtube.com/embed/QhPqez3CwiM?si=wTg_MSIsd38oOHY_"
title="YouTube video player" frameborder="0" allow="accelerometer; autoplay;
clipboard-write; encrypted-media; gyroscope; picture-in-picture; web-share"
allowfullscreen></iframe>

</div>

</main>


<footer>


</footer>


</body>
</html>
```

## <DARK KNIGHT.HTML>

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


<title>TRIOLOGY</titl
e> <style>  body {
font-family: Arial, sans-
serif;  margin: 0;
padding: 0;

}
```

```
header {  
background-color:  
#0a0203;  
    color: #fff;  
    padding: 20px;  
text-align: center;  
}  
  
nav {  
    background-color:  
#353434;    padding: 10px;  
}  
  
nav ul {  
list-style-type:  
none;    margin:  
0;    padding: 0;  
text-align: center;  
}  
  
nav ul li {  
display: inline;  
margin-right:  
20px;  
}
```



```
nav ul li a {
color: #fff;
    text-decoration: none;
}

nav ul li a:hover {
text-decoration: underline;
}

main {
padding:
20px;
}

footer {
    background-color: #0a0202;
    color: #fff;
padding: 10px;
text-align: center;
position: fixed;
width: 100%;
bottom: 0;
}
</style>
</head>
<body>
```

<header>

<h1>TRIOLOGY</h1>

</header>

<nav>

<ul>

<li><a href="index.html">HOME</a></li>

<li><a href="batman begins.html">BATMAN BEGINS</a></li>

<li><a href="the dark knight.html">THE DARK KNIHGT</a></li>

<li><a href="the dark knight rises.html">THE DARK KNIGHT  
RISES</a></li>

</ul>

</nav>

<main>

<h2 align="center">THE DARK KNIGHT</h2>

<p align="center">The Dark Knight is a 2008 superhero film directed by Christopher Nolan from a screenplay co-written with his brother Jonathan. Based on the DC Comics superhero Batman, it is the sequel to Batman Begins (2005) and the second installment in The Dark Knight Trilogy. The plot follows the vigilante Batman, police lieutenant James Gordon, and district attorney Harvey Dent, who form an alliance to dismantle organized crime in Gotham City. Their efforts are derailed by the Joker, an anarchistic mastermind who seeks to test how far Batman will go to save the city from chaos. The ensemble cast includes Christian Bale, Michael Caine, Heath Ledger, Gary Oldman, Aaron Eckhart, Maggie Gyllenhaal, and Morgan Freeman.</p>

<div align="center">

<iframe width="560" height="315"  
src="https://www.youtube.com/embed/\_PZpmTj1Q8Q?si=VgbpiiDT21bpPWz9  
" title="YouTube video player" frameborder="0" allow="accelerometer;  
autoplay; clipboard-write; encrypted-media; gyroscope; picture-in-picture; web-  
share" allowfullscreen></iframe> </div>

```
</main>
```

```
<footer>
```

```
</footer>
```

```
</body>
```

```
</html>
```

```
<DARK KNIGHT RISES.html>
```

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<title>Dark knight</title>
```

```
<style>  body {
```

```
font-family: Arial, sans-
```

```
serif;  margin: 0;
```

```
padding: 0;
```

```
}
```

```
  header {
```

```
    background-color:#0a0202;
```

```
    color: #fff;
```

```
    padding: 20px;
```

```
text-align: center;
```

```
}
```

```
nav {  
    background-color: #353434;  
padding: 10px;  
}
```

```
nav ul {    list-  
style-type: none;  
margin: 0;  
padding: 0;  
text-align: center;  
}
```

```
nav ul li {  
display: inline;  
margin-right:  
20px;  
}
```

```
nav ul li a {  
color: #fff;  
    text-decoration: none;  
}
```

```
nav ul li a:hover {    text-  
decoration: underline;  
}
```

```
main {  
padding: 20px;
```

```
}
```

```
footer {
```

```
background-color: #0a0202;
```

```
color: #fff;
```

```
padding: 10px;
```

```
text-align: center;
```

```
position: fixed;
```

```
width: 100%;
```

```
bottom: 0;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<header>
```

```
<h1>TRIOLOGY</h1>
```

```
</header>
```

```
<nav>
```

```
<ul>
```

```
<li><a href="index.html">HOME</a></li>
```

```
<li><a href="batman begins.html">BATMAN BEGINS</a></li>
```

```
<li><a href="the dark knight.html">THE DARK KNIGHT</a></li>
```

```
<li><a href="the dark knight rises.html">THE DARK KNIGHT RISES</a></li>
```

```
</ul>
```

```
</nav>
```

```
<main>
```

## <h2 align="center">The dark knight rises</h2>

<p align="center">The Dark Knight Rises is a 2012 superhero film directed by Christopher Nolan, who co-wrote the screenplay with his brother Jonathan Nolan, and the story with David S. Goyer.[5] Based on the DC Comics character Batman, it is the final installment in Nolan's The Dark Knight trilogy, and the sequel to The Dark Knight (2008). The film stars Christian Bale as Bruce Wayne / Batman, alongside Anne Hathaway, Gary Oldman, Tom Hardy, Morgan Freeman, Marion Cotillard, Joseph Gordon-Levitt, and Michael Caine. Eight years after the events of The Dark Knight, the terrorist Bane forces Bruce Wayne to resume his role as Batman and save Gotham City from nuclear destruction.</p>

<div align="center">

<iframe width="560" height="315"  
src="https://www.youtube.com/embed/g8evyE9TuYk?si=fEef4d0dfMTCLNuk"  
title="YouTube video player" frameborder="0" allow="accelerometer; autoplay;  
clipboard-write; encrypted-media; gyroscope; picture-in-picture; web-share"  
allowfullscreen></iframe>   </div>

</main>

<footer>

</footer>

</body>

</html>

## Output:



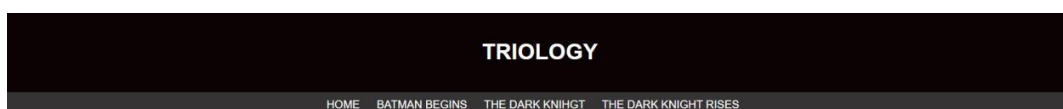
### The dark knight rises

The Dark Knight Rises is a 2012 superhero film directed by Christopher Nolan, who co-wrote the screenplay with his brother Jonathan Nolan, and the story with David S. Goyer.[5] Based on the DC Comics character Batman, it is the final installment in Nolan's The Dark Knight trilogy, and the sequel to The Dark Knight (2008). The film stars Christian Bale as Bruce Wayne / Batman, alongside Anne Hathaway, Gary Oldman, Tom Hardy, Morgan Freeman, Marion Cotillard, Joseph Gordon-Levitt, and Michael Caine. Eight years after the events of The Dark Knight, the terrorist Bane forces Bruce Wayne to resume his role as Batman and save Gotham City from nuclear destruction.



### Batman begins

Batman Begins is a 2005 superhero film directed by Christopher Nolan and written by Nolan and David S. Goyer. Based on the DC Comics character Batman, it stars Christian Bale as Bruce Wayne / Batman, with Michael Caine, Liam Neeson, Katie Holmes, Gary Oldman, Cillian Murphy, Tom Wilkinson, Rutger Hauer, Ken Watanabe, and Morgan Freeman in supporting roles. The film reboots the Batman film series, telling the origin story of Bruce Wayne from the death of his parents to his journey to become Batman and his fight to stop Ra's al Ghul and the Scarecrow from plunging Gotham City into chaos.



### THE DARK KNIGHT

The Dark Knight is a 2008 superhero film directed by Christopher Nolan from a screenplay co-written with his brother Jonathan. Based on the DC Comics superhero Batman, it is the sequel to Batman Begins (2005) and the second installment in The Dark Knight Trilogy. The plot follows the vigilante Batman, police lieutenant James Gordon, and district attorney Harvey Dent, who form an alliance to dismantle organized crime in Gotham City. Their efforts are derailed by the Joker, an anarchistic mastermind who seeks to test how far Batman will go to save the city from chaos. The ensemble cast includes Christian Bale, Michael Caine, Heath Ledger, Gary Oldman, Aaron Eckhart, Maggie Gyllenhaal, and Morgan Freeman.



## RESULT:

Thus the creation of a web page that displays college information using various style sheet was successfully executed and verified

EXPT NO:

**Create a registration page along with validations.**

DATE:

**Aim:**

To create a visually appealing registration form with validation for email addresses.

**Procedure:**

**1. Layout Design:**

Design the layout of the registration form, including input fields for username, email, and password, along with a submit button.

**2. Styling:**

Apply CSS to style the form elements, providing appropriate spacing, alignment, and background color to enhance visual appeal.

**3. Email Validation:**

Implement JavaScript to validate the email address entered by the user. Ensure that the email follows the standard format and contains the "@" symbol.

**4. Error Handling:**

Display error messages if the email entered by the user is invalid. These messages should provide clear guidance on how to correct the input.

**5. Submission Handling:**

Handle form submission events, ensuring that the form data is submitted only if all fields are filled correctly, including a valid email address. If any field is invalid, prevent form submission and prompt the user to correct the errors.



## Code:

### Index.html:

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Registration Page</title>

  <link rel="stylesheet" href="style.css">

</head>

<body>

  <div class="container">

    <h2>Registration Form</h2>

    <form id="registrationForm" action="#" method="post">

      <div class="form-group">

        <label for="username">Username:</label>

        <input type="text" id="username" name="username" required>

      </div>

      <div class="form-group">

        <label for="email">Email:</label>

        <input type="email" id="email" name="email" required>

        <span class="error-message" id="emailError"></span>

      </div>

      <div class="form-group">

        <label for="password">Password:</label>

        <input type="password" id="password" name="password" required>

      </div>

    </form>

  </div>

</body>

</html>
```

```
        <button type="submit">Register</button>
    </form>
</div>
<script src="script.js"></script>
</body>
</html>
```

### **Style.css:**

```
body {
    font-family: Arial, sans-serif;
    background-color: #f0f0f0;
    margin: 0;
    padding: 0;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
}
.container {
    width: 400px;
    padding: 20px;
    background-color: #fff;
    border-radius: 8px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}
h2 {
    text-align: center;
```

```
margin-bottom: 20px;
}
form-group {
    margin-bottom: 20px;
}
label {
    display: block;
    margin-bottom: 5px;
}
input[type="text"],
input[type="email"],
input[type="password"] {
    width: 100%;
    padding: 10px;
    border-radius: 5px;
    border: 1px solid #ccc;
}
error-message {
    color: red;
    font-size: 12px;
    margin-top: 5px;
}
button {
    background-color: #007bff;
    color: #fff;
    border: none;
    padding: 10px 20px;
```

```
border-radius: 5px;
cursor: pointer;
width: 100%;
}
button:hover {
    background-color: #0056b3;
}
```

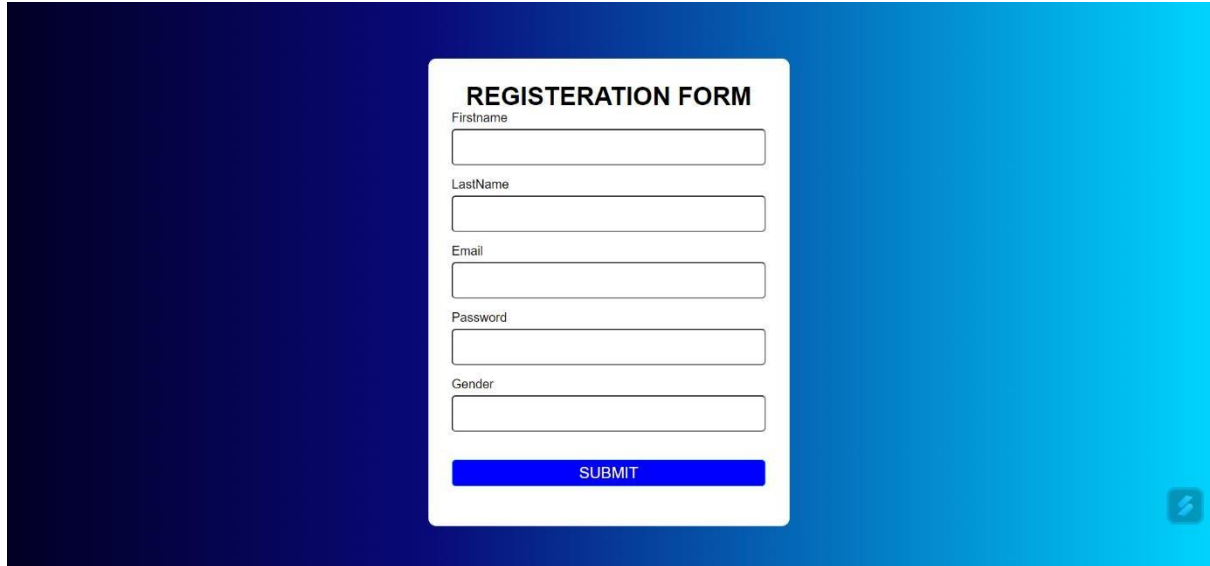
### **Script.js:**

```
document.addEventListener('DOMContentLoaded', function () {
    const form = document.getElementById('registrationForm');
    const emailInput = document.getElementById('email');
    const emailError = document.getElementById('emailError');

    form.addEventListener('submit', function (event) {
        if (!validateEmail(emailInput.value)) {
            emailError.textContent = 'Invalid email address';
            event.preventDefault();
        } else {
            emailError.textContent = "";
        }
    });

    function validateEmail(email) {
        const regex = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
        return regex.test(email);
    }
});
```

## Output:



The image displays a registration form titled "REGISTRATION FORM" centered on a blue gradient background. The form is a white rectangle with rounded corners. It contains five input fields, each with a label above it: "Firstname", "LastName", "Email", "Password", and "Gender". Below these fields is a blue button with the text "SUBMIT" in white. A small, faint logo is visible in the bottom right corner of the background.

REGISTRATION FORM	
Firstname	<input type="text"/>
LastName	<input type="text"/>
Email	<input type="text"/>
Password	<input type="password"/>
Gender	<input type="text"/>
<input type="button" value="SUBMIT"/>	

## Result:

A visually appealing registration form with email validation ensures user inputs adhere to standard email format, enhancing data accuracy and user experience.

EXPT NO:

## JSP - LIBRARY MANAGEMENT SYSTEM

DATE:

### Aim:

To develop a JavaScript program that validates the controls in the forms of the Library Management System application, ensuring data integrity and user input correctness.

### Procedure:

1. Identify forms requiring validation in the Library Management System.
2. Define validation rules for each form field.
3. Develop JavaScript functions for validation based on defined rules.
4. Integrate validation functions with form submission processes.
5. Prevent form submission if data fails validation, display error messages.
6. Thoroughly test and debug the validation functionality for usability and reliability.

### Code:

#### Index.html:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>Library Management System</title>
```

```
  <link rel="stylesheet" href="styles.css">
```

```
</head>
<body>
  <h2>Library Management System</h2>
  <form id="bookForm">
    <label for="title">Title:</label>
    <input type="text" id="title" name="title" required><br>
    <label for="author">Author:</label>
    <input type="text" id="author" name="author" required><br>
    <label for="year">Year:</label>
    <input type="number" id="year" name="year" required><br>
    <button type="submit">Add Book</button>
  </form>
  <table id="bookTable">
    <tr>
      <th>Title</th>
      <th>Author</th>
      <th>Year</th>
      <th>Action</th>
    </tr>
  </table>

  <script>
    const bookForm = document.getElementById('bookForm');
    const bookTable = document.getElementById('bookTable');

    bookForm.addEventListener('submit', function(event) {
```

```
event.preventDefault();

const title = document.getElementById('title').value;
const author = document.getElementById('author').value;
const year = document.getElementById('year').value;

addBook(title, author, year);
bookForm.reset();
});

function addBook(title, author, year) {
    const row = bookTable.insertRow(-1);
    const titleCell = row.insertCell(0);
    const authorCell = row.insertCell(1);
    const yearCell = row.insertCell(2);
    const actionCell = row.insertCell(3);

    titleCell.textContent = title;
    authorCell.textContent = author;
    yearCell.textContent = year;
    actionCell.innerHTML = '<button
onclick="editBook(this)">Edit</button>';
}

function editBook(button) {
    const row = button.parentElement.parentElement;
    const title = row.cells[0].textContent;
    const author = row.cells[1].textContent;
```



```
const year = row.cells[2].textContent;

const newTitle = prompt('Enter new title:', title);
const newAuthor = prompt('Enter new author:', author);
const newYear = prompt('Enter new year:', year);

if (newTitle && newAuthor && newYear) {
    row.cells[0].textContent = newTitle;
    row.cells[1].textContent = newAuthor;
    row.cells[2].textContent = newYear;
}
}
</script>
</body>
</html>
```

### **Style.css:**

```
body {
    font-family: Arial, sans-serif;
    background-color: #f0f0f0;
    margin: 0;
    padding: 0;
}

.container {
    max-width: 800px;
    margin: 20px auto;
    padding: 20px;
```

```
background-color: #fff;
border-radius: 5px;
box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}
```

```
h2 {
  text-align: center;
}
```

```
form {
  margin-bottom: 20px;
}
```

```
form label {
  display: block;
  margin-bottom: 5px;
}
```

```
form input[type="text"],
form input[type="number"] {
  width: calc(100% - 12px);
  padding: 8px;
  margin-bottom: 10px;
}
```

```
form button[type="submit"] {
  padding: 8px 20px;
  background-color: #4CAF50;
  color: white;
  border: none;
  border-radius: 4px;
  cursor: pointer;
```

```
        transition: background-color 0.3s;
    }
    form button[type="submit"]:hover {
        background-color: #45a049;
    }
    table {
        width: 100%;
        border-collapse: collapse;
    }
    th, td {
        padding: 8px;
        border-bottom: 1px solid #ddd;
        text-align: left;
    }
    th {
        background-color: #f2f2f2;
    }
    tr:hover {
        background-color: #f5f5f5;
    }
```

## Output:

Library Management System

Book Title:

Author:

Year:

Add Book

Title	Author	Year	Action
-------	--------	------	--------

Library Management System

Book Title:

Author:

Year:

Add Book

Title	Author	Year	Action
things fall apart	achebe	1958	<div>Edit</div>

Book Title:

Author:

Year:

Add Book

Title	Author	Year	Action
things fall apart	achebe	1958	<div>Edit</div>

This page says

Enter new title:

things fall apart

OK

Cancel

## Result:

Developed JavaScript program to validate Library Management System forms, ensuring data integrity and input correctness.

EXPT NO:

## PHP – Employee Details

DATE:

### Aim:

PHP program for Employee Details, which includes EmpID, Name, Designation, Salary, DOJ, etc., to connect with the database and execute queries to retrieve and update data.

### Procedure:

Relations using MYSQL for a banking application given below enforcing primary key and

foreign key constraints:

EMPDETAILS (EMPID, ENAME, DESIG, DEPT, DOJ, SALARY)

1. Open MySQL.

2. Create a database.

```
mysql> create database rec;
```

Query OK, 1 row affected (0.05 sec)

3. Connect to the database.

```
mysql> use rec;
```

Database changed

4. Create the following tables:

```
mysql> create table empdetails(empid int primary key,
```

```
-> ename varchar(20), desig varchar(20), dept varchar(20),
```

```
-> doj date, salary int);
```

Query OK, 0 rows affected (0.08 sec)

## PROGRAM:

config.php

```
<?php
$databaseHost = 'localhost';
$databaseName = 'rec';
$databaseUsername = 'root';
$databasePassword = 'admin';
$mysqli = mysqli_connect($databaseHost, $databaseUsername,
$databasePassword, $databaseName);
?>
```

index.php

```
<?php
//including the database connection file
include_once("config.php");
//fetching data in descending order (lastest entry first)
$result=mysqli_query($mysqli, "SELECT * FROM empdetails ORDER BY
empid DESC");
?>
<html>
<head>
<title>Homepage</title>
</head>
<body>
<h1 align="center">Employee Details</h1>
<hr />
<a href="add.html">Add New Data</a><br/><br/>
<table width='100%' border=0>
```

```

<tr bgcolor='#CCCCCC'>
<td>Employee Id.</td>
<td>Name</td>
<td>Designation</td>
<td>Department</td>
<td>DOJ</td>
<td>Salary</td>
<td>Edit / Delete</td>
</tr>
<?php
while($res = mysqli_fetch_array($result)) {echo
"<tr>";
echo "<td>".$res['empid']."</td>";
echo "<td>".$res['ename']."</td>";
echo "<td>".$res['desig']."</td>";
echo "<td>".$res['dept']."</td>";
echo "<td>".$res['doj']."</td>";
echo "<td>".$res['salary']."</td>";
echo "<td><a href='edit.php?empid=$res[empid]'>Edit</a>";
echo " | <a href='delete.php?empid=$res[empid]'>Delete</a></td>";echo
"</tr>";
}
?>
</table>
</body>
</html>

```

add.html

```
<html>
```

```
<head>
```

```
<title>Add Employee Details</title>
```

```
</head>
```

```
<body>
```

```
<h1 align="center">Add Employee Details</h1>
```

```
<hr />
```

```
<a href="index.php">Home</a>
```

```
<br /><br />
```

```
<form action="add.php" method="post" name="form1">
```

```
<table width="25%" border="0">
```

```
<tr>
```

```
<td>Employee Id. : </td>
```

```
<td><input type="text" name="empid"></td>
```

```
</tr>
```

```
<tr>
```

```
<td>Name : </td>
```

```
<td><input type="text" name="ename"></td>
```

```
</tr>
```

```
<tr>
```

```
<td>Designation : </td>
```

```
<td><input type="text" name="desig"></td>
```

```
</tr>
```

```
<tr>
```

```
<td>Department</td>
```



```
<td><input type="text" name="dept"></td>
</tr>
<tr>
<td>DOJ</td>
<td><input type="text" name="doj"></td>

</tr>
<tr>
<td>Salary</td>
<td><input type="text" name="salary"></td>
</tr>
<tr>
<td colspan="2" align="center"><input type="submit"
name="Submit" value="Add"></td>
</tr>
</table>
</form>
</body>
</html>
add.php
<html>
<head>
<title>Add Employee Details</title>
</head>
<body>
<?php
//including the database connection file
```

```

include_once("config.php");
$empid = $_POST['empid'];
$name = $_POST['ename'];
$desig = $_POST['desig'];
$dept = $_POST['dept'];
$doj = $_POST['doj'];
$salary = $_POST['salary'];
if(isset($_POST['Submit'])) {
//insert data to database
$result = mysqli_query($mysqli, "INSERT INTO empdetails values ($empid,
'$name','$desig','$dept','$doj','$salary)");
//display success message
echo "<h1 align='center'>Add Employee Details</h1>";echo
"<hr />";
echo "<font color='green'>Data added successfully.";echo
"<br/><a href='index.php'>View Result</a>";
}
?>
</body>
</html>
edit.php
<?php
// including the database connection file
include_once("config.php");
if(isset($_POST['update']))
{
$empid = $_POST['empid'];

```

```

$name = $_POST['ename'];

$desig = $_POST['desig'];
$dept = $_POST['dept'];
$doj = $_POST['doj'];
$salary = $_POST['salary'];

//updating the table
$result = mysqli_query($mysqli, "UPDATE empdetails SET ename='$name',
desig='$desig',dept='$dept',doj='$doj',salary=$salary WHERE empid=$empid");
//redirectig to the display page. In our case, it is index.phpheader("Location:
index.php");
}
?>

<?php
echo "<h1 align='center'>Edit Employee Details</h1>";echo "<hr
/>";

//getting id from url
$empid = $_GET['empid'];

//selecting data associated with this particular eid
$result = mysqli_query($mysqli, "SELECT * FROM empdetails WHERE
empid=$empid");
while($res = mysqli_fetch_array($result))
{
$empid = $res['empid'];
$name = $res['ename'];
$desig = $res['desig'];
$dept = $res['dept'];

```

```
$doj = $res['doj'];
$salary = $res['salary'];
}
?>

<html>
<head>
<title>Edit Employee Details</title>
</head>
<body>
<a href="index.php">Home</a>
<br/><br/>
<form name="empform" method="post" action="edit.php">
<table border="0">
<tr>
<td>Name : </td>
<td><input type="text" name="ename" value="<?php echo $ename;?>"></td>
</tr>
<tr>
<td>
<tr>
<td>Designation : </td>
<td><input type="text" name="desig" value="<?php echo $desig;?>"></td>
</tr>
<tr>
<td>Department : </td>
<td><input type="text" name="dept" value="<?php echo $dept;?>"></td>
</tr>
```

```
<td>DOJ : </td>
<td><input type="text" name="doj" value="<?php echo $doj;?>"></td>
</tr>
<tr>
<td>Salary</td>
<td><input type="text" name="salary" value="<?php echo $salary;?>"></td>
</tr>
<tr>
<td><input type="hidden" name="empid" value=<?php echo
$_GET['empid'];?>></td>
<td><input type="submit" name="update" value="Update"></td>
</tr>
</table>
```

```
</form>
```

```
</body>
```

```
</html>
```

```
delete.php
```

```
<?php
```

```
//including the database connection file
```

```
include("config.php");
```

```
//getting id of the data from url
```

```
$empid = $_GET['empid'];
```

```
//deleting the row from table
```

```
$result = mysqli_query($mysqli, "DELETE FROM empdetails WHERE
empid=$empid");
```

```
//redirecting to the display page (index.php in our case)
```

```
header("Location:index.php");
```

```
?>
```

## Output:

---

### Add Employee Details

---

[Home](#)

Employee Id. :

Name :

Designation :

Department :

DOJ :

Salary :

---

### Add Employee Details

---

[Home](#)

Employee Id. :

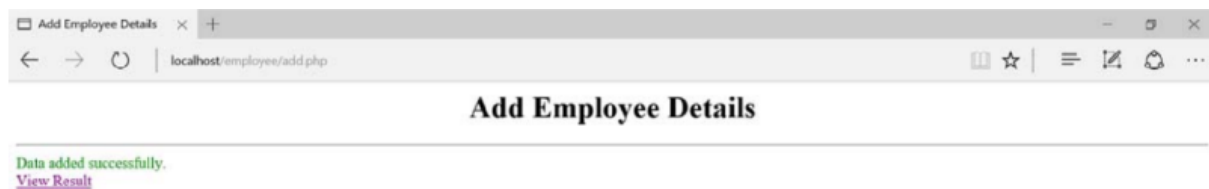
Name :

Designation :

Department :

DOJ :

Salary :



The screenshot shows a web browser window with the title 'Add Employee Details'. The address bar displays 'localhost/employee/add.php'. The page content shows the 'Add Employee Details' form with the following values: Employee Id. : 678409, Name : Ganesh, Designation : Assistant Manager, Department : Accounts, DOJ : 19/12/1988, and Salary : 100000/-. Below the form, a green message states 'Data added successfully.' and a purple link labeled 'View Result' is visible.

---

### Add Employee Details

---

Data added successfully.

[View Result](#)

## Result:

Hence, PHP program for Employee Details, which includes EmpID, Name, Designation, Salary, DOJ, etc., to connect with the database and execute queries to retrieve and update data is executed successfully.

EXPT NO:

## **Servlet - Bank Application**

DATE:

### **Aim:**

Program to develop a Banking application accessing a database using Servlet.

### **Procedure:**

Relations using MYSQL for a banking application given below enforcing primary key and

foreign key constraints:

CUSTOMER (CID, CNAME)

ACCOUNT (ANO, ATYPE, BALANCE, CID)

An account can be a savings account or a current account. Check ATYPE in 'S' or 'C'.

A customer can have both types of accounts.

TRANSACTION (TID, ANO, TTYPE, TDATE, TAMOUNT)

TTYPE can be 'D' or 'W'

D- Deposit; W – Withdrawal

1. Open MySQL.

2. Create a database.

```
mysql> create database banking;
```

Query OK, 1 row affected (0.05 sec)

3. Connect to the database.

```
mysql> use banking;
```

Database changed

4. Create the following tables:

```
mysql> create table customer (cid integer, cname varchar(20),
```

```
-> primary key (cid));
```

**index.html:**

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Banking Application</title>
</head>
<body>
<h1 align="center">Banking Application</h1>
<hr />
<a href="Customer.html">Customer Details</a>
<br />
<br />
<a href="Account.html">Account Details</a>
</body>
</html>
```

**Customer.html:**

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Customer Details</title>
</head>
<body>
<h1 align="center">Customer Details</h1>
<hr />
<form action="AddCustomer" method="post">
```



```

<table>
<tr>
</tr>
<tr>
</tr>
<tr>
</tr>
<tr>
</tr>
</table>
<td>Customer Id. :</td>
<td><input type="text" name="cid"></td>
<td>Customer Name :</td>
<td><input type="text" name="cname"></td>
<td colspan="2" align="center"><input type="submit"
value="Add Customer"></td>
<br /> <a href="ViewCustomers">View All Customers</a>
</form>
</body>
</html>

```

AddCustomer.java:

```

import java.io.IOException; import
java.io.PrintWriter; import
java.sql.Connection; import
java.sql.DriverManager;
import java.sql.PreparedStatement;
import javax.servlet.ServletException; import
javax.servlet.annotation.WebServlet; import
javax.servlet.http.HttpServlet; import

```

```

javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
 * Servlet implementation class AddCustomer
 */
@WebServlet("/AddCustomer")
public class AddCustomer extends HttpServlet { private static
final long serialVersionUID = 1L;Connection conn = null;
PreparedStatement ps = null;
/**
 * @see HttpServlet#doPost(HttpServletRequest request,
HttpServletResponse
 * response)
 */
protected void doPost(HttpServletRequest request,
HttpServletResponse response)
throws ServletException, IOException {
// TODO Auto-generated method stub
response.setContentType("text/html");
PrintWriter out = response.getWriter();
out.println("<html>");
out.println("<head><title>Add Customer Details</title></head>");
out.println("<body>");
out.println("<h1 align='center'>Add Customer Details</h1>");
out.println("<hr />");
try {
Class.forName("com.mysql.cj.jdbc.Driver");
String URL = "jdbc:mysql://localhost:3306/banking";

```

```
conn = DriverManager.getConnection(URL, "root", "admin");
ps = conn.prepareStatement("insert customer values (?, ?)"); ps.setInt(1,
Integer.parseInt(request.getParameter("cid"))); ps.setString(2,
request.getParameter("cname"));
int res = ps.executeUpdate();
if (res != 0)
out.println("Customer Details Inserted
Successfully...");
```

```
else
out.println("Customer Details Insertion Failure...");
ps.close();
conn.close();
} catch (Exception e) {
out.println(e);
}
out.println("<br />");
out.println("<a href='Customer.html'>Back</a>");
out.println("</body></html>");
}
}
```

ViewCustomers.java:

```
import java.io.IOException; import
java.io.PrintWriter; import
java.sql.Connection; import
java.sql.DriverManager;
import java.sql.PreparedStatement;
```

```

import java.sql.ResultSet;
import javax.servlet.ServletException; import
javax.servlet.annotation.WebServlet; import
javax.servlet.http.HttpServlet; import
javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
 * Servlet implementation class ViewCustomers
 */
@WebServlet("/ViewCustomers")
public class ViewCustomers extends HttpServlet { private static
final long serialVersionUID = 1L;Connection conn = null;
PreparedStatement ps = null;
ResultSet rs = null;
/**
 * @see HttpServlet#doPost(HttpServletRequest request,
HttpServletResponse
 * response)
 */
protected void doGet(HttpServletRequest request,
HttpServletResponse response)
throws ServletException, IOException {
// TODO Auto-generated method stub
response.setContentType("text/html"); PrintWriter
out = response.getWriter(); out.println("<html>");
out.println("<head><title>View All Customer
Details</title></head>"); out.println("<body>");
out.println("<h1 align='center'>View All Customer Details</h1>");

```

```
out.println("<hr />");

try {
    Class.forName("com.mysql.cj.jdbc.Driver");
    String URL = "jdbc:mysql://localhost:3306/banking";
    conn = DriverManager.getConnection(URL, "root", "admin"); ps =
    conn.prepareStatement("select * from customer order bycid");
    rs = ps.executeQuery(); out.println("<table
border='1'>"); out.println("<tr>");
    out.println("<td>Customer Id.</td>");
    out.println("<td>Customer Name</td>");
    out.println("<td>Edit</td>");
    out.println("<td>Delete</td>");
    out.println("</tr>");
    while (rs.next()) {
        out.println("<tr>");
        out.println("<td>" + rs.getInt("cid") + "</td>"); out.println("<td>"
+ rs.getString("cname") + "</td>");out.println("<td><a
href='EditCustomer?cid=" + rs.getInt("cid") + "'>Edit</a></td>");
        out.println("<td><a href='DeleteCustomer?cid=" + rs.getInt("cid")
+ "'>Delete</a></td>"); out.println("</tr>");
    }
    out.println("</table>");
    ps.close();
    conn.close();
} catch (Exception e) {
    out.println(e);
}
```

```

}
out.println("<br />");
out.println("<a href='Customer.html'>Back</a>");
out.println("</body></html>");
}
}

```

EditCsutomer.java:

```

import java.io.IOException; import
java.io.PrintWriter; import
java.sql.Connection; import
java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import javax.servlet.ServletException; import
javax.servlet.annotation.WebServlet; import
javax.servlet.http.HttpServlet; import
javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
 * Servlet implementation class EditCustomer
 */
@WebServlet("/EditCustomer")
public class EditCustomer extends HttpServlet { private static
final long serialVersionUID = 1L;Connection conn = null;

PreparedStatement ps = null;
ResultSet rs = null;

```

```

/**
 * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse
 * response)
 */

protected void doGet(HttpServletRequest request,
HttpServletResponse response)
throws ServletException, IOException {
// TODO Auto-generated method stub
response.setContentType("text/html");
PrintWriter out = response.getWriter();
out.println("<html>");
out.println("<head><title>Edit Customer Details</title></head>");
out.println("<body>");
out.println("<h1 align='center'>Edit All Customer Details</h1>");
out.println("<hr />");
try {
Class.forName("com.mysql.cj.jdbc.Driver");
String URL = "jdbc:mysql://localhost:3306/banking";
conn = DriverManager.getConnection(URL, "root", "admin");ps =
conn.prepareStatement("select * from customer where cid = ?");
ps.setInt(1,Integer.parseInt(request.getParameter(("cid"))));rs =
ps.executeQuery();
rs.next();
out.println("<form action='UpdateCustomer' method='post'>");
out.println("<table>");
out.println("<tr>"); out.println("<td>Customer Id.
:</td>");
out.println("<td><input type='text' name='cid' value='" +rs.getInt("cid")

```

```

+ " readonly></td>"); out.println("</tr>");
out.println("<tr>");
out.println("<td>Customer Name :</td>"); out.println("<td><input
type='text' name='cname' value='" +rs.getString("cname") + "'></td>");
out.println("</tr>");
out.println("<tr>");
out.println("<td colspan='2' align='center'><inputtype='submit'
value='Update Customer'></td>"); out.println("</tr>");
out.println("</table>");
out.println("</form>");
ps.close();
conn.close();
} catch (Exception e) {
out.println(e);
}
out.println("<br />");
out.println("<a href='ViewCustomers'>Back</a>");
out.println("</body></html>");
}
}

```

UpdateCustomer.java:

```

import java.io.IOException; import

java.io.PrintWriter; import
java.sql.Connection; import
java.sql.DriverManager;
import java.sql.PreparedStatement;

```



```

import javax.servlet.ServletException; import
javax.servlet.annotation.WebServlet; import
javax.servlet.http.HttpServlet; import
javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
 * Servlet implementation class UpdateCustomer
 */
@WebServlet("/UpdateCustomer")
public class UpdateCustomer extends HttpServlet { private static
final long serialVersionUID = 1L;Connection conn = null;
PreparedStatement ps = null;
/**
 * @see HttpServlet#doPost(HttpServletRequest request,
HttpServletResponse response)
 */
protected void doPost(HttpServletRequest request,
HttpServletResponse response)
throws ServletException, IOException {

// TODO Auto-generated method stub
response.setContentType("text/html");
PrintWriter out = response.getWriter();
out.println("<html>");
out.println("<head><title>Update Customer Details</title></head>");
out.println("<body>");
out.println("<h1 align='center'>Update Customer Details</h1>");
out.println("<hr />");

```

```

try {
    Class.forName("com.mysql.cj.jdbc.Driver");
    String URL = "jdbc:mysql://localhost:3306/banking";
    conn = DriverManager.getConnection(URL, "root", "admin"); ps =
    conn.prepareStatement("update customer set cname = ?where cid = ?");
    ps.setString(1, request.getParameter("cname")); ps.setInt(2,
    Integer.parseInt(request.getParameter("cid")));int res =
    ps.executeUpdate();
    if (res != 0)
        out.println("Customer Details Updated
        Successfully...");
    else
        out.println("Customer Details Updation Failure...");
    ps.close();
    conn.close();
} catch (Exception e) {
    out.println(e);
}
out.println("<br />");
out.println("<a href='ViewCustomers'>Back</a>");
out.println("</body></html>");

}

}

```

DeleteCustomer.java:

```

import java.io.IOException; import
java.io.PrintWriter; import

```

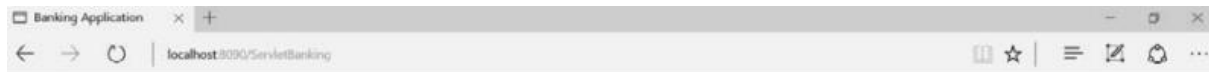
```
java.sql.Connection; import
java.sql.DriverManager;
import java.sql.PreparedStatement;
import javax.servlet.ServletException; import
javax.servlet.annotation.WebServlet; import
javax.servlet.http.HttpServlet; import
javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
 * Servlet implementation class DeleteCustomer
 */
@WebServlet("/DeleteCustomer")
public class DeleteCustomer extends HttpServlet { private static
final long serialVersionUID = 1L;Connection conn = null;
PreparedStatement ps = null;
/**
 * @see HttpServlet#doGet(HttpServletRequest request,
HttpServletResponse response)
 */
protected void doGet(HttpServletRequest request,
HttpServletResponse response)
throws ServletException, IOException {

// TODO Auto-generated method stub
response.setContentType("text/html");
PrintWriter out = response.getWriter();
out.println("<html>");
out.println("<head><title>Delete Customer Details</title></head>");
```

```
out.println("<body>");
out.println("<h1 align='center'>Delete Customer Details</h1>");
out.println("<hr />");
try {
    Class.forName("com.mysql.cj.jdbc.Driver");
    String URL = "jdbc:mysql://localhost:3306/banking";
    conn = DriverManager.getConnection(URL, "root", "admin");
    ps = conn.prepareStatement("delete from customer where cid =
?");
    ps.setInt(1, Integer.parseInt(request.getParameter("cid")));
    int res = ps.executeUpdate();
    if (res != 0)
        out.println("Customer Details Deleted uccessfully...");
    else
        out.println("Customer Details Deletion Failure...");
    ps.close();
    conn.close();
} catch (Exception e) {
    out.println(e);
}
out.println("<br />");

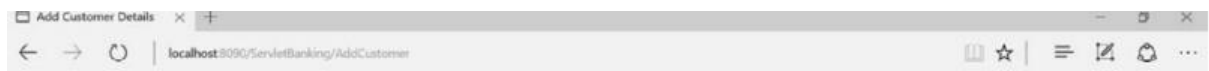
out.println("<a href='ViewCustomers'>Back</a>");
out.println("</body></html>");
}
}
```

## Output:



[Customer Details](#)

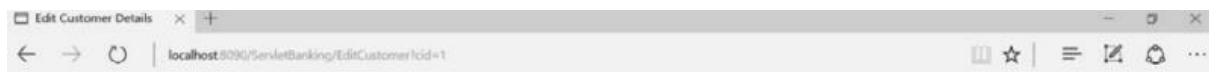
[Account Details](#)

A screenshot of a web browser window titled "Customer Details". The address bar shows "127.0.0.1:5500/index.html". The page has a header with the title "Customer Details". Below the header, there are two input fields: "Customer Id. :" with the value "1" and "Customer Name :" with the value "rakesh". Below these fields is a button labeled "Add Customer". At the bottom of the form, there is a link labeled "View All Customers".

### Add Customer Details

Customer Details Inserted Successfully...

[Back](#)

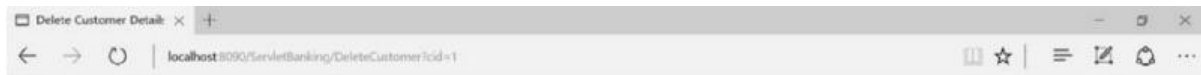


### Edit All Customer Details

Customer Id. :

Customer Name :

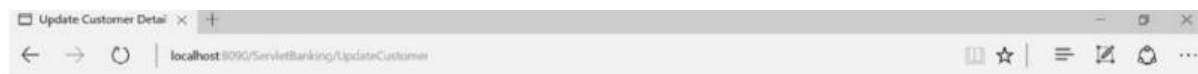
[Back](#)



## Delete Customer Details

Customer Details Deleted successfully...

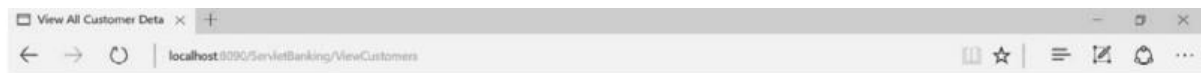
[Back](#)



## Update Customer Details

Customer Details Updated Successfully...

[Back](#)



## View All Customer Details

Customer Id	Customer Name	Edit	Delete
-------------	---------------	------	--------

[Back](#)

### Result:

Hence developed a Banking application accessing a database using Servlet is implemented successfully.

EXPT NO:

## BOOTSTRAP – WEB PAGE

DATE:

### Aim:

Program to develop an attractive web pages using Bootstrap.

### Procedure:

#### 1. File Setup:

- Create `index.html`, `styles.css`, and `scripts.js` files.
- Ensure they are in the same directory for easy access.

#### 2. Bootstrap Integration:

- Link Bootstrap CSS in the HTML file using the CDN (Content Delivery Network)

```
<link  
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"  
rel="stylesheet">
```

#### 3. HTML Structure:

- Set up the basic structure of `index.html`.
- Organize sections such as "About Me," "Portfolio," and "Contact."

#### 4. Content Integration:

- Add relevant content to each section.
- Include text, images, and links to showcase your work and skills.

#### 5. Customization and Styling:

- Customize the appearance using custom CSS in `styles.css`.
- Adjust Bootstrap classes and add additional styles as needed for a personalized look.

## PROGRAM:

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>My Portfolio</title>

  <!-- Bootstrap CSS -->

  <link
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
rel="stylesheet">

  <!-- Font Awesome -->

  <link href="https://cdn.jsdelivr.net/npm/font-awesome@5.15.3/css/all.min.css" rel="stylesheet">

  <!-- Custom CSS -->

  <link href="styles.css" rel="stylesheet">

</head>

<body>

  <!-- Navigation -->

  <nav class="navbar navbar-expand-lg navbar-dark bg-dark">

    <div class="container">

      <a class="navbar-brand" href="#">My Portfolio</a>

      <button class="navbar-toggler" type="button" data-toggle="collapse" data-
target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">

        <span class="navbar-toggler-icon"></span>

      </button>

      <div class="collapse navbar-collapse" id="navbarNav">

        <ul class="navbar-nav ml-auto">
```



```
<li class="nav-item">
  <a class="nav-link" href="#about">About</a>
</li>
<li class="nav-item">
  <a class="nav-link" href="#portfolio">Portfolio</a>
</li>
<li class="nav-item">
  <a class="nav-link" href="#contact">Contact</a>
</li>
</ul>
</nav>
<!-- About Section -->
<section id="about" class="py-5">
  <div class="container">
    <div class="row">
      <div class="col-lg-6">
        <h2>About Me</h2>
        <p>Hi there! I'm Logesh kanna R, currently a student at Rajalakshmi Engineering College, pursuing Computer Science and Design. I'm passionate about exploring the intersection of technology and design to create innovative solutions. My journey in the field of computer science has equipped me with a strong foundation in programming, problem-solving, and software development. Additionally, my interest in design allows me to approach challenges with a creative mindset, striving to craft user-centric experiences.</p>
      </div>
      <div class="col-lg-6">
        
      </div>
    </div>
  </div>
```

```
</div>
</section>
<!-- Portfolio Section -->
<!-- Portfolio Section -->
<section id="portfolio" class="bg-light py-5">
  <div class="container">
    <h2>Portfolio</h2>
    <div class="row">
      <div class="col-md-4">
        <div class="card">
          
          <div class="card-body">
            <h5 class="card-title">E-commerce Website</h5>
            <p class="card-text">Developed a fully functional e-commerce website
using HTML, CSS, and JavaScript, integrated with payment gateway and user
authentication.</p>
            <a href="#" class="btn btn-primary">View Project</a>
          </div>
        </div>
      </div>
      <div class="col-md-4">
        <div class="card">
          
          <div class="card-body">
            <h5 class="card-title">Portfolio Website</h5>
```

```
<p class="card-text">Designed and built a responsive portfolio website to showcase personal projects, skills, and experiences using Bootstrap and custom CSS.</p>
```

```
<a href="#" class="btn btn-primary">View Project</a>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<div class="col-md-4">
```

```
<div class="card">
```

```

```

```
<div class="card-body">
```

```
<h5 class="card-title">Blog Website</h5>
```

```
<p class="card-text">Created a dynamic blog website using WordPress, customized themes, and plugins to enhance functionality and user experience.</p>
```

```
<a href="#" class="btn btn-primary">View Project</a>
```

```
</div>
```

```
</div>
```

```
</section>
```

```
<!-- Contact Section -->
```

```
<section id="contact" class="py-5">
```

```
<div class="container">
```

```
<h2>Contact Me</h2>
```

```
<div class="row">
```

```
<div class="col-md-6">
```

```
<form>
```

```
<div class="form-group">
```

```
<label for="name">Name</label>
```

```
<input type="text" class="form-control" id="name">
</div>
<div class="form-group">
  <label for="email">Email address</label>
  <input type="email" class="form-control" id="email">
</div>
<div class="form-group">
  <label for="message">Message</label>
  <textarea class="form-control" id="message" rows="3"></textarea>
</div>
<button type="submit" class="btn btn-primary">Submit</button>
</form>
</div>
<div class="col-md-6">
  <div class="card bg-primary text-white">
    <div class="card-body">
      <h5 class="card-title">Get In Touch</h5>
      <p class="card-text">Feel free to contact me if you have any questions
or inquiries!</p>
    </div>
  </div>
</div>
</div>
</div>
</div>
</section>

<!-- Bootstrap JS and dependencies -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
```

```

<script
src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.5.4/dist/umd/popper.min.js
"></script>

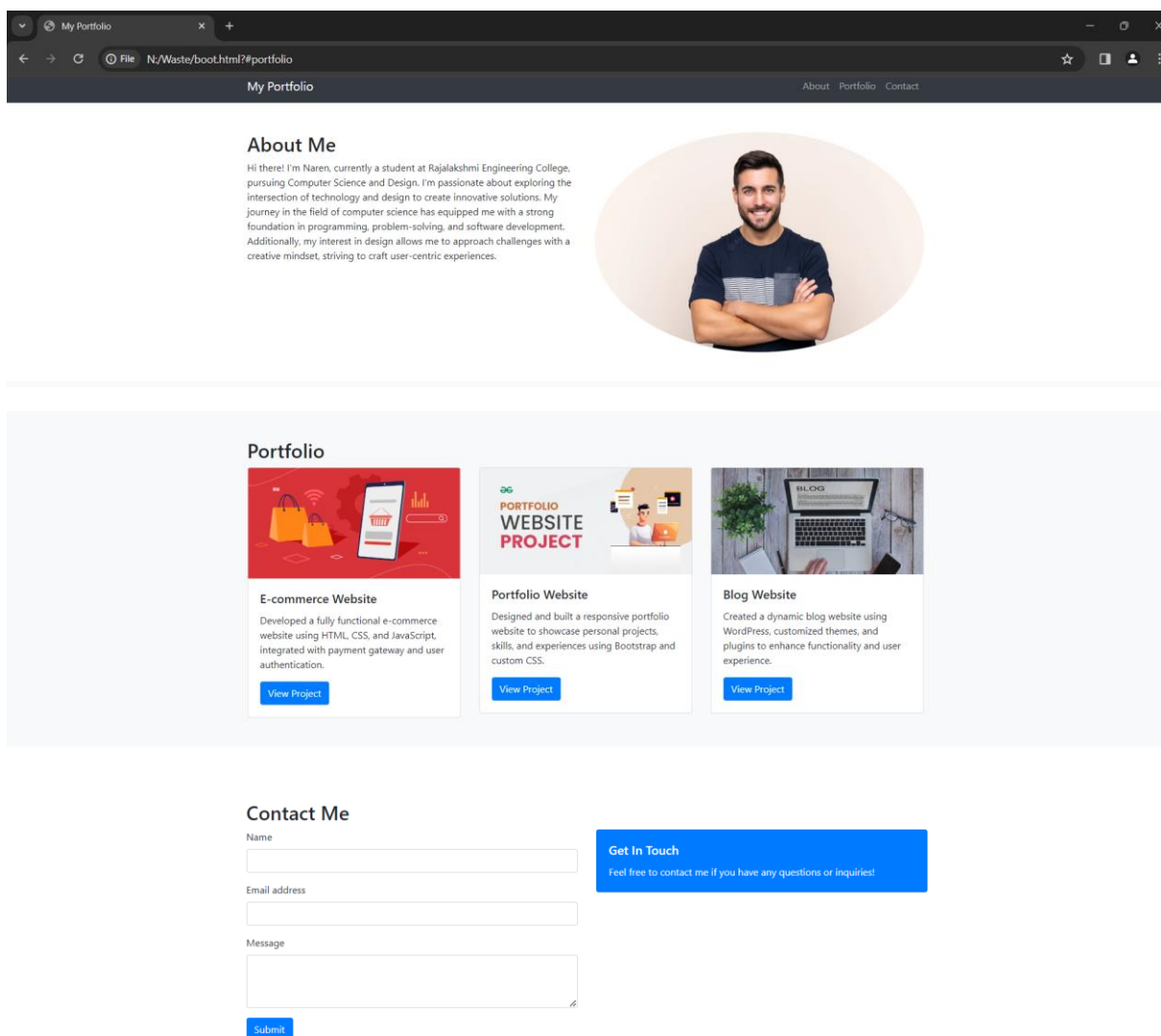
<script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></s
cript>

</body>

</html>

```

OUTPUT:



**RESULT:**

Hence developed an attractive web pages using Bootstrap.

EXPT NO:           **DESIGN A WEB PAGE WITH - NAVIGATION MENU**

DATE:

AIM:

Program to design a web page with navigation menus using Angular JS.

PROCEDURE:

1. Using Angular's directives to set and read the active variable.
2. When it changes, it causes the HTML that uses it to be updated automatically.
3. In Angular's terminology, this variable is called a model. It is available to all directives in the current scope, and can be accessed in your controllers (more on that in the nextexample).
4. JavaScript templates are with the `{{var}}` syntax, the framework sees such a string, it replaces it with the contents of the variable.
5. This operation is repeated every time var is changed.

PROGRAM:

Index.html:

```
<!DOCTYPE html>

<html>

  <head>

    <link rel="stylesheet" href="style.css">

    <script src="https://code.angularjs.org/1.2.13/angular.js"></script>

    <script src="//cdnjs.cloudflare.com/ajax/libs/angular-material-icons/0.7.1/
      angular-material-icons.min.js"></script>

    <script src="app.js"></script>
```

```
</head>
```

```
<body>
```

```
<!-- Adding the ng-app declaration to initialize AngularJS -->
```

```
<div id="main" ng-app="navApp">
```

```
  <nav class="{ { active} }" ng-click="$event.preventDefault()">
```

```
    <h2>Shopping Site</h2>
```

```
    <a href="#" class="home" ng-click="active='home'">
```

```
      <ng-md-icon icon="home" style="fill:white"></ng-md-icon>
```

```
    </a>
```

```
    <a href="#" class="electronics" ng-click="active='electronics'">
```

```
      Electronics</a>
```

```
    <a href="#" class="appliances" ng-click="active='appliances'">
```

```
      Appliances</a>
```

```
    <a href="#" class="clothing" ng-click="active='clothing'">
```

```
      Clothing</a>
```

```
  </nav>
```

```
  <p ng-hide="active">Please click a menu item</p>
```

```
  <p ng-show="active">You chose <b>{ { active} }</b></p>
```

```
</div>
```

```
</body>
```

```
</html>
```

STYLES.CSS:

```
*{  
  
    margin:0;  
  
    padding:0;  
  
}  
  
body{  
  
    font:15px/1.3 'Open Sans', sans-serif;  
  
    color: #5e5b64;  
  
    text-align:center;  
  
}  
  
a, a:visited {  
  
    outline:none;  
  
    color:#389dc1;  
  
}  
  
a:hover{  
  
    text-decoration:none;  
  
}  
  
a img{  
  
    display:inline-block;  
  
}  
  
section, footer, header, aside, nav{  
  
    display: block;}
```



```
nav{  
    display:inline-block;  
    margin:60px auto 45px;  
    background-color:#5597b4;  
    box-shadow:0 1px 1px #ccc;  
    border-radius:2px;  
}  
nav h2{  
    color:#fff !important;  
}  
nav a{  
    display:inline-block;  
    padding: 18px 30px;  
    color:#fff !important;  
    font-weight:bold;  
    font-size:16px;  
    text-decoration:none !important;  
    line-height:1;  
    text-transform: uppercase;  
    background-color:transparent;
```

```
-webkit-transition:background-color 0.25s;

-moz-transition:background-color 0.25s;

transition:background-color 0.25s;

}

nav a:first-child{

    border-radius:2px 0 0 2px;

}

nav a:last-child{

    border-radius:0 2px 2px 0;

}

nav.home .home,

nav.electronics .electronics,

nav.appliances .appliances,

nav.clothing .clothing{

    color:yellow !important;

}

p{

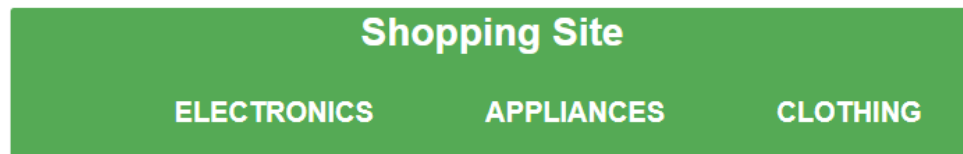
    font-size:22px;

    font-weight:bold;

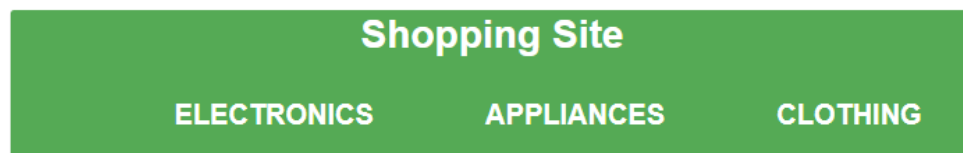
    color:#7d9098;

}
```

**OUTPUT:**



**Please click a menu item**  
**You chose {{active}}**



**Please click a menu item**  
**You chose {{active}}**

**RESULT:**

Hence designed a web page with navigation menus using Angular JS.

## DESIGN A WEB PAGE WITH – INLINE EDITOR

### AIM:

Program to design a web page with inline editor using Angular JS.

### PROCEDURE:

1. Clicking a paragraph will show a tooltip with a text field.
2. Use a controller that will initialize the models and declare two methods for toggling the visibility of the tooltip.
3. Controllers are regular JavaScript functions which are executed automatically by Angular, and which are associated with your page using the ng-controller directive.
4. When the controller function is executed, it gets the special \$scope object as a parameter.
5. Adding properties or functions to it makes them available to the view.
6. Using the ng-model binding on the text field tells Angular to update that variable when the value of the field changes (this in turn re-renders the paragraph with the value).

### PROGRAM:

```
<!DOCTYPE html>
<html lang="en" ng-app="inlineEditorApp">
<head>
  <meta charset="UTF-8">
  <title>Bootstrap & AngularJS Inline Editor</title>
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
>
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.15.3/css/all.min.css">
  <style>
    .center {
```

```

    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
  }
.title-container {
    display: flex;
    align-items: center;
  }
.title {
    margin: 0;
  }
</style>
</head>
<body>
  <div ng-controller="InlineEditorController as ctrl" class="container center">
    <div class="title-container">
      <h1 class="title" ng-hide="ctrl.editingTitle">{{ ctrl.title }}</h1>
      <div ng-show="ctrl.editingTitle">
        <input type="text" class="form-control" ng-model="ctrl.title" id="title">
        <button class="btn btn-outline-secondary ml-2" type="button" ng-
click="ctrl.saveField('title')"><i class="fas fa-check"></i></button>
      </div>
    </div>
    <button class="btn btn-outline-secondary mt-3" type="button" ng-
click="ctrl.editField('title')"><i class="fas fa-pencil-alt"></i> Edit
Title</button>
  </div>

```

```
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></scri
pt>

<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>

<script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></s
cript>

<script>

angular.module('inlineEditorApp', [])

.controller('InlineEditorController', function() {

  var ctrl = this;

  ctrl.title = "Click to edit me";

  ctrl.editingTitle = false;

  ctrl.editField = function(field) {

    ctrl.editingTitle = true;

    // Set a timeout to focus the input after it's shown

    setTimeout(function() {

      document.getElementById(field).focus();

    });

  };

  ctrl.saveField = function(field) {

    ctrl.editingTitle = false;

  };

});



</script>

</body>

</html>
```

**OUTPUT:**

Click to edit me 

WEB ESSENTIALS   


WEB ESSENTIALS 

**RESULT:**

Hence designed a web page with inline editor using Angular JS.

## DESIGN A WEB PAGE WITH – ORDER FORM

### AIM:

Program to design a web page with order form using Angular JS.

### PROCEDURE:

1. Code an order form with a total price updated in real time, using another one of Angular's useful features - filters.
2. Filters let modify models and can be chained together using the pipe character.
3. Use the currency filter, to turn a number into a properly formatted price, complete with a dollar sign and cents. You can easily make your own filters.
4. The ng-repeat binding (docs) is another useful feature of the framework. It lets loop through an array of items and generate markup for them. It is intelligently updated when an item is changed or deleted.

### PROGRAM:

```
<!DOCTYPE html>

<html lang="en" ng-app="orderFormApp">
<head>
  <meta charset="UTF-8">
  <title>Order Form</title>
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
>
  <style>
    body, html {
      height: 100%;
    }
    .container {
      display: flex;
      justify-content: center;
```



```
    align-items: center;
    height: 100%;
}
.order-form {
    max-width: 400px;
    width: 100%;
}
.form-group {
    margin-bottom: 20px;
}
.form-label {
    font-weight: bold;
}
.btn-green {
    background-color: #28a745;
    border-color: #28a745;
}
.btn-green:hover {
    background-color: #218838;
    border-color: #1e7e34;
}
</style>
</head>
<body>
<div ng-controller="OrderFormController as formCtrl" class="container">
    <form class="order-form">
        <div class="form-group">
```

```

    <label for="products" class="form-label">Products available:</label>

    <select multiple class="form-control" id="products" ng-
model="formCtrl.selectedProducts" ng-options="product as product.name for
product in formCtrl.products">

</select>

</div>

<div class="form-group">

    <label for="quantity" class="form-label">Quantity:</label>

    <input type="number" class="form-control" id="quantity" ng-
model="formCtrl.quantity">

</div>

<button type="button" class="btn btn-green" ng-
click="formCtrl.addToCart()">Add to Cart</button>

<div class="form-group mt-3">

    <label class="form-label">Overall details</label>

    <ul class="list-group">

        <li class="list-group-item" ng-repeat="item in formCtrl.cart">{{
item.product.name }} - Quantity: {{ item.quantity }} - Total: ${{ item.total
}}</li>

    </ul>

    <p class="mt-3">Grand Total: ${{ formCtrl.grandTotal }}</p>

</div>

</form>

</div>

<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></scri
pt>

<script>

angular.module('orderFormApp', [])

.controller('OrderFormController', function() {

```

```
var formCtrl = this;
formCtrl.products = [
  { name: 'Pendrive', cost: 100 },
  { name: 'Card reader', cost: 50 },
  { name: 'Usb cable', cost: 20 }
];
formCtrl.selectedProducts = [];
formCtrl.quantity = "";
formCtrl.cart = [];
formCtrl.grandTotal = 0;
formCtrl.addToCart = function() {
  if (formCtrl.selectedProducts.length && formCtrl.quantity) {
    angular.forEach(formCtrl.selectedProducts, function(product) {
      var total = product.cost * formCtrl.quantity;
      formCtrl.cart.push({ product: product, quantity: formCtrl.quantity, total:
total });
      formCtrl.grandTotal += total;
    });
    // Clear input fields after adding to cart
    formCtrl.selectedProducts = [];
    formCtrl.quantity = "";
  } else {
    console.log("Please select product(s) and enter a quantity.");
  }
};
});
</script>
</body> </html>
```

## OUTPUT:

### Products available:

Pendrive  
Card reader  
Usb cable

### Quantity:

Add to Cart

### Overall details

Grand Total: \$0

### Products available:

Pendrive  
Card reader  
Usb cable

### Quantity:

Add to Cart

### Overall details

Card reader - Quantity: 10 - Total: \$500

Grand Total: \$500

## RESULT:

Hence designed a web page with order form using Angular JS.

## DESIGN A WEB PAGE WITH – INSTANT SEARCH

### AIM:

Program to design a web page with instant search using Angular JS.

### PROCEDURE:

1. To filter a list of items by typing into a text field.
2. First have to turn the application into a module.
3. Modules are a way of organizing JavaScript applications into self-contained components that can be combined in new and interesting ways.
4. Angular relies on this technique for code isolation and requires that your application follows it before you can create a filter.
5. There are only two things that you need to do to turn your app into a module: 1. Use the `angular.module("name",[])` function call in your JS. This will instantiate and return a new module; 2. Pass the name of the module as the value of the `ng-app` directive.
6. Creating a filter then is as simple as calling the `filter()` method on the module object returned by `angular.module("name", [])`.

### PROGRAM:

```
<!DOCTYPE html>
<html lang="en" ng-app="instantSearchApp">
<head>
  <meta charset="UTF-8">
  <title>Instant Search - IPL TEAMS</title>
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
>
</head>
<body>
  <div ng-controller="SearchController as searchCtrl" class="container mt-5">
```

```
<h1>Instant Search - INDIAN PREMIER LEAGUE</h1>
```

```
<input type="text" class="form-control mt-3" placeholder="Search..." ng-model="searchCtrl.query">
```

```
<ul class="list-group mt-3">
```

```
<li class="list-group-item" ng-repeat="department in searchCtrl.departments | filter:searchCtrl.query">{{ department }}</li> </ul>
```

```
</div>
```

```
<script
```

```
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
```

```
<script>
```

```
angular.module('instantSearchApp', [])
```

```
.controller('SearchController', function() {
```

```
var searchCtrl = this;
```

```
searchCtrl.departments = [
```

```
'Royal challengers bengaluru',
```

```
'Chennai super kings',
```

```
'Mumbai Indians',
```

```
'Delhi capitals',
```

```
'Gujarat Titans',
```

```
'Lucknow super giants',
```

```
'Punjab kings',
```

```
'Sunrisers hyderabad',
```

```
'Kolkata knight Riders',
```

```
'Rajasthan royals',
```

```
];});
```

```
</script>
```

## OUTPUT:

### Instant Search - INDIAN PREMIER LEAGUE

Search...
Royal challengers bangalore
Chennai super kings
Mumbai Indians
Delhi capitals
Gujarat Titans
Lucknow super giants
Punjab kings
Sunrisers hyderabad
Kolkata knight Riders
Rajasthan royals

### Instant Search - INDIAN PREMIER LEAGUE

cha
Royal challengers bangalore

### Instant Search - INDIAN PREMIER LEAGUE

mumb
Mumbai Indians

## RESULT:

Hence designed a web page with instant search using Angular JS.

## DESIGN A WEB PAGE WITH – SWITCHABLE GRID

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### **Aim:**

Program to design a web page with Switchable grid using Angular JS.

### **Procedure:**

1. Create the HTML structure for the switchable grid interface. Include buttons for switching between grid and list views and define containers for displaying the grid and list.
2. Set up an AngularJS module and controller to manage the functionality of the switchable grid. Inject the AngularJS library into the HTML file.
3. Initialize data and view: Define a sample list of items and initialize the default view to be displayed (in this case, the grid view).
4. Create a function in the AngularJS controller to switch between grid and list views. This function will change the value of a variable representing the current view.
5. Use AngularJS directives such as ng-show and ng-repeat to bind the data to the grid and list views. Show or hide each view based on the current view variable, and iterate over the list of items to display them in the respective views.

### **PROGRAM:**

```
<!DOCTYPE html>

<html lang="en" ng-app="switchableViewApp">
<head>

  <meta charset="UTF-8">

  <title>Switchable Grid</title>
```



```
<linkrel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
>

</head>

<body>

  <div ng-controller="SwitchableGridController as gridCtrl" class="container
mt-5">

    <h1>Switchable Grid</h1>

    <!-- Buttons for switching views -->

    <div class="btn-group mb-3">

      <button class="btn btn-primary" ng-
click="gridCtrl.switchView('grid')">Grid View</button>

      <button class="btn btn-primary" ng-click="gridCtrl.switchView('list')">List
View</button>

    </div>

    <!-- Grid view -->

    <div ng-show="gridCtrl.currentView === 'grid'">

      <div class="row">

        <div class="col-md-4 mb-3" ng-repeat="item in gridCtrl.items">

          <div class="card">

            <div class="card-body">

              {{ item }}

            </div>

          </div>

        </div>

      </div>

    </div>

    <!-- List view -->

    <div ng-show="gridCtrl.currentView === 'list'">
```

```

    <ul class="list-group">
      <li class="list-group-item" ng-repeat="item in gridCtrl.items">{{ item
    }}</li>
    </ul>
  </div>
</div>
<!-- AngularJS Library -->
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></scri
pt>
<script>
angular.module('switchableViewApp', [])
.controller('SwitchableGridController', function() {
  var gridCtrl = this;
  gridCtrl.items = [
    'Item 1', 'Item 2', 'Item 3', 'Item 4', 'Item 5'
  ];
  gridCtrl.currentView = 'grid'; // Default view
  gridCtrl.switchView = function(view) {
    // Error handling for unexpected view types
    if (view === 'grid' || view === 'list') {
      gridCtrl.currentView = view;
    } else {
      console.error('Invalid view type');
    }
  };
});
</script></body></html>

```

## OUTPUT:

### Switchable Grid

Grid List

object 1

object 2

object 3

object 4

object 5

### Switchable Grid

Grid List

object 1

object 2

object 3

object 4

object 5

## RESULT:

Hence designed a web page with Switchable grid using Angular JS.

EXPT NO:           **SINGLE PAGE APPLICATION**

DATE:

**AIM:**

Program to develop an single page application using angular js.

**PROCEDURE:**

1. Make a single page application and don't want any page refreshes, use Angular's routing capabilities.
2. Include angular-route script after the main angular script. 8. Specify that the module depends on ngRoute module to be able to use it.
3. The next thing is to distinguish common HTML for every page. This HTML will be layout of the website.
4. Then specify the place where HTML of each page will be placed in our layout. There is a ng-view directive for that.
5. ng-view is an Angular directive that will include the template of the current route (for example, /blog or /about) in the main layout file.
6. Configure the routes. Use \$routeProvider service from the ngRoute module.
7. For each route, specify templateUrl and controller.
8. If user will try to go to the route that does not exist, handle this by using otherwise function. In our case, we will redirect user to the "/" route:
9. Build controllers for every route (already specified their names in routeProvider).

**PROGRAM:**

```
<!DOCTYPE html>
<html ng-app="myApp">
<head>
  <meta charset="UTF-8">
  <title>Single Page Application</title>
  <style>
```

```
body {  
    font-family: Arial, sans-serif;  
    margin: 0;  
    padding: 0;  
    background-color: #f4f4f4;  
    display: flex;  
    flex-direction: column;  
    justify-content: center;  
    align-items: center;  
    height: 100vh;  
}  
  
#navbar {  
    background-color: #333;  
    overflow: hidden;  
    display: flex;  
    justify-content: center;  
    align-items: center;  
    width: 100%;  
    position: fixed;  
    top: 0;  
}  
  
#navbar a {  
    display: block;  
    color: white;  
    text-align: center;  
    padding: 14px 16px;  
    text-decoration: none;
```

```
}

#navbar a:hover {
    background-color: #ddd;
    color: black;
}

#navbar a.active {
    background-color: #4CAF50;
    color: white;
}

.content {
    padding: 20px;
    text-align: center;
    margin-top: 60px; /* Adjusted margin to make space for navbar */
}

h1 {
    margin-top: 0;
}

img {
    max-width: 100%;
    height: auto;
}

</style>

<script
src="https://cdnjs.cloudflare.com/ajax/libs/angular.js/1.4.7/angular.min.js"></sc
ript>

<script src="https://cdnjs.cloudflare.com/ajax/libs/angular.js/1.4.7/angular-
route.min.js"></script>
```

```

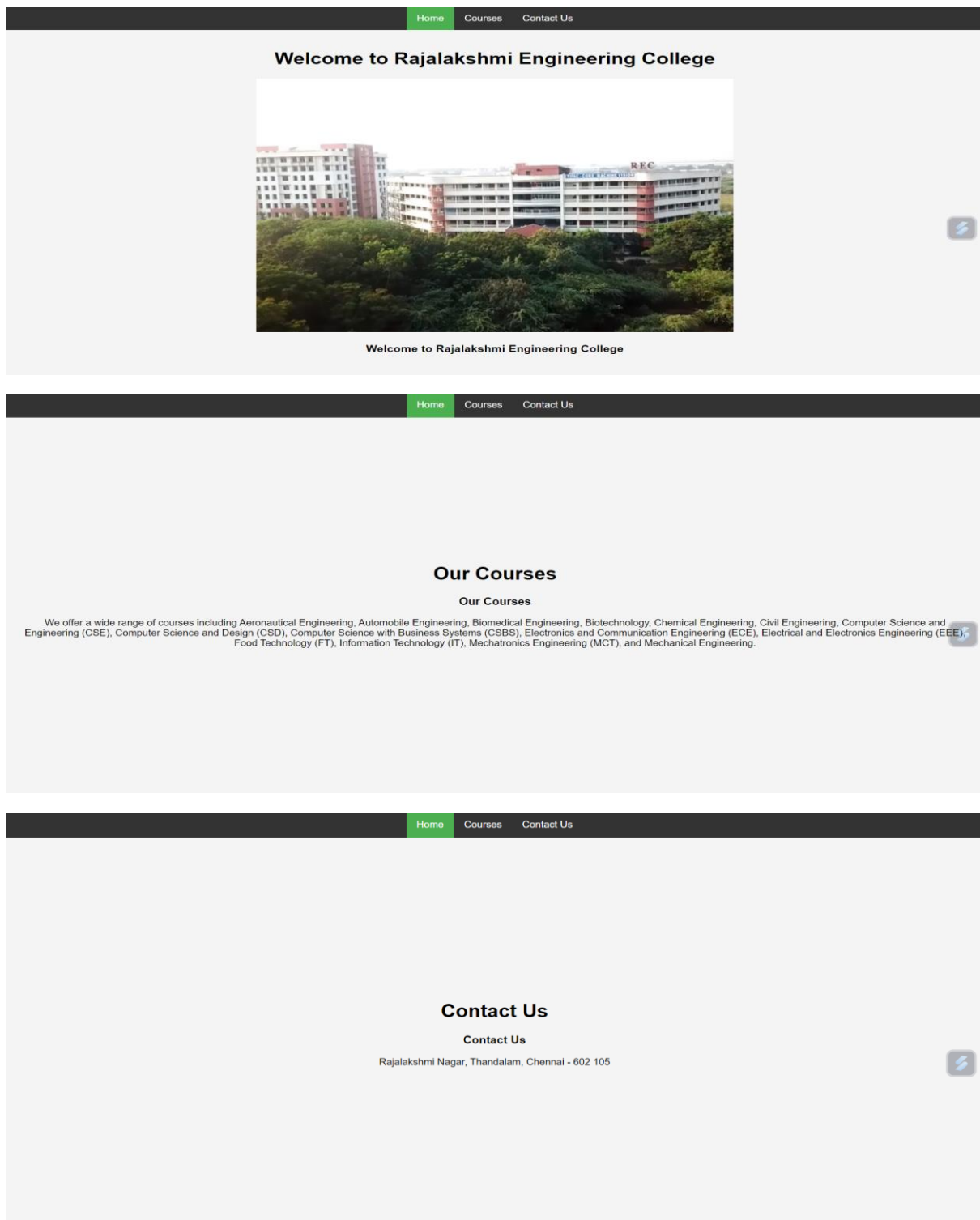
</head>
<body>
  <div id="navbar">
    <a href="#" class="active">Home</a>
    <a href="#/courses">Courses</a>
    <a href="#/contactus">Contact Us</a>
  </div>
  <div ng-view class="content"></div>
<script type="text/ng-template" id="pages/home.html">
  <h1>Home</h1>
  
  <h3>{{message}}</h3>
</script>
<script type="text/ng-template" id="pages/courses.html">
  <h1>Courses</h1>
  <h3>{{message}}</h3>
</script>
<script type="text/ng-template" id="pages/contactus.html">
  <h1>Contact Us</h1>
  <h3>{{message}}</h3>
</script>
<script>
  var app = angular.module('myApp', ['ngRoute']);
  app.config(function($routeProvider) {
    $routeProvider
      .when('/', {
        templateUrl : 'pages/home.html',

```

```
        controller : 'HomeController'
    })
    .when('/courses', {
        templateUrl : 'pages/courses.html',
        controller : 'CoursesController'
    })
    .when('/contactus', {
        templateUrl : 'pages/contactus.html',
        controller : 'ContactUsController'
    })
    .otherwise({redirectTo: '/'});
});
app.controller('HomeController', function($scope) {
    $scope.message = 'Welcome to REC';
});
app.controller('CoursesController', function($scope) {
    $scope.message = 'AERO, AUTO, BIOMED, BIOTECH, CHEMICAL,
CIVIL, CSE,CSD, CSBS,ECE, EEE, FT, IT, MCT, MECH';
});
app.controller('ContactUsController', function($scope) {
    $scope.message = 'Rajalakshmi Nagar, Thandalam, Chennai - 602 105';
});
</script>
</body>
</html>
```



## OUTPUT:



## RESULT:

Hence developed a single page application using Angular JS.