

# DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT

Department of Artificial Intelligence and Machine Learning

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Academic Year – 2023- 2024

Lab Manual

Angular JS

Subject – code – 21CSL581

DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND  
MANAGEMENT

Opp. Art of Living, Udayapura, Kanakapura Road, Bangalore-560 082

(Affiliated to Visvesvaraya Technological University, Belagavi and Approved by AICTE,

New Delhi) CE, CSE, ECE, EEE, ISE, ME Courses Accredited by NBA, New Delhi,

NAAC A+

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## Program1

**Develop Angular JS program that allows user to input their first name and last name and display their full name. Note: The default values for first name and last name may be included in the program.**

```
<!DOCTYPE html>
<html ng-app="fullNameApp">
<head>
  <title>Full Name Display</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
  <div ng-controller="FullNameController">
    <label>First Name:</label>
    <input type="text" ng-model="firstName"><br>
    <label>Last Name:</label>
    <input type="text" ng-model="lastName"><br>
    <p>Full Name: {{fullName()}}</p>
  </div>
  <script>
    var app = angular.module('fullNameApp', []);
    app.controller('FullNameController', function($scope) {
      // Default values for first name and last name
      $scope.firstName = "John";
      $scope.lastName = "Doe";

      // Function to concatenate first name and last name
      $scope.fullName = function() {
        return $scope.firstName + " " + $scope.lastName;
      };
    });
  </script>
</body>
</html>
```

## Output

First Name:   
Last Name:

Full Name: Oorja Saxena

## Program Number 2

**Develop an Angular JS application that displays a list of shopping items. Allow users to add and remove items from the list using directives and controllers. Note: The default values of items may be included in the program.**

```
<!DOCTYPE html>
<html ng-app="shoppingApp">
<head>
  <title>Shopping List</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
  <div ng-controller="ShoppingController">
    <h2>Shopping List</h2>
    <ul>
      <li ng-repeat="item in items">{{ item }} <button
ngclick="removeItem($index)">Remove</button></li>
    </ul>
    <label>Add Item:</label>
    <input type="text" ng-model="newItem">
    <button ng-click="addItem()">Add</button>
  </div>
  <script>
    var app = angular.module('shoppingApp', []);
    app.controller('ShoppingController', function($scope) {
      // Default items
      $scope.items = ["Milk", "Bread", "Eggs"];

      // Function to add a new item to the list
      $scope.addItem = function() {
        if ($scope.newItem) {
          $scope.items.push($scope.newItem);
          $scope.newItem = ""; // Clear the input field
        }
      };

      // Function to remove an item from the list
      $scope.removeItem = function(index) {
        $scope.items.splice(index, 1);
      };
    });
  </script>
</body>
</html>
```

## Output

# Shopping List

- Milk
- Bread
- Eggs
- Oranges

Add Item:

## Program Number 3

**Develop a simple Angular JS calculator application that can perform basic mathematical operations (addition, subtraction, multiplication, division) based on user input.**

```
<!DOCTYPE html>
<html ng-app="calculatorApp">
<head>
<title>Simple Calculator</title>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
<div ng-controller="CalculatorController">
<h2>Simple 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><br>
<p>Result: {{result}}</p>
</div>
<script>
var app = angular.module('calculatorApp', []);
app.controller('CalculatorController', function($scope) {
// Initialize variables
$scope.num1 = 0;
$scope.num2 = 0;
$scope.result = 0;
// Function to perform addition
$scope.add = function() {
$scope.result = $scope.num1 + $scope.num2;
};
// Function to perform subtraction
$scope.subtract = function() {
$scope.result = $scope.num1 - $scope.num2;
};
```

```
// Function to perform multiplication
$scope.multiply = function() {
    $scope.result = $scope.num1 * $scope.num2;
};

// Function to perform division
$scope.divide = function() {
    if ($scope.num2 !== 0) {
        $scope.result = $scope.num1 / $scope.num2;
    } else {
        $scope.result = "Cannot divide by zero";
    }
};
});
</script>
</body>
</html>
```

## Output

### Simple Calculator

Number 1:

Number 2:

Result: 28

### Simple Calculator

Number 1:

Number 2:

Result: 192

### Simple Calculator

Number 1:

Number 2:

Result: -4

### Simple Calculator

Number 1:

Number 2:

Result: 0.75

## Program 4

**Write an Angular JS application that can calculate factorial and compute square based on given user input.**

```
<!DOCTYPE html>
<html ng-app="mathApp">
<head>
  <title>Factorial and Square Calculator</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
  <div ng-controller="MathController">
    <h2>Factorial and Square Calculator</h2>
    <label>Number:</label>
    <input type="number" ng-model="number"><br>
    <button ng-click="calculateFactorial()">Calculate Factorial</button>
    <button ng-click="calculateSquare()">Calculate Square</button><br>
    <p ng-if="factorial !== null">Factorial: {{ factorial }}</p>
    <p ng-if="square !== null">Square: {{ square }}</p>
  </div>
  <script>
var app = angular.module('mathApp', []);
app.controller('MathController', function($scope) {
  // Initialize variables
  $scope.number = 0;
  $scope.factorial = null;
  $scope.square = null;
  // Function to calculate factorial
  $scope.calculateFactorial = function() {
    if ($scope.number < 0) {
      $scope.factorial = "Invalid input";
      return;
    }
    var result = 1;
    for (var i = 2; i <= $scope.number; i++) {
      result *= i;
    }
    $scope.factorial = result;
  };
  // Function to calculate square
  $scope.calculateSquare = function() {
    $scope.square = $scope.number * $scope.number;
  };
});
</script>
</body>
</html>
```

## Output

### Factorial and Square Calculator

Number:

Factorial: 479001600

Square: 144

## Program 5

**Develop AngularJS application that displays the details of students and their CGPA. Allow users to read the number of students and display the count. Note: Student details may be included in the program.**

```
<!DOCTYPE html>
<html ng-app="studentApp">
<head>
<title>AngularJS Student Details</title>
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"
></script>
</head>
<body ng-controller="studentController">
<h2>Student Details</h2>
Student Name:
<input type="text" ng-model="name" />
CGPA:
<input type="number" ng-model="cgpa" ng-min="1" ng-max="10" />
<button ng-click="addStudent()">Add Student</button>
<p>Total Students: {{ students.length }}</p>
<ul>
<li ng-repeat="student in students">
{{ student.name }} - CGPA: {{ student.cgpa }}
</li>
</ul>
<script>
var app = angular.module('studentApp', []);
app.controller('studentController', function ($scope) {
$scope.students = [];
$scope.addStudent = function () {
if ($scope.name && $scope.cgpa) {
$scope.students.push({
name: $scope.name,
cgpa: $scope.cgpa
});
}
```



```

$scope.name = "";
$scope.cgpa = "";
}
};
});
</script>
</body>
</html>

```

## Output

## Student Details

Student Name:  CGPA:

Total Students: 2

- Ayush - CGPA: 8.5
- Oorja - CGPA: 8.25

## Program 6

**Develop an AngularJS program to create a simple to-do list application. Allow users to add, edit, and delete tasks. Note: The default values for tasks may be included in the program.**

```

<!DOCTYPE html>
<html ng-app="todoApp">
<head>
<title>To-Do List</title>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
<div ng-controller="TodoController">
<h2>To-Do List</h2>
<label>Add Task:</label>
<input type="text" ng-model="newTask">
<button ng-click="addTask()">Add</button><br>
<ul>
<li ng-repeat="task in tasks">
<span>{{ task }}</span>
<button ng-click="editTask($index)">Edit</button>
<button ng-click="deleteTask($index)">Delete</button>
</li>
</ul>
</div>
<script>
var app = angular.module('todoApp', []);

```

```

app.controller('TodoController', function($scope) {
// Default tasks
$scope.tasks = ["Task 1", "Task 2", "Task 3"];
// Function to add a task
$scope.addTask = function() {
if ($scope.newTask) {
$scope.tasks.push($scope.newTask);
$scope.newTask = ""; // Clear the input field
}
};
// Function to edit a task
$scope.editTask = function(index) {
var editedTask = prompt("Edit Task", $scope.tasks[index]);
if (editedTask !== null) {
$scope.tasks[index] = editedTask;
}
};
// Function to delete a task
$scope.deleteTask = function(index) {
$scope.tasks.splice(index, 1);
};
});
</script>
</body>
</html>

```

## Output

### To-Do List

Add Task:

- Study well
- Sleep on time
- Pray to god

## Program 7

**Write an AngularJS program to create a simple CRUD application (Create, Read, Update, and Delete) for managing users.**

```

<!DOCTYPE html>
<html ng-app="crudApp">
<head>
<title>User Management</title>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
<div ng-controller="UserController">

```

```

<h2>User Management</h2>
<label>Name:</label>
<input type="text" ng-model="newUser.name"><br>
<label>Email:</label>
<input type="email" ng-model="newUser.email"><br>
<button ng-click="addUser()">Add User</button><br>
<ul>
<li ng-repeat="user in users">
<span>Name: {{ user.name }}, Email: {{ user.email }}</span>
<button ng-click="editUser(user)">Edit</button>
<button ng-click="deleteUser(user)">Delete</button>
</li>
</ul>
<div ng-show="editingUser">
<h3>Edit User</h3>
<label>Name:</label>
<input type="text" ng-model="editedUser.name"><br>
<label>Email:</label>
<input type="email" ng-model="editedUser.email"><br>
<button ng-click="updateUser()">Update</button>
<button ng-click="cancelEdit()">Cancel</button>
</div>
</div>
<script>
var app = angular.module('crudApp', []);
app.controller('UserController', function($scope) {
$scope.users = []; // Array to store users
$scope.newUser = {}; // Object to store new user data
$scope.editedUser = {}; // Object to store edited user data
$scope.editingUser = false; // Flag to indicate if user is being edited
// Function to add a new user
$scope.addUser = function() {
$scope.users.push($scope.newUser);
$scope.newUser = {}; // Clear the new user object
};
// Function to edit a user
$scope.editUser = function(user) {
$scope.editedUser = angular.copy(user);
$scope.editingUser = true;
};
// Function to update a user
$scope.updateUser = function() {
var index = $scope.users.indexOf($scope.editedUser);
$scope.users[index] = $scope.editedUser;
$scope.editingUser = false;
$scope.editedUser = {};
};
// Function to cancel editing
$scope.cancelEdit = function() {
$scope.editingUser = false;
$scope.editedUser = {};
};
};

```

```
// Function to delete a user
$scope.deleteUser = function(user) {
  var index = $scope.users.indexOf(user);
  $scope.users.splice(index, 1);
};
});
</script>
</body>
</html>
```

## Output

## User Management

Name:

Email:

- Name: Ayush, Email: 1DT22AI008@dsatm.edu.in
- Name: Oorja, Email: 1DT21AI043@dsatm.edu.in

## Program 8

**Develop AngularJS program to create a login form, with validation for the username and password fields.**

```
<!DOCTYPE html>
<html ng-app="loginApp">
<head>
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"
></script>
</head>
<body ng-controller="loginController">
<h1>Login Form</h1>
<!-- Form for login with validation -->
<form ng-submit="login()">
Username<br>
<input type="text" ng-model="username" required>
<br> Password <br>
<input type="password" ng-model="password" required>
<br>
<button type="submit">Login</button>
</form>
<script>
var app = angular.module('loginApp', []);
app.controller('loginController', function ($scope) {
$scope.login = function () {
```

```

// Check if username is "ayush" and password is "ayush"
if ($scope.username.toLowerCase() === 'ayush' &&
$scope.password === 'ayush') {
alert('Login successful');
// Add further logic for successful login
} else {
alert('Login failed. Invalid username or password. ');
// Add logic for failed login
}
};
});
</script>
</body>
</html>

```

## Output

## Program 9

**Create an AngularJS application that displays a list of employees and their salaries. Allow users to search for employees by name and salary. Note: Employee details may be included in the program.**

```

<!DOCTYPE html>
<html ng-app="employeeApp">
<head>
<title>Employee List</title>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
<div ng-controller="EmployeeController">
<h2>Employee List</h2>
<label>Search by Name:</label>
<input type="text" ng-model="searchName"><br>
<label>Search by Salary:</label>
<input type="number" ng-model="searchSalary"><br>
<ul>
<li ng-repeat="employee in filteredEmployees">
<span>Name: {{ employee.name }}, Salary: {{ employee.salary }}</span>
</li>

```

```

</ul>
</div>
<script>
var app = angular.module('employeeApp', []);
app.controller('EmployeeController', function($scope) {
$scope.employees = [
{ name: 'Manav', salary: 50000 },
{ name: 'Abhishek', salary: 60000 },
{ name: 'Aahish', salary: 55000 },
{ name: 'Ayush', salary: 70000 },
{ name: 'Oorja', salary: 65000 }
];
$scope.searchName = "";
$scope.searchSalary = "";
$scope.filteredEmployees = $scope.employees;
$scope.$watchGroup(['searchName', 'searchSalary'], function(newValues, oldValues) {
var name = newValues[0];
var salary = newValues[1];
$scope.filteredEmployees = $scope.employees.filter(function(employee) {
return employee.name.toLowerCase().includes(name.toLowerCase()) &&
(salary === "" || employee.salary >= salary);
});
});
});
</script>
</body>
</html>

```

## Output

### Employee List

Search by Name:

Search by Salary:

- Name: Manav, Salary: 50000
- Name: Abhishek, Salary: 60000
- Name: Aahish, Salary: 55000
- Name: Ayush, Salary: 70000
- Name: Oorja, Salary: 65000

### Employee List

Search by Name:

Search by Salary:

- Name: Abhishek, Salary: 60000
- Name: Aahish, Salary: 55000
- Name: Ayush, Salary: 70000

## Program 10

**Create AngularJS application that allows users to maintain a collection of items. The application should display the current total number of items, and this count should automatically update as items are added or removed. Users should be able to add items to the collection and remove them as needed. Include the default values for items in the program.**

```
<!DOCTYPE html>
<html ng-app="itemApp">
<head>
  <title>Item Collection</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
  <div ng-controller="ItemController">
    <h2>Item Collection</h2>
    <label>Add Item:</label>
    <input type="text" ng-model="newItem"><br>
    <button ng-click="addItem()">Add</button><br>
    <ul>
      <li ng-repeat="item in items">
        <span>{{ item }}</span>
        <button ng-click="removeItem($index)">Remove</button>
      </li>
    </ul>
    <p>Total Items: {{ items.length }}</p>
  </div>
  <script>
    var app = angular.module('itemApp', []);
    app.controller('ItemController', function($scope) {
      // Default items
      $scope.items = ["Item 1", "Item 2", "Item 3"];
      // Function to add an item
      $scope.addItem = function() {
        if ($scope.newItem) {
          $scope.items.push($scope.newItem);
          $scope.newItem = ""; // Clear the input field
        }
      };
      // Function to remove an item
      $scope.removeItem = function(index) {
        $scope.items.splice(index, 1);
      };
    });
  </script>
</body>
</html>
```

## Output

### Item Collection

Add Item:

Add

- Pen
- Scale
- Whitener

Total Items: 3

## Program 11

**Create AngularJS application to convert student details to Uppercase using angular filters. Include the default details of students in the program.**

```
<!DOCTYPE html>
<html ng-app="studentApp">
<head>
  <title>Student Details</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
  <div ng-controller="StudentController">
    <h2>Student Details</h2>
    <ul>
      <li ng-repeat="student in students">
        <span>Name: {{ student.name | uppercase }}, Grade: {{ student.grade | uppercase }}</span>
      </li>
    </ul>
  </div>
  <script>
    var app = angular.module('studentApp', []);
    app.controller('StudentController', function($scope) {
      $scope.students = [
        { name: 'Ayush', grade: 'C' },
        { name: 'Oorja', grade: 'A' },
        { name: 'Abhishek', grade: 'B' }
      ];
    });
  </script>
</body>
</html>
```



## Output

### Student Details

- Name: AYUSH, Grade: C
- Name: OORJA, Grade: A
- Name: ABHISHEK, Grade: B

## Program 12

Create an AngularJS application that displays the date by using date filter parameters.

```
<!DOCTYPE html>
<html ng-app="dateApp">
<head>
<title>Date Display</title>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body>
<div ng-controller="DateController">
<h2>Date Display</h2>
<p>Today's Date: {{ currentDate | date: 'fullDate' }}</p>
<p>Current Time: {{ currentDate | date: 'shortTime' }}</p>
</div>
<script>
var app = angular.module('dateApp', []);
app.controller('DateController', function($scope) {
$scope.currentDate = new Date();
});
</script>
</body>
</html>
```

## Output

### Date Display

Today's Date: Thursday, March 21, 2024

Current Time: 4:55 AM