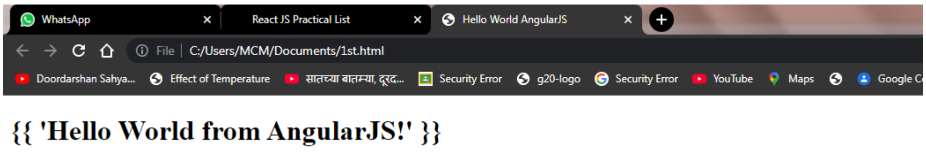
1. Demonstrate a simple hello world program using angular.

```
<!DOCTYPE html>

<html>

<head>

  <title>Hello World AngularJS</title>

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

</head>

<div>

  <h1>{{ 'Hello World from AngularJS!' }}</h1>

</div>

</html>
```

OUTPUT:

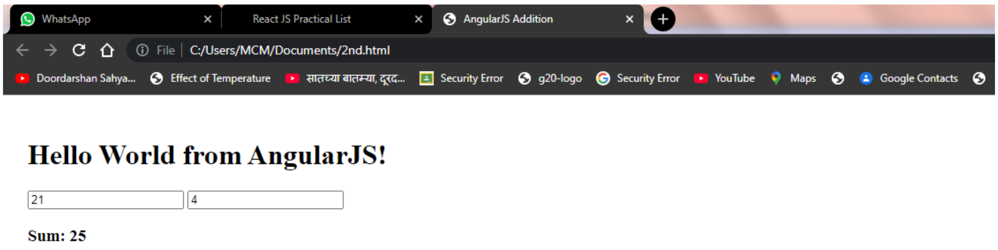


```
{{ 'Hello World from AngularJS!' }}
```

2. Demonstrate the angular js script to implement built in directives in html

```
<!DOCTYPE html>

<html>

<head>

  <title>AngularJS Addition</title>

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

</head>

<body ng-app="" style="padding: 20px;">

  <h1>{{ 'Hello World from AngularJS!' }}</h1>

 <input type="number" ng-model="num1" placeholder="First Number" />

  <input type="number" ng-model="num2" placeholder="Second Number" />

 <h3>Sum: {{ num1 + num2 }}</h3>

</body>

</html>
```

OUTPUT:



Hello World from AngularJS!

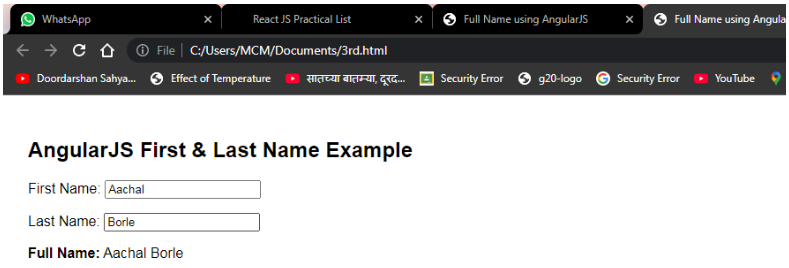
21
4

Sum: 25

3.Demonstrate a angular js script to add modules and controller.

```
<!DOCTYPE html>

<html>

<head>

  <title>Full Name using AngularJS</title>

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

</head>

<body ng-app="myApp" ng-controller="myCtrl" style="padding: 20px; font-family: Arial;">

  <h2>AngularJS First & Last Name Example</h2>

  <p>

    First Name:

    <input type="text" ng-model="firstName" />

  </p>

  <p>

    Last Name:

    <input type="text" ng-model="lastName" />

  </p>

  <p>

    <strong>Full Name:</strong> {{ firstName + " " + lastName }}

  </p>

  <script>

    // Define module and controller

    var app = angular.module("myApp", []);

    app.controller("myCtrl", function($scope) {

      $scope.firstName = "Aachal";

      $scope.lastName = "Borle";

    });

  </script>

</body>

</html>
```

OUTPUT:



AngularJS First & Last Name Example

First Name: Aachal

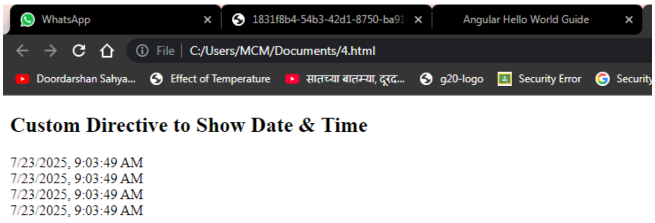
Last Name: Borle

Full Name: Aachal Borle

4)Write a angular js app for creating custom directive which display a current date and current time in elements,attributes,class and comments.

```
<!DOCTYPE html>

<html lang="en" ng-app="myApp">

<head>

  <meta charset="UTF-8">

  <title>Custom Directive - Date & Time</title>

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

  <style>

    .custom-time {

      font-weight: bold;

      color: darkgreen;

    }

  </style>

</head>

<body ng-controller="myCtrl">

  <h2>Custom Directive to Show Date & Time</h2>

<!-- Element Directive -->

  <current-date-time></current-date-time>

  <!-- Attribute Directive -->

  <p current-date-time></p>

  <!-- Class Directive -->

  <div class="current-date-time"></div>

  <!-- Comment Directive -->

  <!-- directive: current-date-time -->

  <script>

    var app = angular.module('myApp', []);

    app.controller('myCtrl', function($scope) {

      // Controller not needed here for logic, included for structure

    });

    app.directive('currentDateTime', function() {

      return {
        restrict: 'EACM',  // Element, Attribute, Class, Comment

        replace: true,

        template: '<div>{{ currentTime }}</div>',

        link: function(scope, element) {

          function updateTime() {

            const now = new Date();

            scope.currentTime = now.toLocaleString();

            scope.$applyAsync(); // ensures binding updates

          }

          updateTime();

          setInterval(updateTime, 1000); // update every second

        }

      };

    });

  </script>

</body>

</html>
```

OUTPUT:



Custom Directive to Show Date & Time

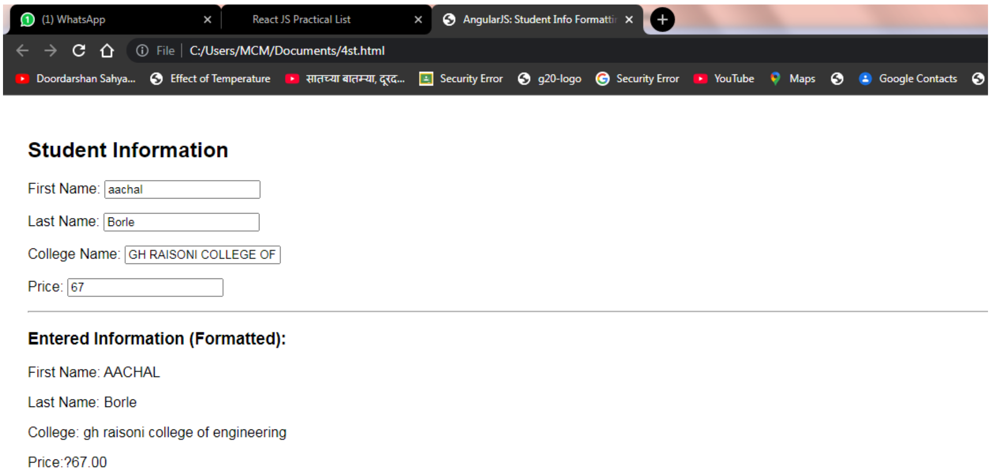
```
7/23/2025, 9:03:49 AM
7/23/2025, 9:03:49 AM
7/23/2025, 9:03:49 AM
7/23/2025, 9:03:49 AM
```

5)Demonstrate number,currency,Uppercase and Lowercase filters.

```
<!DOCTYPE html>
<html>
<head>
  <title>AngularJS: Student Info Formatting</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body ng-app="myApp" ng-controller="myCtrl" style="padding: 20px; font-family: Arial;">
  <h2>Student Information</h2>
  <p>
    First Name:
    <input type="text" ng-model="firstName" />
  </p>
  <p>
    Last Name:
    <input type="text" ng-model="lastName" />
  </p>
  <p>
    College Name:
    <input type="text" ng-model="college" />
  </p>
  <p>
    Price:
    <input type="number" ng-model="price" />
  </p>
  <hr>
  <h3>Entered Information (Formatted):</h3>
  <p>First Name: {{ firstName | uppercase }}</p>
  <p>Last Name: {{ lastName }}</p>
  <p>College: {{ college | lowercase }}</p>
  <p>Price:{{ price | currency:'₹' }}</p>
  <script>
```

```
    var app = angular.module("myApp", []);

    app.controller("myCtrl", function($scope) {

      $scope.firstName = "";

      $scope.lastName = "";

      $scope.college = "";

      $scope.price = null;

    });

  </script>

</body>

</html>
```

OUTPUT:



Student Information

First Name: aachal

Last Name: Borle

College Name: GH RAISONI COLLEGE OF

Price: 67

Entered Information (Formatted):

First Name: AACHAL

Last Name: Borle

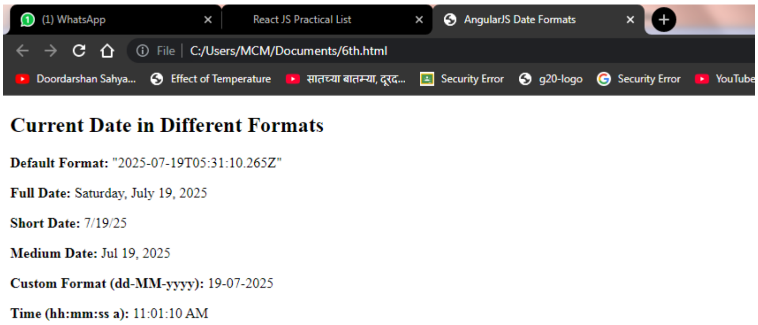
College: gh raisoni college of engineering

Price:?67.00

6.Write angular js app for displaying current date in 10 different format using date filter.

```
<!DOCTYPE html>
<html>
<head>
  <title>AngularJS Date Formats</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body ng-app="myApp" ng-controller="myCtrl" ">
  <h2>Current Date in Different Formats</h2>
  <p><strong>Default Format:</strong> {{ today }}</p>
  <p><strong>Full Date:</strong> {{ today | date:'fullDate' }}</p>
  <p><strong>Short Date:</strong> {{ today | date:'shortDate' }}</p>
  <p><strong>Medium Date:</strong> {{ today | date:'mediumDate' }}</p>
  <p><strong>Custom Format (dd-MM-yyyy):</strong> {{ today | date:'dd-MM-yyyy' }}</p>
  <p><strong>Time (hh:mm:ss a):</strong> {{ today | date:'hh:mm:ss a' }}</p>
  <script>
    var app = angular.module("myApp", []);
    app.controller("myCtrl", function($scope) {
      $scope.today = new Date();
    });
  </script>
</body>
</html>
```

OUTPUT:



Current Date in Different Formats

Default Format: "2025-07-19T05:31:10.265Z"

Full Date: Saturday, July 19, 2025

Short Date: 7/19/25

Medium Date: Jul 19, 2025

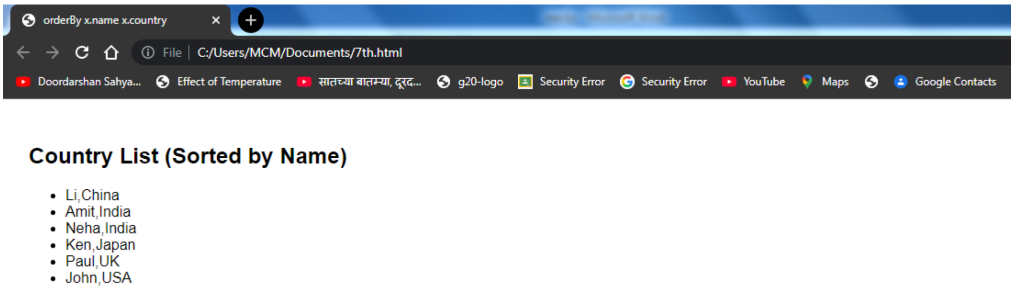
Custom Format (dd-MM-yyyy): 19-07-2025

Time (hh:mm:ss a): 11:01:10 AM

7)Write a angular js app which sort array object data in ascending and descending by using orderby filters.

```
<!DOCTYPE html>

<html>

<head>

  <title>orderBy x.name x.country</title>

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

</head>

<body ng-app="myApp" ng-controller="myCtrl" style="padding: 20px; font-family: Arial;">

  <h2>Country List (Sorted by Name)</h2>

  <ul>

    <li ng-repeat="x in names | orderBy:'country'">

       {{ x.name+','+ x.country }}

    </li>

  </ul>

  <script>

    var app = angular.module("myApp", []);

    app.controller("myCtrl", function($scope) {

      $scope.names = [

        { name: 'John', country: 'USA' },

        { name: 'Amit', country: 'India' },

        { name: 'Li', country: 'China' },

        { name: 'Ken', country: 'Japan' },

        { name: 'Paul', country: 'UK' },

        { name: 'Neha', country: 'India' }

      ];

    });

  </script>

</body>

</html>
```

OUTPUT:



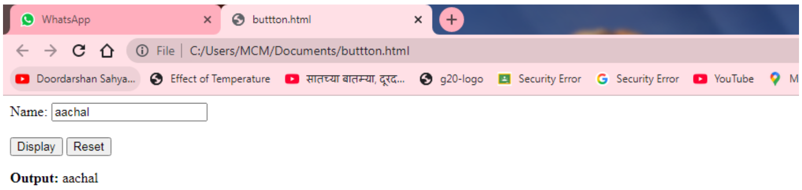
Country List (Sorted by Name)

- Li,China
- Amit,India
- Neha,India
- Ken,Japan
- Paul,UK
- John,USA

8.Demonstrate simple form using angularjs script.

```
<!DOCTYPE html>
<html ng-app="myApp">
<head>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body ng-controller="myCtrl">
<form>
    Name: <input type="text" ng-model="name">
    <br><br>
    <button type="button" ng-click="show()">Display</button>
    <button type="button" ng-click="reset()">Reset</button>
  </form>
 <p><b>Output:</b> {{output}}</p>
<script>
    angular.module("myApp", [])
    .controller("myCtrl", function($scope){
      $scope.show = function(){ $scope.output = $scope.name; };
      $scope.reset = function(){ $scope.name = ""; $scope.output = ""; };
    });
  </script>
</body>
</html>
```

OUTPUT:



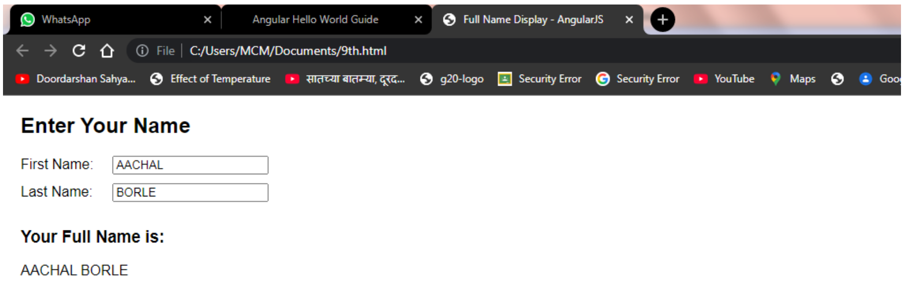
Name: aachal

Output: aachal

9)Demonstrate angular program that allows user to input their first name,last name and display their full name.

```
<!DOCTYPE html>
<html lang="en" ng-app="myApp">
<head>
  <meta charset="UTF-8">
  <title>Full Name Display - AngularJS</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body ng-controller="nameCtrl">
  <h2>Enter Your Name</h2>
  <label>First Name:</label>
  <input type="text" ng-model="firstName"><br>
<label>Last Name:</label>
  <input type="text" ng-model="lastName"><br>
  <h3>Your Full Name is:</h3>
  <p>{{ getFullName() }}</p>
  <script>
    var app = angular.module('myApp', []);
    app.controller('nameCtrl', function($scope) {
      $scope.firstName = '';
      $scope.lastName = '';
 $scope.getFullName = function() {
       return $scope.firstName + ' ' + $scope.lastName;
      };
    });
  </script>
</body>
</html>
```

OUTPUT:



Enter Your Name

First Name: AACHAL

Last Name: BORLE

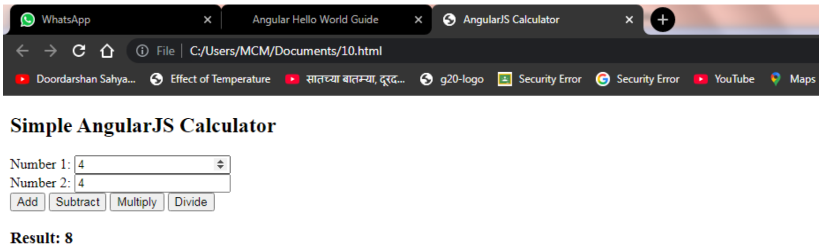
Your Full Name is:

AACHAL BORLE

10)Implement a simple angular calculator application that can perform basic mathematical operation (addition,substraction,multiplication,division)based on user input.

```
<!DOCTYPE html>
<html lang="en" ng-app="calcApp">
<head>
  <meta charset="UTF-8">
  <title>AngularJS Calculator</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body ng-controller="calcCtrl">
  <h2>Simple AngularJS Calculator</h2>
  <label>Number 1:</label>
  <input type="number" ng-model="num1"><br>
  <label>Number 2:</label>
  <input type="number" ng-model="num2"><br>
  <button ng-click="add()">Add</button>
  <button ng-click="subtract()">Subtract</button>
  <button ng-click="multiply()">Multiply</button>
  <button ng-click="divide()">Divide</button>
  <h3>Result: {{ result }}</h3>
  <script>
    var app = angular.module('calcApp', []);
    app.controller('calcCtrl', function($scope) {
      $scope.num1 = 0;
      $scope.num2 = 0;
      $scope.result = 0;
      $scope.add = function() {
        $scope.result = $scope.num1 + $scope.num2;
      };
      $scope.subtract = function() {
        $scope.result = $scope.num1 - $scope.num2;
    };
    $scope.multiply = function() {
      $scope.result = $scope.num1 * $scope.num2;
    };
    $scope.divide = function() {
      if ($scope.num2 === 0) {
        $scope.result = 'Cannot divide by zero';
      } else {
        $scope.result = $scope.num1 / $scope.num2;
      }
    };
  });
 </script>
</body>
</html>
```

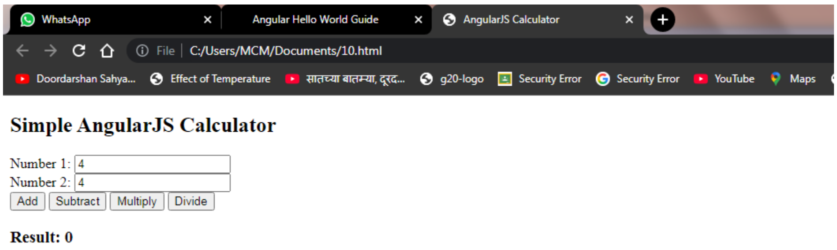
OUTPUT:



Simple AngularJS Calculator

Number 1: 4
Number 2: 4

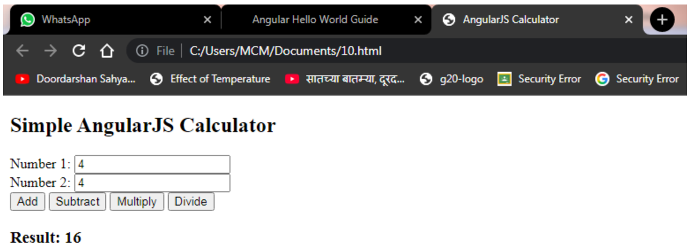
Result: 8



Simple AngularJS Calculator

Number 1: 4
Number 2: 4

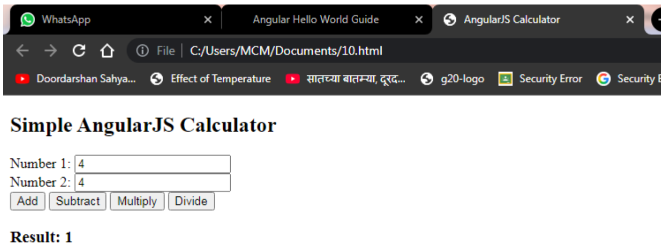
Result: 0



Simple AngularJS Calculator

Number 1: 4
Number 2: 4

Result: 16



Simple AngularJS Calculator

Number 1: 4
Number 2: 4

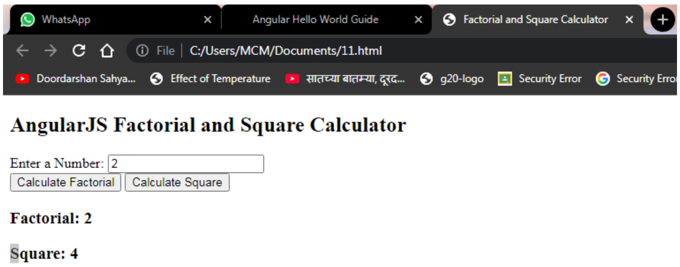
Result: 1

11)Demonstrate an angular application that can calculate factorial and compute square based on given user input.

```
<!DOCTYPE html>
<html lang="en" ng-app="mathApp">
<head>
  <meta charset="UTF-8">
  <title>Factorial and Square Calculator</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body ng-controller="mathCtrl">
  <h2>AngularJS Factorial and Square Calculator</h2>
  <label>Enter a Number:</label>
  <input type="number" ng-model="number"><br>
  <button ng-click="calculateFactorial()">Calculate Factorial</button>
  <button ng-click="calculateSquare()">Calculate Square</button>
  <h3>Factorial: {{ factorialResult }}</h3>
  <h3>Square: {{ squareResult }}</h3>
  <script>
    var app = angular.module('mathApp', []);
    app.controller('mathCtrl', function($scope) {
      $scope.number = 0;
      $scope.factorialResult = '';
      $scope.squareResult = '';
  $scope.calculateFactorial = function() {
        let n = $scope.number;
        if (n < 0) {
          $scope.factorialResult = 'Invalid (negative number)';
        } else {
          let fact = 1;
          for (let i = 1; i <= n; i++) {
            fact *= i;
          }
```

```
     $scope.factorialResult = fact;
    }
   };
   $scope.calculateSquare = function() {
    $scope.squareResult = $scope.number * $scope.number;
   };
  });
 </script>
</body>
</html>
```

Output:



AngularJS Factorial and Square Calculator

Enter a Number: 2

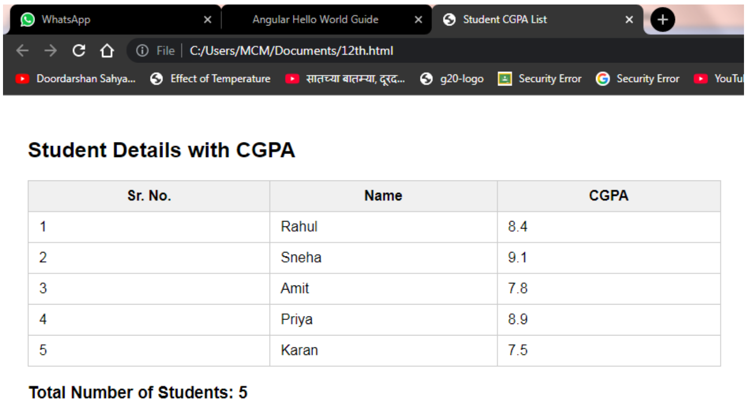
Factorial: 2

Square: 4

12)Implement an angular application that displays details of students and their CGPA allow users to read the number of students and display the count.

```
<!DOCTYPE html>

<html lang="en" ng-app="studentApp">

<head>

  <meta charset="UTF-8">

  <title>Student CGPA List</title>

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

</head>

<body ng-controller="studentCtrl">

<h2>Student Details with CGPA</h2>

  <table>

    <tr>

      <th>Sr. No.</th>

      <th>Name</th>

      <th>CGPA</th>

    </tr>

    <tr ng-repeat="student in students">

      <td>{{ $index + 1 }}</td>

      <td>{{ student.name }}</td>

      <td>{{ student.cgpa }}</td>

    </tr>

  </table>

  <h3>Total Number of Students: {{ students.length }}</h3>

  <script>

    var app = angular.module('studentApp', []);

    app.controller('studentCtrl', function($scope) {

      $scope.students = [

        { name: 'Rahul', cgpa: 8.4 },

        { name: 'Sneha', cgpa: 9.1 },

        { name: 'Amit', cgpa: 7.8 },

        { name: 'Priya', cgpa: 8.9 },
        { name: 'Karan', cgpa: 7.5 }
      ];
    });
  </script>
</body>
</html>
```

OUTPUT:



Student Details with CGPA

Sr. No.	Name	CGPA
1	Rahul	8.4
2	Sneha	9.1
3	Amit	7.8
4	Priya	8.9
5	Karan	7.5

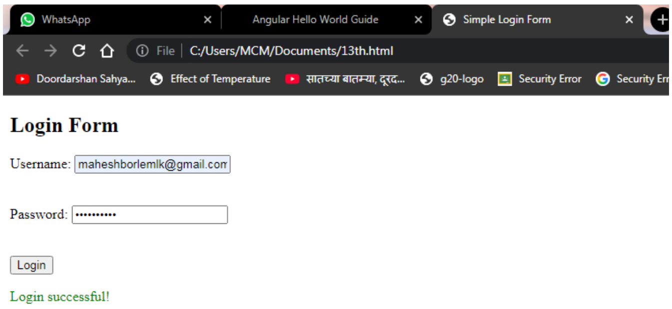
Total Number of Students: 5

13)Implement an angular program to create a login form with validation for the username and passwords fields.

```
<!DOCTYPE html>

<html ng-app="myApp">

<head>

  <title>Simple Login Form</title>

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

</head>

<body ng-controller="loginCtrl">

  <h2>Login Form</h2>

  <form name="loginForm" ng-submit="login()" novalidate>

    Username: <input type="text" ng-model="username" name="username" required><br>

    <span ng-show="loginForm.username.$touched && loginForm.username.$invalid" style="color:red;">

      Username is required

    </span><br><br>

    Password: <input type="password" ng-model="password" name="password" required ng-minlength="6"><br>

    <span ng-show="loginForm.password.$touched && loginForm.password.$invalid" style="color:red;">

      Password is required (min 6 characters)

    </span><br><br>

    <button type="submit" ng-disabled="loginForm.$invalid">Login</button>

  </form>

  <p style="color:green;" ng-show="message">{{ message }}</p>

  <script>

    var app = angular.module('myApp', []);

    app.controller('loginCtrl', function($scope) {

      $scope.login = function() {

        if ($scope.username && $scope.password.length >= 6) {

          $scope.message = "Login successful!";

        }

      };

    });

  </script>
```

```
</body>

</html>
```

OUTPUT:



Login Form

Username: maheshborlemlk@gmail.com

Password: ••••••••••

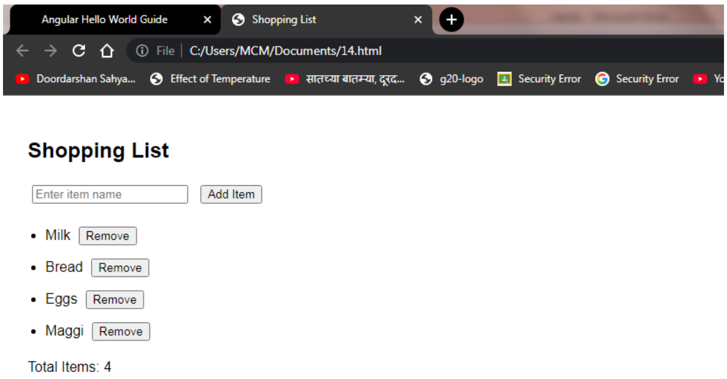
Login

Login successful!

14)Implement an angular application that displays a list of shopping items.allow users to add and remove items from the list using directives and controllers.

```
<!DOCTYPE html>
<html lang="en" ng-app="shoppingApp">
<head>
  <meta charset="UTF-8">
  <title>Shopping List</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body ng-controller="shoppingCtrl">
  <h2>Shopping List</h2>
  <!-- Input for adding new item -->
  <input type="text" ng-model="newItem" placeholder="Enter item name">
  <button ng-click="addItem()">Add Item</button>
  <!-- List of items -->
  <ul>
    <li ng-repeat="item in items">
      {{ item }}
      <button ng-click="removeItem($index)">Remove</button>
    </li>
  </ul>
  <!-- Total count -->
  <p>Total Items: {{ items.length }}</p>
  <script>
    var app = angular.module('shoppingApp', []);
    app.controller('shoppingCtrl', function($scope) {
      // Initial list
      $scope.items = ['Milk', 'Bread', 'Eggs'];
      // Add new item
      $scope.addItem = function() {
        if ($scope.newItem) {
          $scope.items.push($scope.newItem);
          $scope.newItem = ''; // Clear input
        }
      };
      // Remove item by index
      $scope.removeItem = function(index) {
        $scope.items.splice(index, 1);
      };
    });
  </script>
</body>
</html>
```

OUTPUT:



Shopping List

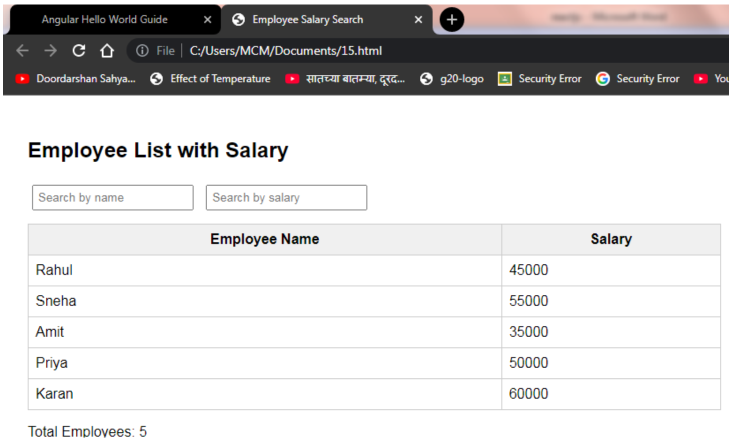
- Milk
- Bread
- Eggs
- Maggi

Total Items: 4

15)Implement the angular application that displays a list of employees and their salries allow users to search for employees by name and salary.

```
<!DOCTYPE html>

<html lang="en" ng-app="employeeApp">

<head>

  <meta charset="UTF-8">

  <title>Employee Salary Search</title>

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

</head>

<body ng-controller="employeeCtrl">

  <h2>Employee List with Salary</h2>

  <!-- Search Filters -->

  <input type="text" ng-model="searchName" placeholder="Search by name">

  <input type="number" ng-model="searchSalary" placeholder="Search by salary">

  <!-- Employee Table -->

  <table>

    <tr>

      <th>Employee Name</th>

      <th>Salary</th>

    </tr>

    <tr ng-repeat="emp in employees | filter:{ name: searchName, salary: searchSalary }">

      <td>{{ emp.name }}</td>

      <td>{{ emp.salary }}</td>

    </tr>

  </table>

  <p>Total Employees: {{ (employees | filter:{ name: searchName, salary: searchSalary }).length }}</p>

  <script>

    var app = angular.module('employeeApp', []);

    app.controller('employeeCtrl', function($scope) {

      $scope.employees = [

        { name: 'Rahul', salary: 45000 },

        { name: 'Sneha', salary: 55000 },
        { name: 'Amit', salary: 35000 },
        { name: 'Priya', salary: 50000 },
        { name: 'Karan', salary: 60000 }
      ];
    });
  </script>
</body>
</html>
```

OUTPUT:

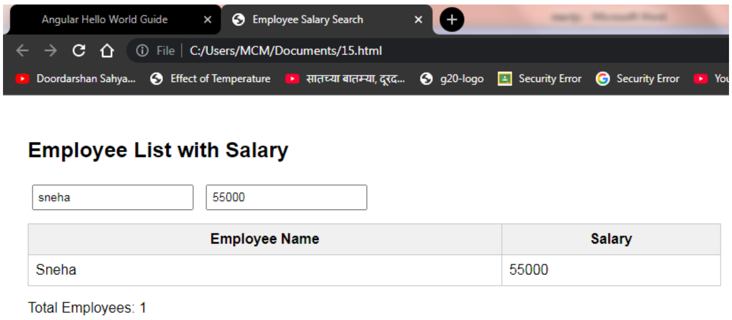


Employee List with Salary

Search by name | Search by salary

Employee Name	Salary
Rahul	45000
Sneha	55000
Amit	35000
Priya	50000
Karan	60000

Total Employees: 5



Employee List with Salary

sneha | 55000

Employee Name	Salary
Sneha	55000

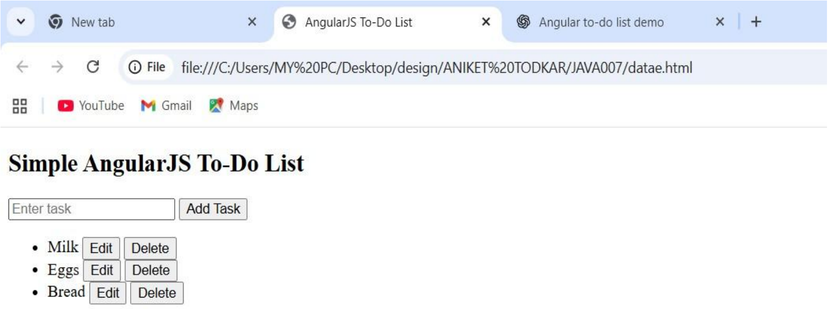
Total Employees: 1

16)Demonstrate the angular program to create a simple to-do list application .allow users to add,edit and delete task.

```
<!DOCTYPE html>
<html ng-app="todoApp">
<head>
<meta charset="UTF-8">
<title>AngularJS To-Do List</title>
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></s cript>
</head>
<body ng-controller="TodoController">
<h2>Simple AngularJS To-Do List</h2>
<input type="text" ng-model="newTask" placeholder="Enter task">
<button ng-click="addTask()">
   {{ editIndex !== null ? 'Update Task' : 'Add Task' }}
</button>
<ul>
<li ng-repeat="task in tasks track by $index">
     {{ task }}
<span>
<button ng-click="editTask($index)">Edit</button>
<button ng-click="deleteTask($index)">Delete</button>
</span>
</li>
</ul><script>
angular.module('todoApp', [])
     .controller('TodoController', ['$scope', function($scope) {

       $scope.tasks = [];
       $scope.newTask = '';
       $scope.editIndex = null;
       $scope.addTask = function() {          if
($scope.newTask.trim()) {            if
($scope.editIndex !== null) {
            $scope.tasks[$scope.editIndex] = $scope.newTask.trim();
            $scope.editIndex = null;
          } else {
            $scope.tasks.push($scope.newTask.trim());
          }
          $scope.newTask = '';
        }
       };
       $scope.editTask = function(index) {
         $scope.newTask = $scope.tasks[index];
         $scope.editIndex = index;
       };

       $scope.deleteTask = function(index) {
$scope.tasks.splice(index, 1);          if ($scope.editIndex
=== index) {
          $scope.newTask = '';
          $scope.editIndex = null;
        }
       };
     }]);
</script>
</body>
```

```
</html>
```

OUTPUT:



New tab
AngularJS To-Do List
Angular to-do list demo
File
file:///C:/Users/MY%20PC/Desktop/design/ANIKET%20TODKAR/JAVA007/datae.html
YouTube
Gmail
Maps

Simple AngularJS To-Do List

- Milk Edit Delete
- Eggs Edit Delete
- Bread Edit Delete

17)Implement angular application that allows users to maintain a collection of items.the application should display current total number of items and this count should automatically update as added or removed users should be able to add items to the collection and remove them as needed.

Step1:Create Angular application

```
ng new item-collection-app

cd item-collection-app

ng serve
```

Step2:Generate component

```
ng generate component item-collection
```

Step3:item-collection-component.ts

```
import { Component } from '@angular/core';

@Component({

  selector: 'app-item-collection',

  templateUrl: './item-collection.component.html',

  styleUrls: ['./item-collection.component.css']

})

export class ItemCollectionComponent {

  items: string[] = [];  // Array to store items

  newItem: string = '';  // Input model

// Add item to collection

  addItem() {

    if(this.newItem.trim() !== '') {

      this.items.push(this.newItem.trim());

      this.newItem = '';

    }

  }

  // Remove item by index

  removeItem(index: number) {

    this.items.splice(index, 1);

  }

  // Get total items count

  get totalItems(): number {
    return this.items.length;
  }
}
```

item-collection-component.html

```
<div class="container">
  <h2>Item Collection</h2>
    <p><strong>Total Items:</strong> {{ totalItems }}</p>
<input [(ngModel)]="newItem" placeholder="Enter item" />
  <button (click)="addItem()">Add Item</button>
 <ul>
    <li *ngFor="let item of items; let i = index">
      {{ item }}
      <button (click)="removeItem(i)">Remove</button>
    </li>
  </ul>
</div>
```

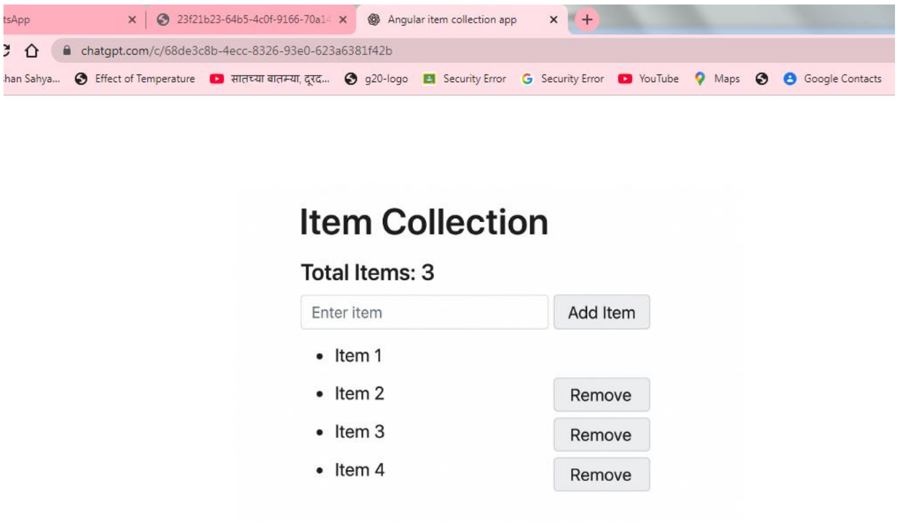
Step4:app.module.ts

```
import { NgModule } from '@angular/core';
import { BrowserModule } from '@angular/platform-browser';
import { FormsModule } from '@angular/forms';
import { AppComponent } from './app.component';
import { ItemCollectionComponent } from './item-collection/item-collection.component';
@NgModule({
  declarations: [
    AppComponent,
    ItemCollectionComponent
  ],
  imports: [
    BrowserModule,
    FormsModule   // Required for ngModel
  ],
  providers: [],
  bootstrap: [AppComponent]

})

export class AppModule { }
```

Step5:display component in app template(app.component.html)

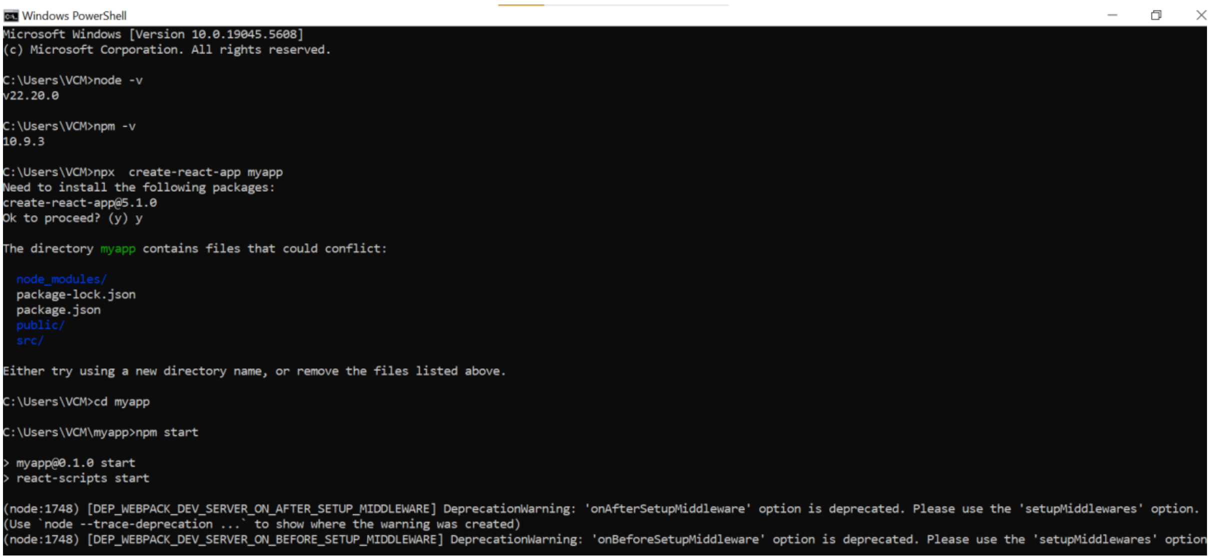
```
<app-item-collection></app-item-collection>
```

OUTPUT:

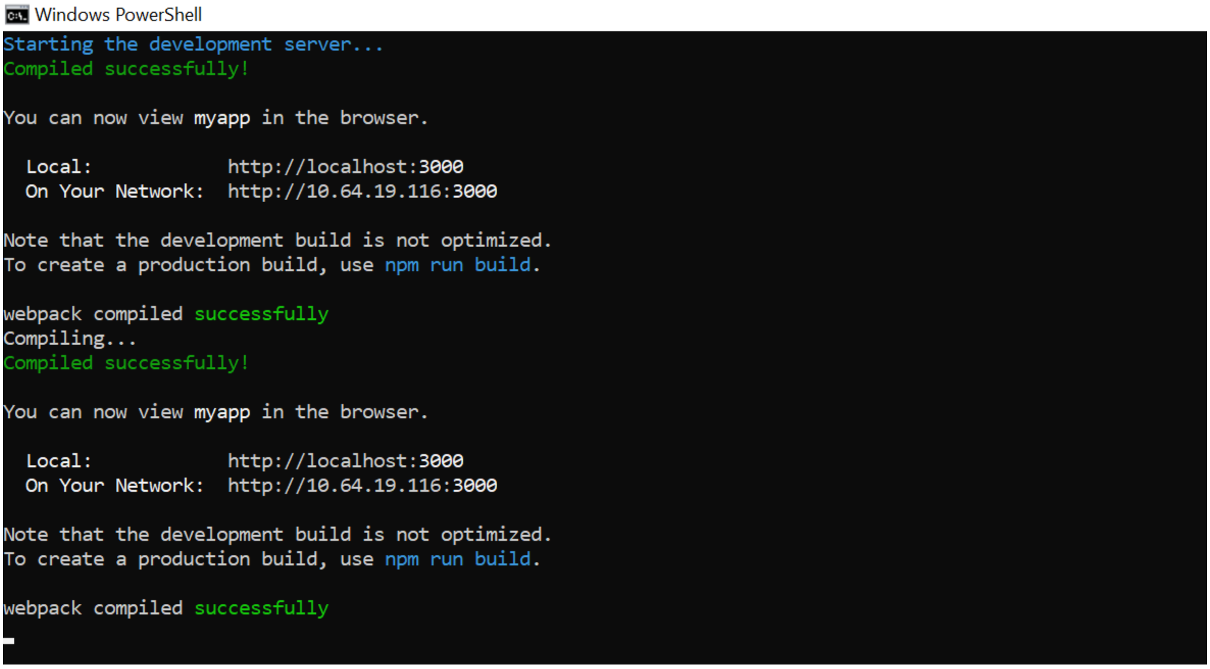


```
Item Collection

Total Items: 3

Enter item          Add Item

• Item 1
• Item 2            Remove
• Item 3            Remove
• Item 4            Remove
```

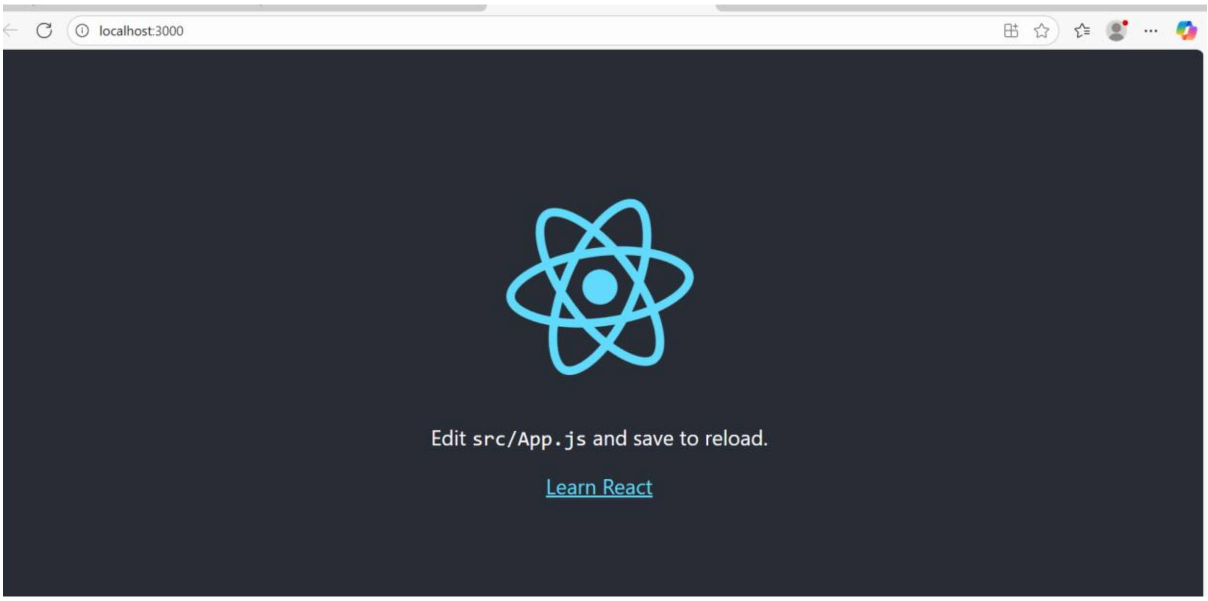
18)Demonstrate installation steps in react js.



```
Microsoft Windows [Version 10.0.19045.5608]
(c) Microsoft Corporation. All rights reserved.

C:\Users\VCM>node -v
v22.20.0

C:\Users\VCM>npm -v
10.9.3

C:\Users\VCM>npx  create-react-app myapp
Need to install the following packages:
create-react-app@5.1.0
Ok to proceed? (y) y

The directory myapp contains files that could conflict:

  node_modules/
  package-lock.json
  package.json
  public/
  src/

Either try using a new directory name, or remove the files listed above.

C:\Users\VCM>cd myapp

C:\Users\VCM\myapp>npm start

> myapp@0.1.0 start
> react-scripts start

(node:1748) [DEP_WEBPACK_DEV_SERVER_ON_AFTER_SETUP_MIDDLEWARE] DeprecationWarning: 'onAfterSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option.
(Use `node --trace-deprecation ...` to show where the warning was created)
(node:1748) [DEP_WEBPACK_DEV_SERVER_ON_BEFORE_SETUP_MIDDLEWARE] DeprecationWarning: 'onBeforeSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option
```



```
Starting the development server...
Compiled successfully!

You can now view myapp in the browser.

  Local:            http://localhost:3000
  On Your Network:  http://10.64.19.116:3000

Note that the development build is not optimized.
To create a production build, use npm run build.

webpack compiled successfully
Compiling...
Compiled successfully!

You can now view myapp in the browser.

  Local:            http://localhost:3000
  On Your Network:  http://10.64.19.116:3000

Note that the development build is not optimized.
To create a production build, use npm run build.

webpack compiled successfully
```



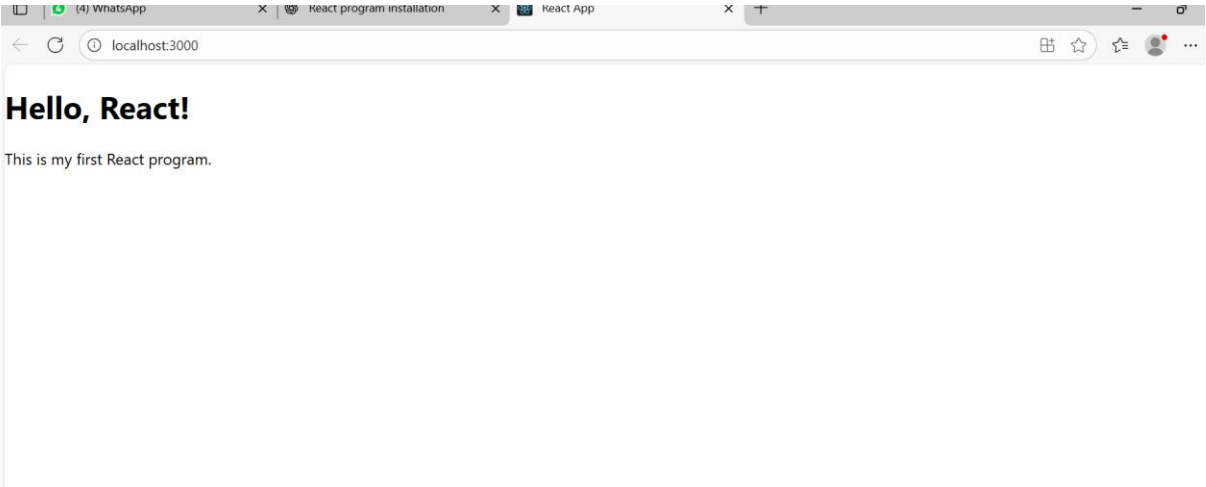
Edit `src/App.js` and save to reload.

Learn React

19)Demonstrate a Simple Hello world program using React js.

```
function App() {

  return (

<div>

<h1>Hello World from React!</h1>

</div>

  );

}

export default App;
```

Output:



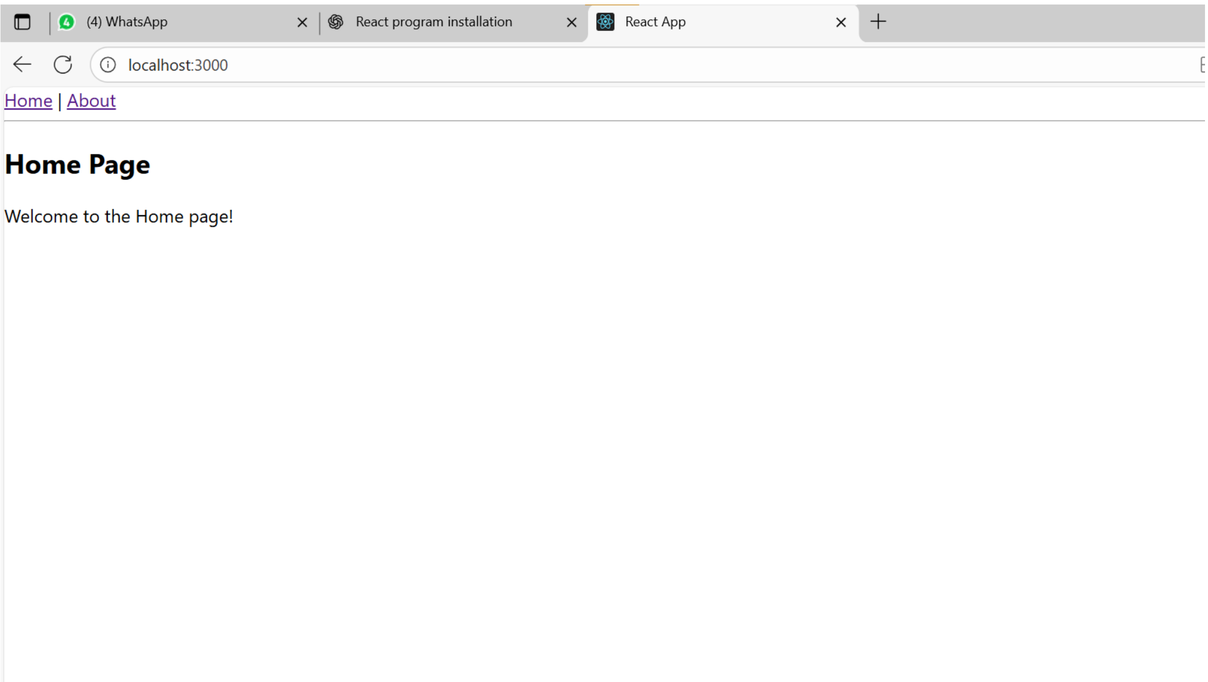
Hello, React!

This is my first React program.

20)Demonstarte a simple reactjs application to navigate pages using routing

```
import React from 'react';

import { BrowserRouter as Router, Routes, Route, Link } from 'react-router-dom';

// Home Page Component

function Home() {

  return (

<div>

<h2>Home Page</h2>

<p>Welcome to the Home page!</p>

</div>

  );

}

// About Page Component

function About() {

  return (

<div>

<h2>About Page</h2>

<p>This is the About page.</p>

</div>

  );

}

// App Component with Routing

function App() {

  return (

<Router>

<div>

<nav>

<Link to="/">Home</Link> | <Link to="/about">About</Link>

</nav>

<hr />

<Routes>

<Route path="/" element={<Home />} />
<Route path="/about" element={<About />} />
</Routes>
</div>
</Router>
  );
}
export default App;
```

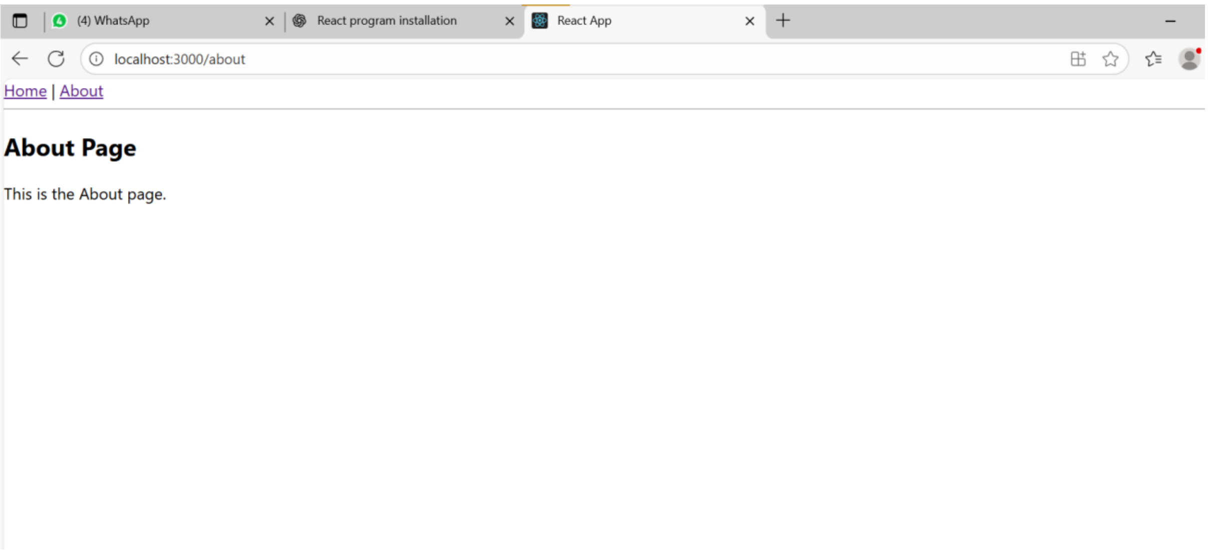
OUTPUT:



Home | About

Home Page

Welcome to the Home page!



Home | About

About Page

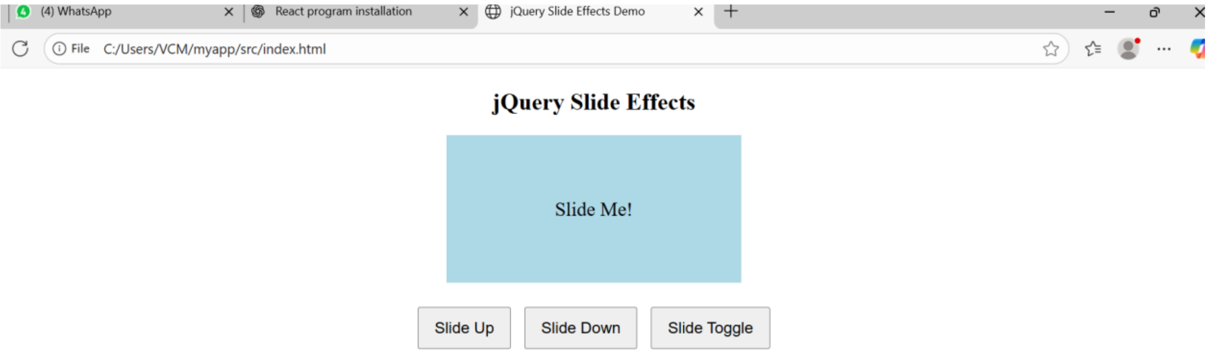
This is the About page.

21)Implement a html document to demonstrating the slideup ,slide down ,and slide toggle using jquery

```
<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>jQuery Slide Effects Demo</title>

<!-- jQuery CDN -->

<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

<style>

        #box {

            width: 300px;

            height: 150px;

            background-color: lightblue;

            line-height: 150px;

            text-align: center;

            margin: 20px auto;

            font-size: 20px;

        }

        button {

            margin: 5px;

            padding: 10px 15px;

            font-size: 16px;

        }

</style>

</head>

<body>

<h2 style="text-align:center;">jQuery Slide Effects</h2>

<div id="box">Slide Me!</div>

<div style="text-align:center;">

<button id="slideUpBtn">Slide Up</button>

<button id="slideDownBtn">Slide Down</button>
```

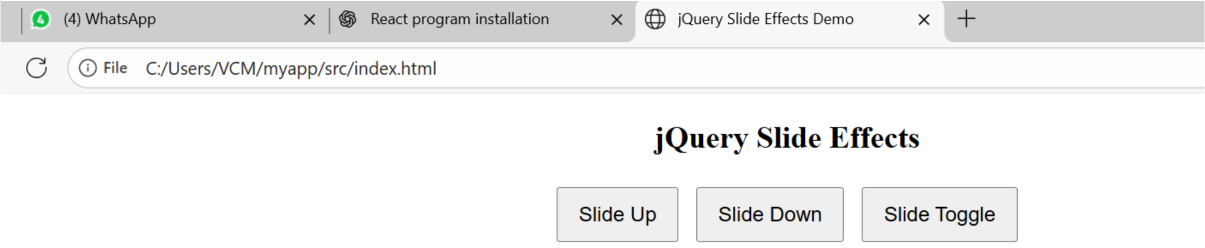
```
<button id="slideToggleBtn">Slide Toggle</button>
</div>
<script>
$(document).ready(function(){
  // Slide Up
  $("#slideUpBtn").click(function(){
    $("#box").slideUp("slow");
  });
  // Slide Down
  $("#slideDownBtn").click(function(){
    $("#box").slideDown("slow");
  });
  // Slide Toggle
  $("#slideToggleBtn").click(function(){
    $("#box").slideToggle("slow");
  });
});
</script>
</body>
</html>
```

OUTPUT:

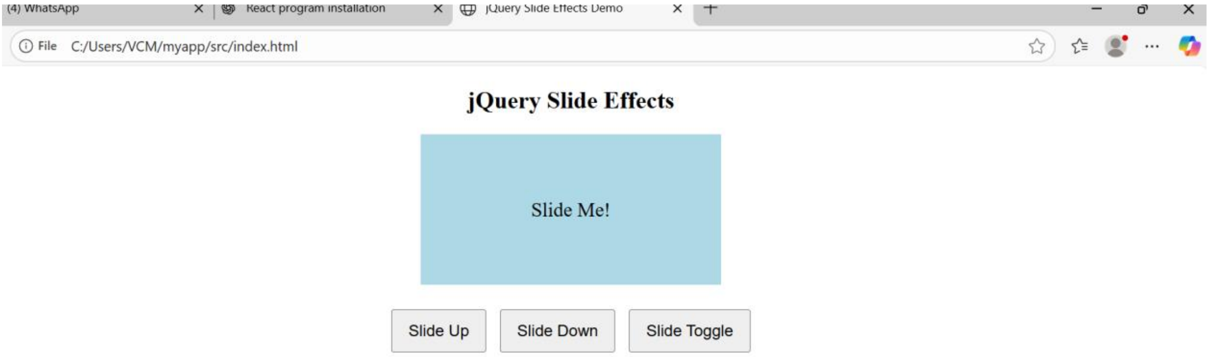


(4) WhatsApp
React program installation
jQuery Slide Effects Demo
File C:/Users/VCM/myapp/src/index.html
jQuery Slide Effects
Slide Me!
Slide Up
Slide Down
Slide Toggle

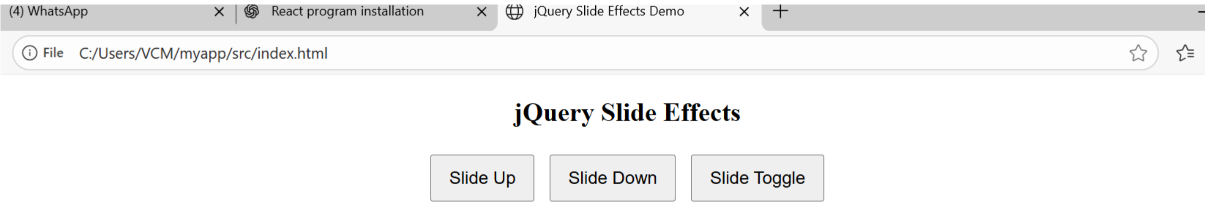
Slide up


(4) WhatsApp
React program installation
jQuery Slide Effects Demo
File C:/Users/VCM/myapp/src/index.html
jQuery Slide Effects
Slide Up
Slide Down
Slide Toggle

Slide down


(4) WhatsApp
React program installation
jQuery Slide Effects Demo
File C:/Users/VCM/myapp/src/index.html
jQuery Slide Effects
Slide Me!
Slide Up
Slide Down
Slide Toggle

Slide toggle

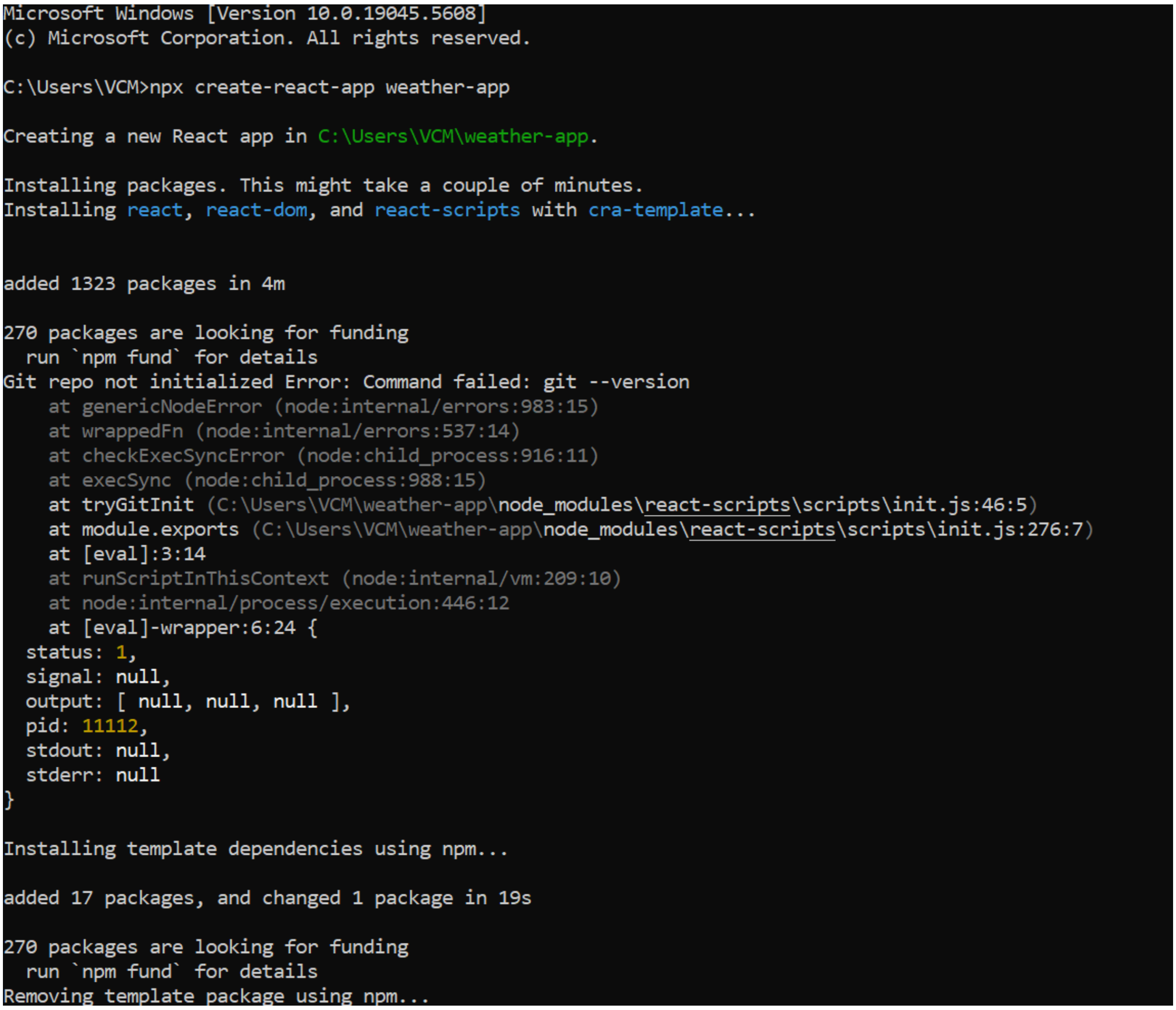

(4) WhatsApp
React program installation
jQuery Slide Effects Demo
File C:/Users/VCM/myapp/src/index.html
jQuery Slide Effects
Slide Up
Slide Down
Slide Toggle

22)Create a React service to fetch weather information from OpenWeatherMap API and display current & historical weather using Chart.js.

Step1:set up a your react project

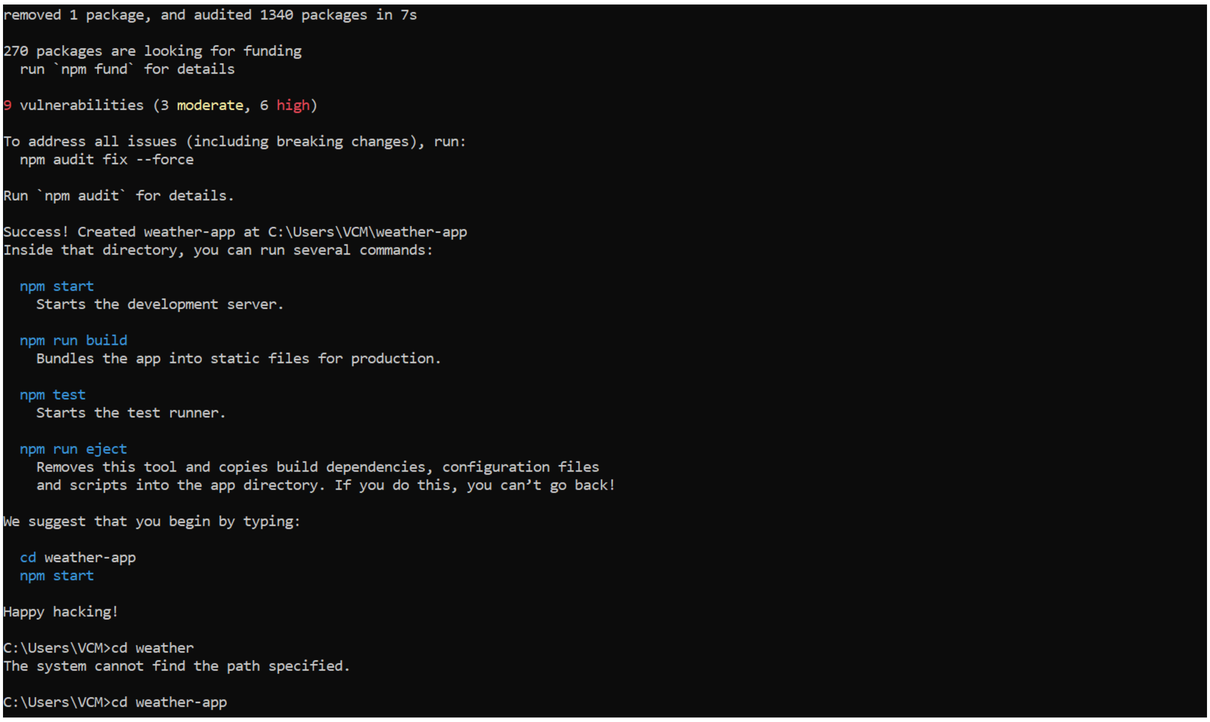
npx create-react-app weather-app

cd weather-app



```
Microsoft Windows [Version 10.0.19045.5608]
(c) Microsoft Corporation. All rights reserved.

C:\Users\VCM>npx create-react-app weather-app

Creating a new React app in C:\Users\VCM\weather-app.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...


added 1323 packages in 4m

270 packages are looking for funding
  run `npm fund` for details
Git repo not initialized Error: Command failed: git --version
    at genericNodeError (node:internal/errors:983:15)
    at wrappedFn (node:internal/errors:537:14)
    at checkExecSyncError (node:child_process:916:11)
    at execSync (node:child_process:988:15)
    at tryGitInit (C:\Users\VCM\weather-app\node_modules\react-scripts\scripts\init.js:46:5)
    at module.exports (C:\Users\VCM\weather-app\node_modules\react-scripts\scripts\init.js:276:7)
    at [eval]:3:14
    at runScriptInThisContext (node:internal/vm:209:10)
    at node:internal/process/execution:446:12
    at [eval]-wrapper:6:24 {
  status: 1,
  signal: null,
  output: [ null, null, null ],
  pid: 11112,
  stdout: null,
  stderr: null
}

Installing template dependencies using npm...

added 17 packages, and changed 1 package in 19s

270 packages are looking for funding
  run `npm fund` for details
Removing template package using npm...
```

Install dependancies:



```
removed 1 package, and audited 1340 packages in 7s

270 packages are looking for funding
  run `npm fund` for details

9 vulnerabilities (3 moderate, 6 high)

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.

Success! Created weather-app at C:\Users\VCM\weather-app
Inside that directory, you can run several commands:

  npm start
    Starts the development server.

  npm run build
    Bundles the app into static files for production.

  npm test
    Starts the test runner.

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd weather-app
  npm start

Happy hacking!

C:\Users\VCM>cd weather
The system cannot find the path specified.

C:\Users\VCM>cd weather-app
```

Step2:Create a weather service

Create a file src/services/weatherService.js:

```
import axios from "axios";

const API_KEY = "YOUR_API_KEY_HERE"; // Replace with your OpenWeatherMap API key

const BASE_URL = "https://api.openweathermap.org/data/2.5";

// Fetch current weather by city

export const getCurrentWeather = async (city) => {

  const response = await axios.get(`${BASE_URL}/weather`, {

    params: {

      q: city,

      units: "metric",

      appid: API_KEY,

    },

  });

  return response.data;

};

// Fetch historical weather by coordinates and timestamp

export const getHistoricalWeather = async (lat, lon, dt) => {

  const response = await axios.get(`${BASE_URL}/onecall/timemachine`, {

    params: {
      lat: lat,
      lon: lon,
      dt: dt, // UNIX timestamp (seconds)
      units: "metric",
      appid: API_KEY,
    },
  });
  return response.data;
};
```

Create a weather chart component

Create src/components/WeatherChart.js:

```
import React, { useState, useEffect } from "react";
import { getCurrentWeather, getHistoricalWeather } from "../services/weatherService";
import { Line } from "react-chartjs-2";
import { Chart, registerables } from "chart.js";
Chart.register(...registerables);
const WeatherChart = () => {
  const [city, setCity] = useState("London"); // Default city
  const [currentWeather, setCurrentWeather] = useState(null);
  const [historicalData, setHistoricalData] = useState([]);
  const [loading, setLoading] = useState(false);
  const [error, setError] = useState("");
  // Fetch weather when city changes
  const fetchWeather = async () => {
    if (!city) return;
    setLoading(true);
    setError("");
    setCurrentWeather(null);
    setHistoricalData([]);
    try {
      // Current weather
      const current = await getCurrentWeather(city);
      setCurrentWeather(current);
      // Coordinates
      const lat = current.coord.lat;
      const lon = current.coord.lon;
      const historical = [];
      for (let i = 1; i <= 5; i++) {
        const dt = Math.floor((Date.now() - i * 24 * 60 * 60 * 1000) / 1000); // UNIX timestamp
        try {
          const data = await getHistoricalWeather(lat, lon, dt);
          historical.push({ dt: `-${i} day`, temp: data.current.temp });
        } catch (err) {
          console.error(`Failed day ${i}:`, err);
        }
      }
      setHistoricalData(historical.reverse());
    } catch (err) {
      console.error(err);
      setError("Failed to fetch weather. Check city name or API key.");
    } finally {
      setLoading(false);
    }
  };
  return (
<div style={{ width: "600px", margin: "20px auto", textAlign: "center" }}>
<h2>Weather Info</h2>
```

```
   {/* City Input */}
<div style={{ marginBottom: "20px" }}>
<input
     type="text"
     value={city}
     onChange={(e) => setCity(e.target.value)}
     placeholder="Enter city"
     style={{ padding: "5px 10px", fontSize: "16px" }}
    />
<button onClick={fetchWeather} style={{ marginLeft: "10px", padding: "5px 10px" }}>
     Get Weather
</button>
</div>
   {/* Loading */}
   {loading &&<p>Loading...</p>}
   {/* Error */}
   {error &&<p style={{ color: "red" }}>{error}</p>}
   {/* Current Weather */}
   {currentWeather && (
<div style={{ marginBottom: "20px" }}>
<p>
<strong>City:</strong> {currentWeather.name}
</p>
<p>
<strong>Temperature:</strong> {currentWeather.main.temp} °C
</p>
<p>
<strong>Weather:</strong> {currentWeather.weather[0].description}
</p>
<p>

<strong>Humidity:</strong> {currentWeather.main.humidity} %

</p>

</div>

      )}

      {/* Historical Chart */}

      {historicalData.length > 0 && (

<div>

<h3>Past 5 Days Temperature</h3>

<Line

            data={{

              labels: historicalData.map((d) => d.dt),

              datasets: [

                {

                  label: "Temperature (°C)",

                  data: historicalData.map((d) => d.temp),

                  fill: false,

                  borderColor: "blue",

                  tension: 0.1,

                },

              ],

            }}

          />

</div>

      )}

</div>

  );

};
```

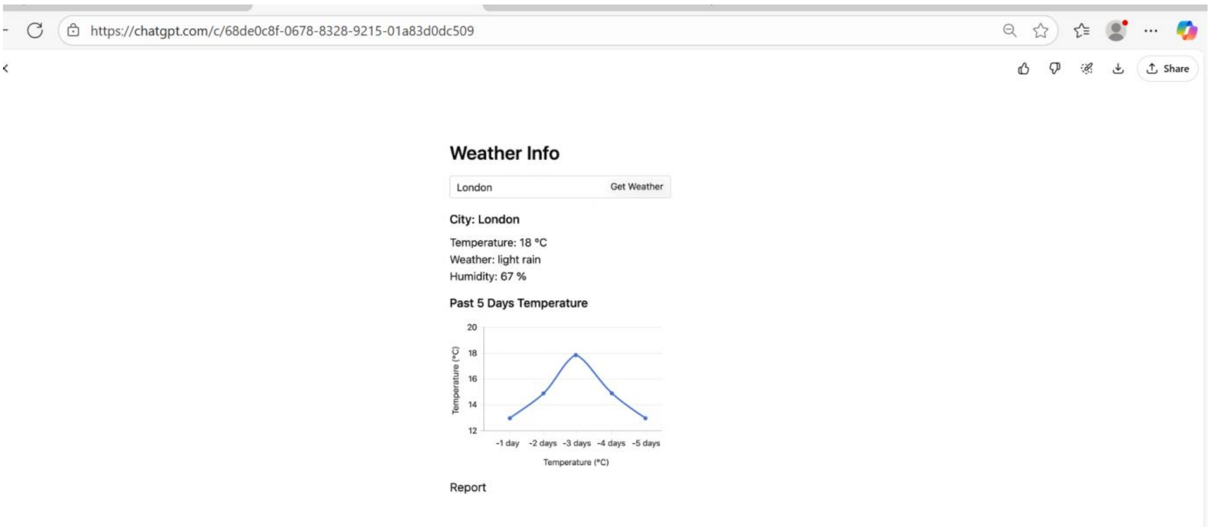
```
export default WeatherChart;
```

Use Component in App.js

Replace src/App.js with:

```
import React from "react";

import WeatherChart from "./components/WeatherChart";

function App() {

  return (

<div className="App">

<WeatherChart />

</div>

  );

}

export default App;
```

Step4:run the react app in cmd


https://chatgpt.com/c/68de0c8f-0678-8328-9215-01a83d0dc509

Weather Info

London

Get Weather

City: London

Temperature: 18 °C

Weather: light rain

Humidity: 67 %

Past 5 Days Temperature

Report

23) Implement a simple login from using react js

Step1:Create react app

```
npx create-react-app login-form

cd login-form

npm start
```

Step2:components/Login.js

```
import React, { useState } from "react";

function Login()

  const [email, setEmail] = useState("");

  const [password, setPassword] = useState("");

  const [message, setMessage] = useState("");

  const handleSubmit = (e) => {

e.preventDefault();

    // Simple validation

    if (email === "user@example.com" && password === "123456") {

      setMessage("Login successful!");

    } else {

      setMessage("Invalid email or password.");

    }

  };

return (

<div style={{ maxWidth: "400px", margin: "50px auto", padding: "20px", border: "1px solid #ccc",
borderRadius: "8px" }}>

<h2>Login Form</h2>

<form onSubmit={handleSubmit}>

<div style={{ marginBottom: "10px" }}>

<label>Email:</label>

<input  type="email"

 value={email}

   onChange={(e) => setEmail(e.target.value)}

  style={{ width: "100%", padding: "8px", marginTop: "5px" }}  required />

</div>
<div style={{ marginBottom: "10px" }}>
<label>Password:</label>
<input
      type="password"
      value={password}
      onChange={(e) => setPassword(e.target.value)}
      style={{ width: "100%", padding: "8px", marginTop: "5px" }}
      required
     />
</div>
<button type="submit" style={{ padding: "10px 20px" }}>
     Login
</button>
</form>
   {message &&<p style={{ marginTop: "20px", fontWeight: "bold" }}>{message}</p>}
</div>
 );
}
export default Login;
```

Step3:Use Login.js in App.js

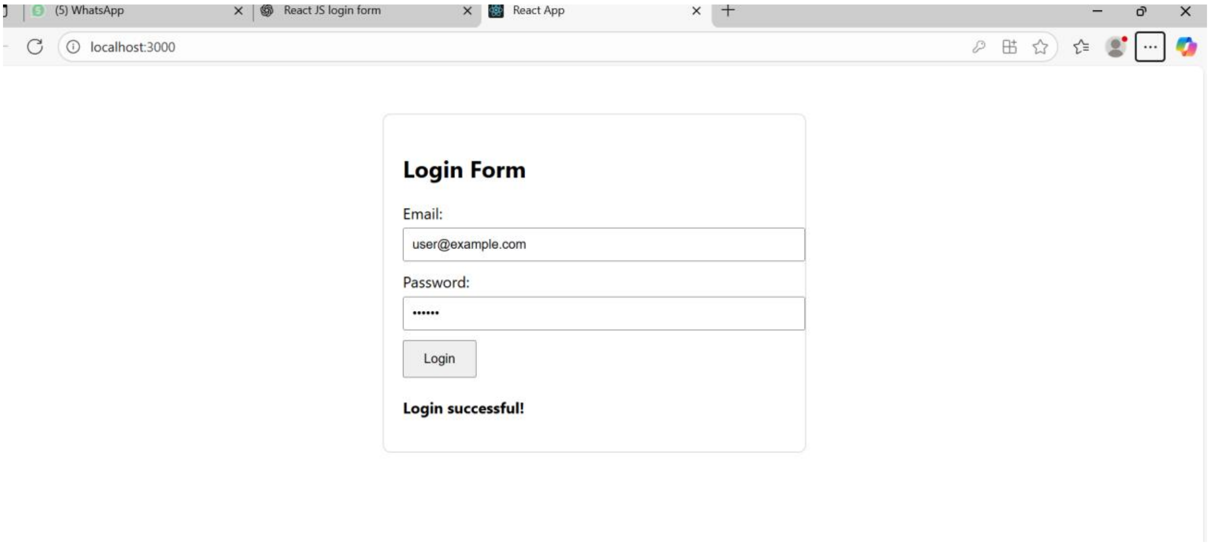
Replace App.js content with:

Step4:run thenapp npm start

```
import React from "react";
import Login from "./components/Login"; // import from components folder
function App() {
 return (
<div>
<Login />
</div>
 );
}
```

```
export default App;
```

Output:



Login Form

Email:

user@example.com

Password:

••••••

Login successful!

24)Demonstrate a Events in React js

1)components/eventdemo.js

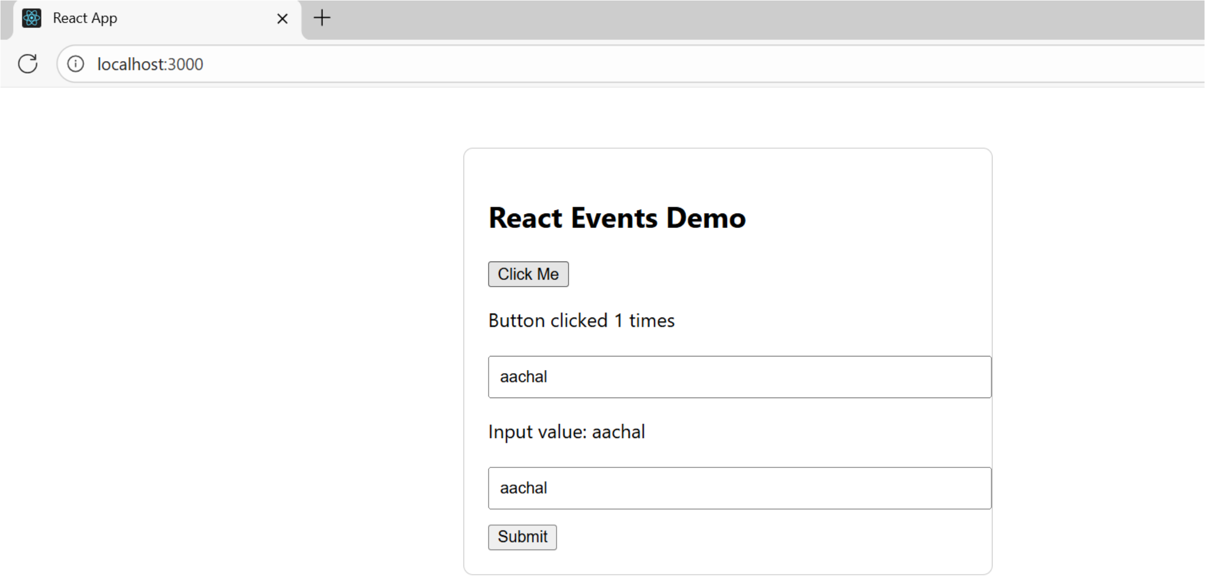
```
importReact, { useState } from"react";

functionEventDemo() {
const [count, setCount] = useState(0);
const [inputValue, setInputValue] = useState("");

// Button click event
consthandleClick = () => {
setCount(count + 1);
  };

// Input change event
consthandleChange = (e) => {
setInputValue(e.target.value);
  };

// Form submit event
consthandleSubmit = (e) => {
    e.preventDefault();
alert(`Form submitted with value: ${inputValue}`);
  };

return (
<divstyle={{maxWidth: "400px", margin: "50pxauto", padding: "20px", border: "1pxsolid #ccc", borderRadius:
"8px" }}>
<h2>React Events Demo</h2>

      {/* Click Event */}
<divstyle={{marginBottom: "20px" }}>
<buttononClick={handleClick}>Click Me</button>
<p>Button clicked {count} times</p>
</div>

      {/* Input Change Event */}
<divstyle={{marginBottom: "20px" }}>
<input
type="text"
placeholder="Type something..."
value={inputValue}
onChange={handleChange}
style={{width: "100%", padding: "8px" }}
        />
<p>Input value: {inputValue}</p>
</div>

      {/* Form Submit Event */}
<formonSubmit={handleSubmit}>
<input
type="text"
placeholder="Enter text for submit"
value={inputValue}
onChange={handleChange}
style={{width: "100%", padding: "8px", marginBottom: "10px" }}
        />
<buttontype="submit">Submit</button>
</form>
</div>
  );
}
```

```
exportdefaultEventDemo;
```

2)App.js (use the component)

```
import React from "react";
import EventDemo from "./components/EventDemo";
function App() {
  return (
<div>
<EventDemo />
</div>
  );
}
export default App;
```

OUTPUT:



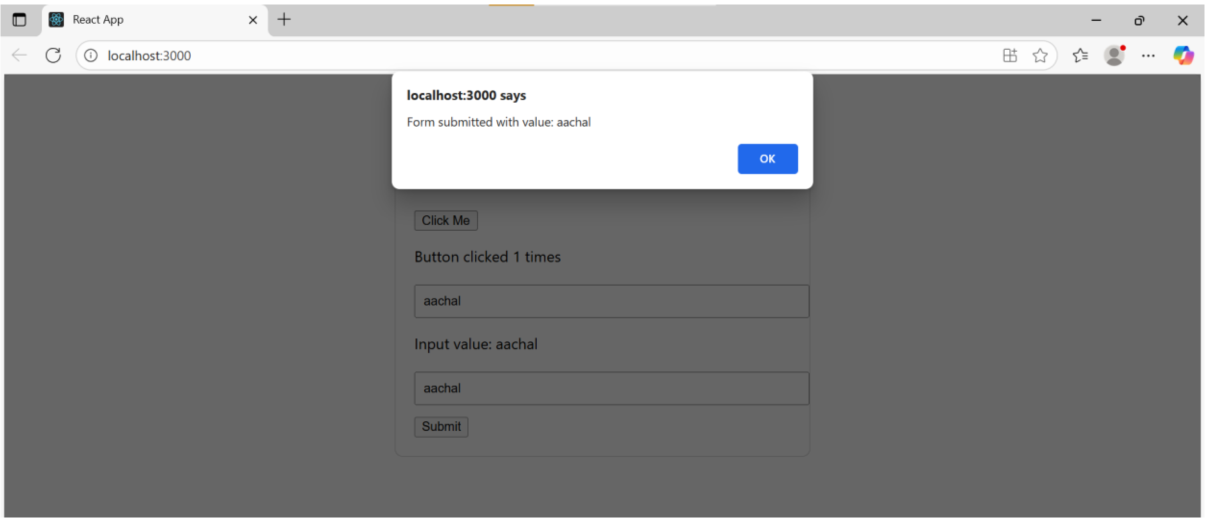
React Events Demo

Button clicked 1 times

aachal

Input value: aachal

aachal



localhost:3000 says

Form submitted with value: aachal

Button clicked 1 times

aachal

Input value: aachal

aachal

25)Demonstrate search filter in react js.

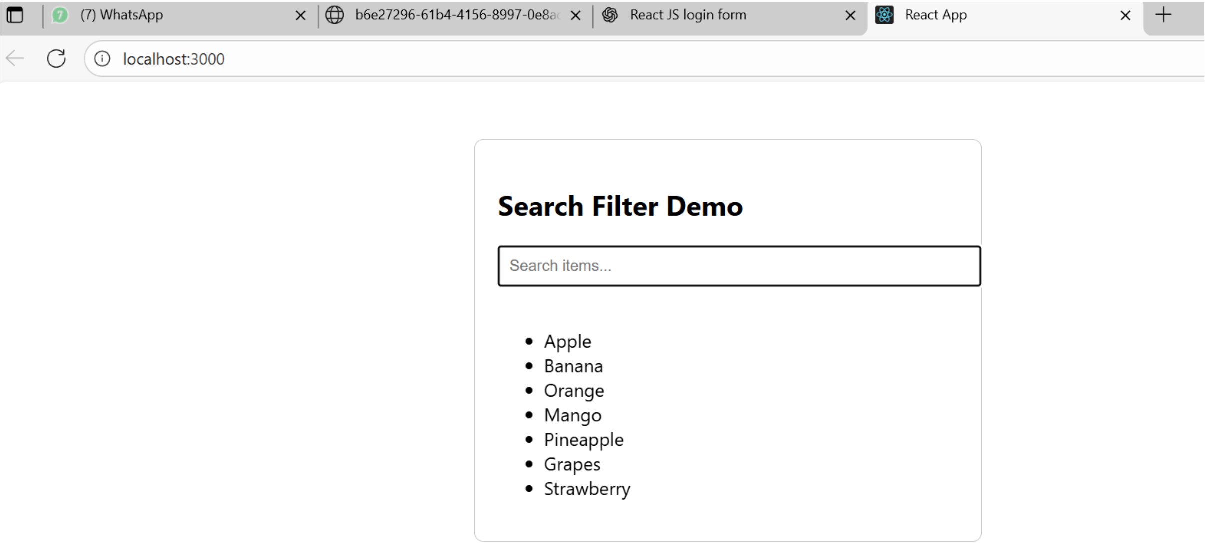
components/SearchFilter.js

```
import React, { useState } from "react";

function SearchFilter() {

  const [searchTerm, setSearchTerm] = useState("");

  // Sample data

  const items = [

    "Apple",

    "Banana",

    "Orange",

    "Mango",

    "Pineapple",

    "Grapes",

    "Strawberry"

  ];

// Filtered list based on search term

  const filteredItems = items.filter((item) =>

    item.toLowerCase().includes(searchTerm.toLowerCase())

  );

  return (

<div style={{ maxWidth: "400px", margin: "50px auto", padding: "20px", border: "1px solid #ccc",
borderRadius: "8px" }}>

<h2>Search Filter Demo</h2>

      {/* Search Input */}

<input

        type="text"

        placeholder="Search items..."

        value={searchTerm}

        onChange={(e) => setSearchTerm(e.target.value)}

        style={{ width: "100%", padding: "8px", marginBottom: "20px" }}

      />
      {/* Filtered List */}
<ul>
        {filteredItems.length > 0 ? (
          filteredItems.map((item, index) =><li key={index}>{item}</li>)
        ) : (
<li>No items found</li>
        )}
</ul>
</div>
  );
}
export default SearchFilter;
```

App.js (use the component)

```
import React from "react";
import SearchFilter from "./components/SearchFilter";
function App() {
  return (
<div>
<SearchFilter />
</div>
  );
}
export default App;
```

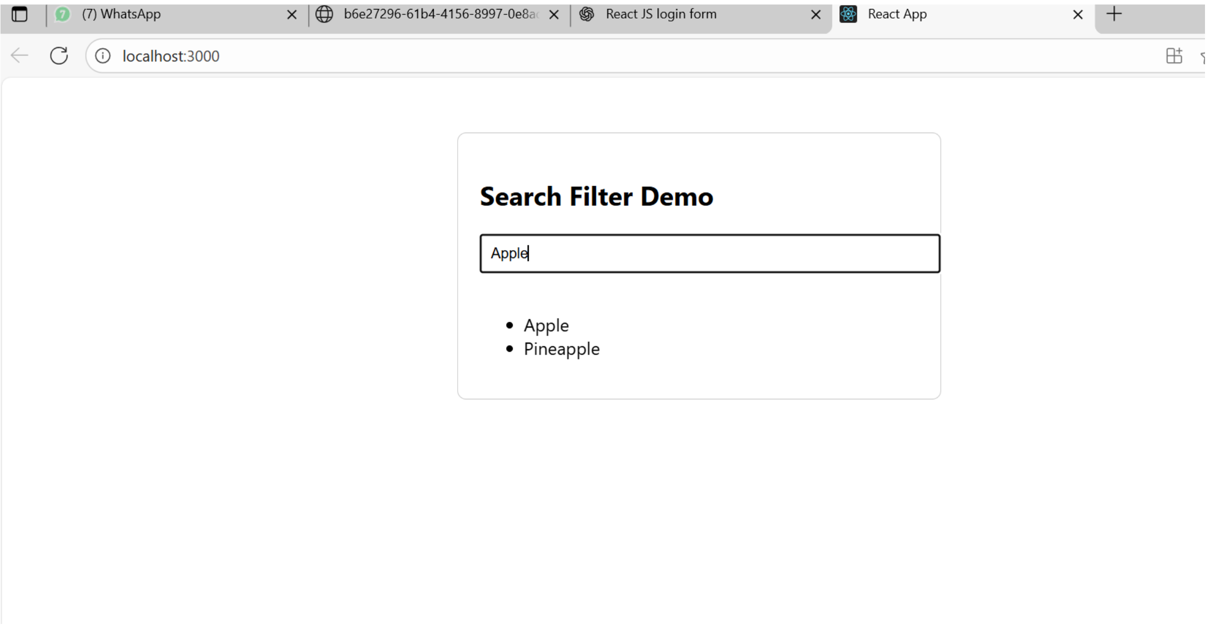
OUTPUT:



Search Filter Demo

Search items...

- Apple
- Banana
- Orange
- Mango
- Pineapple
- Grapes
- Strawberry



Search Filter Demo

Apple

- Apple
- Pineapple

26)Implement a program to create a simple calculator application using reactjs.

components/Calculator.js

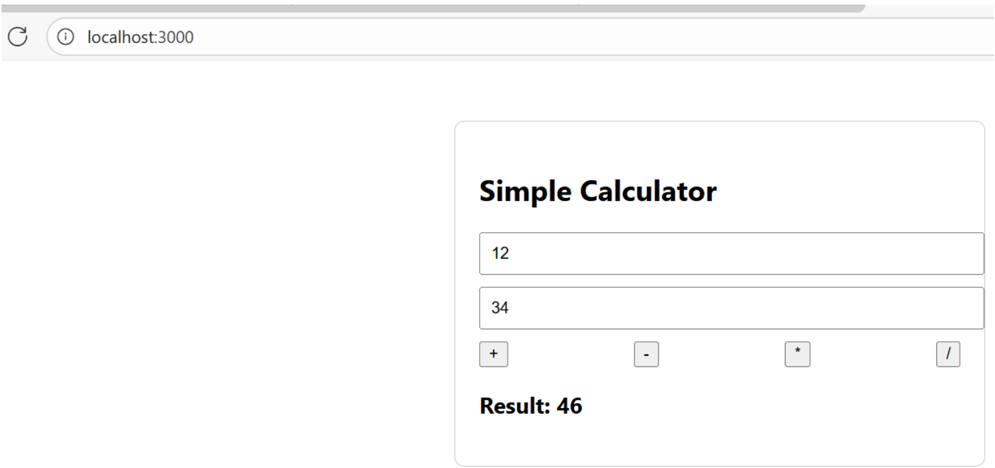
```
import React, { useState } from "react";

function Calculator() {

  const [num1, setNum1] = useState("");

  const [num2, setNum2] = useState("");

  const [result, setResult] = useState("");

  // Handle operation

  const calculate = (operation) => {

    const a = parseFloat(num1);

    const b = parseFloat(num2);

    if (isNaN(a) || isNaN(b)) {

      setResult("Please enter valid numbers");

      return;

    }

    switch (operation) {

      case "add":

        setResult(a + b);

        break;

      case "subtract":

        setResult(a - b);

        break;

      case "multiply":

        setResult(a * b);

        break;

      case "divide":

        if (b === 0) {

          setResult("Cannot divide by zero");

        } else {

          setResult(a / b);

        }

        break;
      default:
        setResult("Invalid operation");
    }
  };
  return (
<div style={{ maxWidth: "400px", margin: "50px auto", padding: "20px", border: "1px solid #ccc",
borderRadius: "8px" }}>
<h2>Simple Calculator</h2>
<input
        type="number"
        placeholder="Enter first number"
        value={num1}
        onChange={(e) => setNum1(e.target.value)}
        style={{ width: "100%", padding: "8px", marginBottom: "10px" }}
      />
<input
        type="number"
        placeholder="Enter second number"
        value={num2}
        onChange={(e) => setNum2(e.target.value)}
        style={{ width: "100%", padding: "8px", marginBottom: "10px" }}
      />
<div style={{ display: "flex", justifyContent: "space-between", marginBottom: "10px" }}>
<button onClick={() => calculate("add")}>+</button>
<button onClick={() => calculate("subtract")}>-</button>
<button onClick={() => calculate("multiply")}>*</button>
<button onClick={() => calculate("divide")}>/</button>
</div>
<h3>Result: {result}</h3>
</div>
  );
}
```

```
export default Calculator;
```

App.js

```
import React from "react";
import Calculator from "./components/Calculator";
function App() {
  return (
<div>
<Calculator />
</div>
  );
}
export default App;
```

OUTPUT:

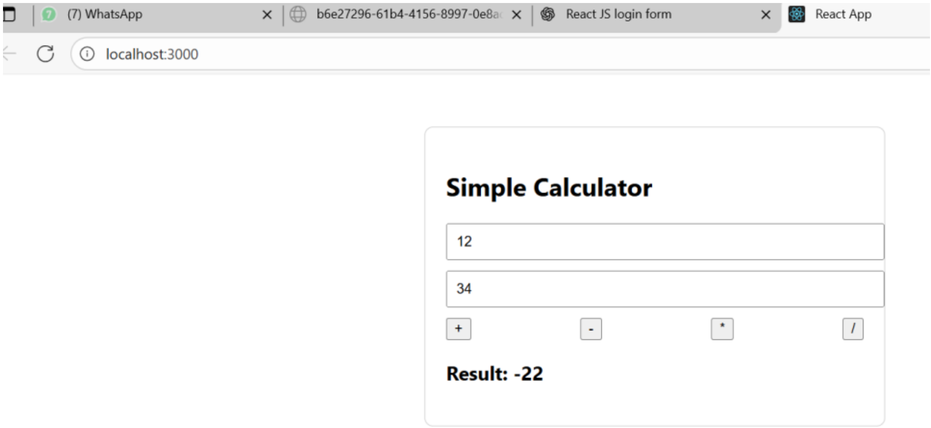


Simple Calculator

12

34

Result: 46

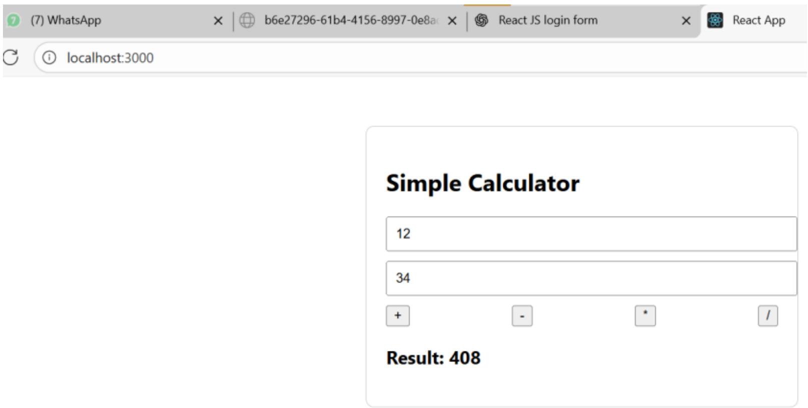


Simple Calculator

12

34

Result: -22

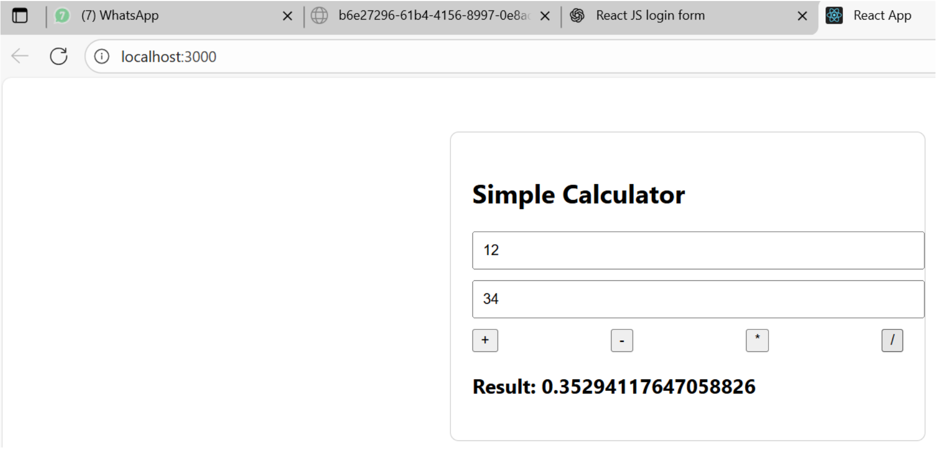


Simple Calculator

12

34

Result: 408



Simple Calculator

12

34

Result: 0.35294117647058826

27) Implement a product page that displays detailed product info ,images,reviews and purchases options inreact js.

```
// ProductPage.js
import React, { useState } from "react";
// Sample product data
const product = {
  name: "Wireless Headphones",
  price: 149.99,
  description:
    "High-quality wireless headphones with noise cancellation and 20 hours battery life.",
  images: [
    "https://via.placeholder.com/400x300?text=Headphone+1",
    "https://via.placeholder.com/400x300?text=Headphone+2",
    "https://via.placeholder.com/400x300?text=Headphone+3",
  ],
  reviews: [
    { id: 1, name: "John", rating: 5, comment: "Excellent sound quality!" },
    { id: 2, name: "Alice", rating: 4, comment: "Very comfortable to wear." },
  ],
};
function ProductPage() {
  const [selectedImage, setSelectedImage] = useState(product.images[0]);
  const [quantity, setQuantity] = useState(1);
  const handleAddToCart = () => {
    alert(`Added ${quantity} item(s) of ${product.name} to cart.`);
  };
  return (
<div style={{ maxWidth: "800px", margin: "20px auto", fontFamily: "Arial" }}>
<h1>{product.name}</h1>
<h2>${product.price}</h2>
<p>{product.description}</p>
```

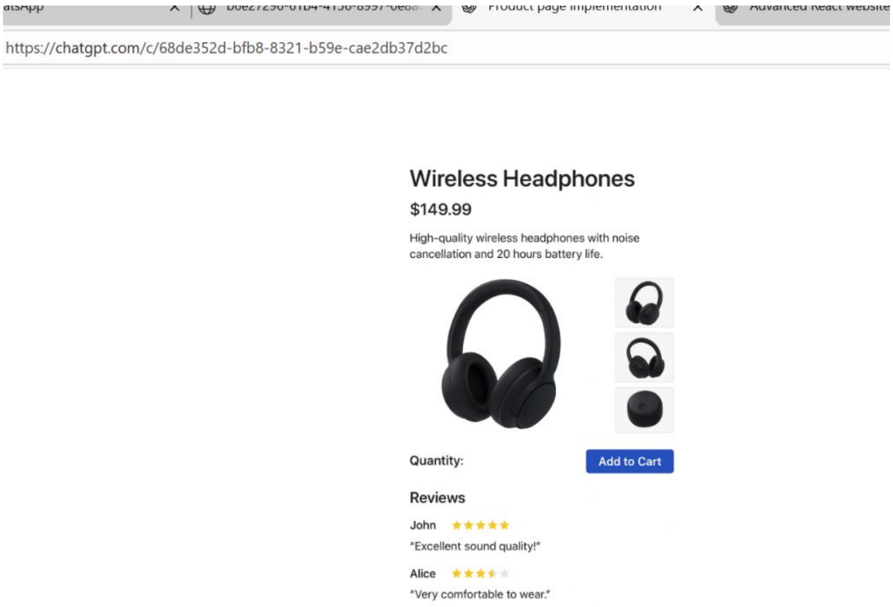
```
   {/* Images */}
<div style={{ display: "flex", gap: "10px", marginBottom: "20px" }}>
<img
     src={selectedImage}
     alt="Selected"
     style={{ width: "400px", height: "300px", objectFit: "cover" }}
    />
<div style={{ display: "flex", flexDirection: "column", gap: "10px" }}>
     {product.images.map((img, index) => (
<img
       key={index}
       src={img}
       alt={`Thumbnail ${index}`}
       style={{
        width: "100px",
        height: "75px",
        objectFit: "cover",
        cursor: "pointer",
        border: selectedImage === img ? "2px solid blue" : "1px solid gray",
       }}
       onClick={() => setSelectedImage(img)}
      />
     ))}
</div>
</div>
   {/* Purchase Options */}
<div style={{ marginBottom: "20px" }}>
<label>
     Quantity:{" "}
<input
      type="number"
      min="1"
```

```
            value={quantity}
            onChange={(e) => setQuantity(Number(e.target.value))}
          />
</label>
<button
          style={{ marginLeft: "10px", padding: "5px 15px" }}
          onClick={handleAddToCart}>
          Add to Cart
</button>
</div>
{/* Reviews */}
<div>
<h3>Reviews</h3>
        {product.reviews.map((review) => (
<div
            key={review.id}
            style={{ borderBottom: "1px solid #ccc", padding: "10px 0" }}>
<strong>{review.name}</strong> - Rating: {review.rating}/5
<p>{review.comment}</p>
</div>
        ))}
</div>
</div>
  );
}
export default ProductPage;
```

App.js

```
// App.js
import React from "react";
import ProductPage from "./ProductPage";
function App() {
  return (
<div className="App">

<ProductPage />

</div>

  );

}

export default App;
```

OUTPUT:



https://chatgpt.com/c/68de352d-bfb8-8321-b59e-cae2db37d2bc

Wireless Headphones

$149.99

High-quality wireless headphones with noise cancellation and 20 hours battery life.

Quantity:

Reviews

John ★★★★★

"Excellent sound quality!"

Alice ★★★★☆

"Very comfortable to wear."

28) Implement a dynamic website using demonstratting web technologies (html,css,javascript).

Index.html

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Dynamic Web Demo</title>

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

</head>

<body>

    <div class="container">

        <h1>Dynamic Item List</h1>

        <p>Total Items: <span id="item-count">0</span></p>

<input type="text" id="item-input" placeholder="Enter item name">

        <button id="add-item-btn">Add Item</button>

 <ul id="item-list">

            <!-- Dynamic items will appear here -->

        </ul>

    </div>

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

</body>

</html>
```

Style.css

```
body {

    font-family: Arial, sans-serif;

    background-color: #f9f9f9;

    display: flex;

    justify-content: center;

    padding-top: 50px;

}
```

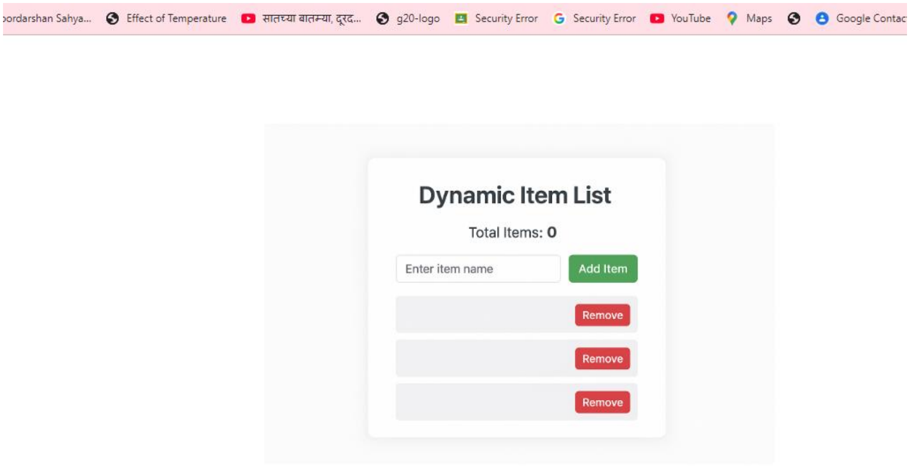
```
.container {
    background-color: white;
    padding: 30px;
    border-radius: 10px;
    box-shadow: 0 0 15px rgba(0,0,0,0.2);
    width: 400px;
    text-align: center;
}
input[type="text"] {
    padding: 10px;
    width: 70%;
    margin-bottom: 10px;
    border-radius: 5px;
    border: 1px solid #ccc;
}
button {
    padding: 10px 15px;
    border: none;
    border-radius: 5px;
    background-color: #28a745;
    color: white;
    cursor: pointer;
}
button:hover {
    background-color: #218838;
}
ul {
    list-style-type: none;
    padding: 0;
}
```

```
li {
    background-color: #e9ecef;
    margin: 5px 0;
    padding: 10px;
    border-radius: 5px;
    display: flex;
    justify-content: space-between;
}
li button {
    background-color: #dc3545;
}
li button:hover {
    background-color: #c82333;
}
```

Script.js

```
const addItemBtn = document.getElementById('add-item-btn');
const itemInput = document.getElementById('item-input');
const itemList = document.getElementById('item-list');
const itemCount = document.getElementById('item-count');
let count = 0;
// Function to add item
addItemBtn.addEventListener('click', () => {
    const itemName = itemInput.value.trim();
    if(itemName === "") {
        alert("Please enter an item name!");
        return;
    }
    // Create list item
    const li = document.createElement('li');
    li.textContent = itemName;
    // Create remove button
    const removeBtn = document.createElement('button');
    removeBtn.textContent = "Remove";

    removeBtn.addEventListener('click', () => {

        itemList.removeChild(li);

        count--;

        itemCount.textContent = count;

    });

    li.appendChild(removeBtn);

    itemList.appendChild(li);

    count++;

    itemCount.textContent = count;

    itemInput.value = "";

});
```

OUTPUT:



29)Implement advanced dynamic website using react js.

Step1:project setup

```
npx create-react-app advanced-website

cd advanced-website

npm install react-router-dom axios

npm start
```

Step2:project structure

```
src/
  components/
    Header.js
    Footer.js
    ProductCard.js
  pages/
    Home.js
    Products.js
    About.js
  App.js
  index.js
```

Step3:Routing in App.js

```
import React from 'react';

import { BrowserRouter as Router, Routes, Route } from 'react-router-dom';

import Header from './components/Header';

import Footer from './components/Footer';

import Home from './pages/Home';

import Products from './pages/Products';

import About from './pages/About';

function App() {

  return (

    <Router>

      <Header />

      <Routes>

        <Route path="/" element={<Home />} />
        <Route path="/products" element={<Products />} />
        <Route path="/about" element={<About />} />
      </Routes>
      <Footer />
    </Router>
  );
}
export default App;
```

Header.js

```
// Header.js
import React from 'react';
import { Link } from 'react-router-dom';
function Header() {
  return (
    <header style={{ padding: '10px', background: '#333', color: 'white' }}>
      <h1>Advanced Website</h1>
      <nav>
        <Link to="/" style={{ color: 'white', margin: '10px' }}>Home</Link>
        <Link to="/products" style={{ color: 'white', margin: '10px' }}>Products</Link>
        <Link to="/about" style={{ color: 'white', margin: '10px' }}>About</Link>
      </nav>
    </header>
  );
}
export default Header;
// Footer.js
import React from 'react';
function Footer() {
  return (
    <footer style={{ padding: '10px', background: '#333', color: 'white', marginTop: '20px' }}>
      <p>&copy; 2025 Advanced Website</p>
    </footer>
  );
}
export default Footer;
```

home page(dynamic content)

```
// Home.js
import React, { useState } from 'react';
function Home() {
  const [count, setCount] = useState(0);
  return (
    <div style={{ padding: '20px' }}>
      <h2>Welcome to Advanced Website</h2>
      <p>This is a dynamic website built using ReactJS.</p>
            <h3>Dynamic Counter:</h3>
      <p>Current Count: {count}</p>
      <button onClick={() => setCount(count + 1)}>Increase</button>
      <button onClick={() => setCount(count - 1)}>Decrease</button>
    </div>
  );
}
export default Home;
```

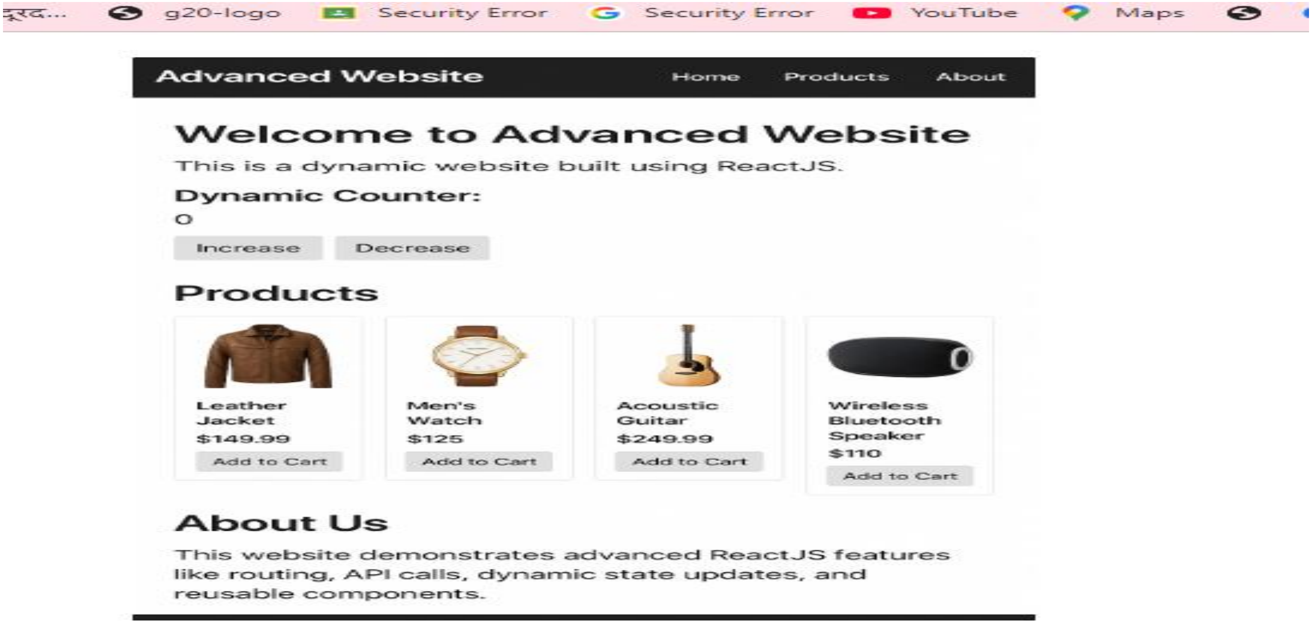
products page(API fetching)

```
// Products.js
import React, { useEffect, useState } from 'react';
import axios from 'axios';
import ProductCard from '../components/ProductCard';
function Products() {
  const [products, setProducts] = useState([]);

  useEffect(() => {
    // Fetching dummy API
    axios.get('https://fakestoreapi.com/products')
      .then(res => setProducts(res.data))
      .catch(err => console.error(err));
  }, []);
  return (
    <div style={{ padding: '20px' }}>
      <h2>Products</h2>
      <div style={{ display: 'flex', flexWrap: 'wrap', gap: '20px' }}>
        {products.map(product => (
          <ProductCard key={product.id} product={product} />
        ))}
      </div>
    </div>
  );
}
export default Products;
```

productcard.js

```
// ProductCard.js
import React from 'react';
function ProductCard({ product }) {
  return (
    <div style={{ border: '1px solid #ccc', padding: '10px', width: '200px' }}>
      <img src={product.image} alt={product.title} style={{ width: '100px', height: '100px' }} />
      <h4>{product.title}</h4>
      <p>Price: ${product.price}</p>
      <button>Add to Cart</button>
    </div>
  );
}
export default ProductCard;
// About.js
import React from 'react';
function About() {
  return (
    <div style={{ padding: '20px' }}>
      <h2>About Us</h2>
      <p>This website demonstrates advanced ReactJS features like routing, API calls, dynamic state updates, and reusable components.</p>
    </div>
  );
}
export default About;
```

OUTPUT:



Advanced Website

Welcome to Advanced Website

This is a dynamic website built using ReactJS.

Dynamic Counter:

0

Products

Leather Jacket
$149.99

Men's Watch
$125

Acoustic Guitar
$249.99

Wireless Bluetooth Speaker
$110

About Us

This website demonstrates advanced ReactJS features like routing, API calls, dynamic state updates, and reusable components.

30) Create a react application for the student management system having registration.login,contact,about pages and implementing routing through navigate through those pages.

Step1:install react app

```
npx create-react-app student-management

cd student-management

npm install react-router-dom

npm start
```

Step2:project structure

```
src/
 ├─ components/
 │   ├─ Navbar.js
 ├─ pages/
 │   ├─ Home.js
 │   ├─ Registration.js
 │   ├─ Login.js
 │   ├─ Contact.js
 │   ├─ About.js
 ├─ App.js
 ├─ index.js
```

```
//Navbar.js

import React from "react";

import { Link } from "react-router-dom";

const Navbar = () => {

  return (

    <nav style={{ padding: "10px", backgroundColor: "#f2f2f2" }}>

      <Link to="/" style={{ margin: "10px" }}>Home</Link>

      <Link to="/registration" style={{ margin: "10px" }}>Registration</Link>

      <Link to="/login" style={{ margin: "10px" }}>Login</Link>

      <Link to="/contact" style={{ margin: "10px" }}>Contact</Link>

      <Link to="/about" style={{ margin: "10px" }}>About</Link>

    </nav>
  );
};
export default Navbar;
Home.js
import React from "react";
const Home = () => {
  return <h2>Welcome to Student Management System</h2>;
};
export default Home;
Registration.js
import React, { useState } from "react";
const Registration = () => {
  const [formData, setFormData] = useState({ name: "", email: "", password: "" });
  const handleChange = (e) => {
    setFormData({...formData, [e.target.name]: e.target.value});
  };
  const handleSubmit = (e) => {
    e.preventDefault();
    alert(`Registered: ${JSON.stringify(formData)}`);
  };
  return (
    <div>
      <h2>Registration</h2>
      <form onSubmit={handleSubmit}>
        <input type="text" name="name" placeholder="Name" onChange={handleChange} required /><br />
        <input type="email" name="email" placeholder="Email" onChange={handleChange} required /><br />
        <input type="password" name="password" placeholder="Password" onChange={handleChange} required
/><br />
        <button type="submit">Register</button>
      </form>
    </div>
  );
```

```
};

export default Registration;
```

login.js

```
import React, { useState } from "react";

const Login = () => {

  const [email, setEmail] = useState("");

  const [password, setPassword] = useState("");

  const handleSubmit = (e) => {

    e.preventDefault();

    alert(`Login attempted with email: ${email}`);

  };

  return (

    <div>

      <h2>Login</h2>

      <form onSubmit={handleSubmit}>

        <input type="email" placeholder="Email" value={email} onChange={(e) => setEmail(e.target.value)} required /><br />

        <input type="password" placeholder="Password" value={password} onChange={(e) => setPassword(e.target.value)} required /><br />

        <button type="submit">Login</button>

      </form>

    </div>

  );

};


export default Login;
```

contact.js

```
import React from "react";

const Contact = () => {

  return (

    <div>

      <h2>Contact Us</h2>

      <p>Email: info@studentms.com</p>
      <p>Phone: +91 1234567890</p>
    </div>
  );
};
export default Contact;
```

About.js

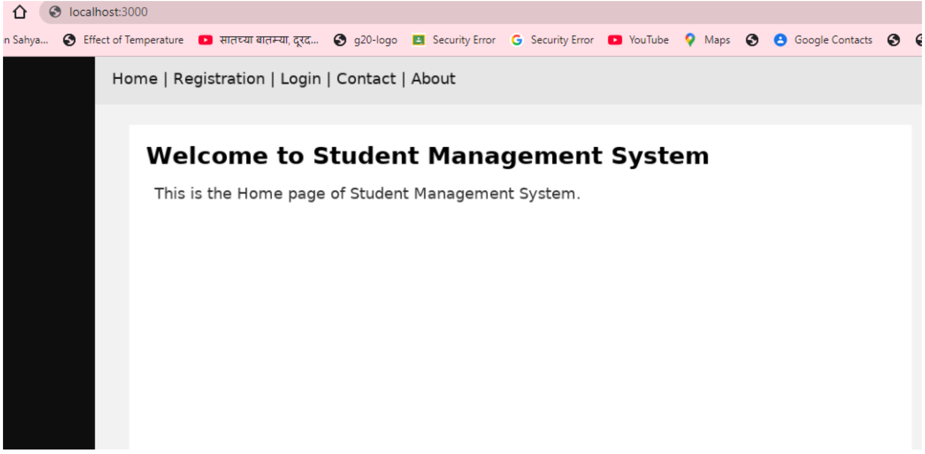
```
import React from "react";
const About = () => {
  return (
    <div>
      <h2>About Student Management System</h2>
      <p>This system manages student registration, login and information efficiently.</p>
    </div>
  );
};
export default About;
```

Setup Routing in App.js

```
import React from "react";
import { BrowserRouter as Router, Routes, Route } from "react-router-dom";
import Navbar from "./components/Navbar";
import Home from "./pages/Home";
import Registration from "./pages/Registration";
import Login from "./pages/Login";
import Contact from "./pages/Contact";
import About from "./pages/About";
function App() {
  return (
    <Router>
      <Navbar />
      <div style={{ padding: "20px" }}>
        <Routes>
          <Route path="/" element={<Home />} />
```

```
     <Route path="/registration" element={<Registration />} />
     <Route path="/login" element={<Login />} />
     <Route path="/contact" element={<Contact />} />
     <Route path="/about" element={<About />} />
    </Routes>
   </div>
  </Router>
 );
}
export default App;
```

Output:



Home | Registration | Login | Contact | About

Welcome to Student Management System

This is the Home page of Student Management System.