

# **RAJALAKSHMI ENGINEERING COLLEGE**

**RAJALAKSHMI NAGAR, THANDALAM – 602 105**



<p><b>CS23A34</b> <b>USER INTERFACE AND DESIGN LAB</b></p>
<p><b>Laboratory Observation NoteBook</b></p>

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## **Create a data visualization (e.g., pie charts, bar graphs) for an inventory management system using javascript**

### **AIM:**

The aim is to create data visualizations, such as pie charts and bar graphs, for an inventory management system using JavaScript.

### **PROCEDURE:**

#### **Step 1: Set Up Your HTML File**

First, create an HTML file to hold your canvas for the chart and include Chart.js.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Inventory Management Visualization</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      margin: 50px;
    }
  </style>
</head>
<body>
```

```
    canvas {
      margin: 20px auto;
      display: block;
    }
  </style>
</head>
<body>
  <h1>Inventory Management System</h1>
  <canvas id="pieChart" width="400" height="400"></canvas>
  <canvas id="barChart" width="400" height="400"></canvas>

  <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
  <script src="script.js"></script>
</body>
</html>
```

## Step 2: Create the JavaScript File for Charts

Next, create a JavaScript file (script.js) to handle the data visualization logic.

```
// script.js

// Data for the inventory
const inventoryData = {
  labels: ['Electronics', 'Clothing', 'Home Appliances', 'Books', 'Toys'],
  datasets: [
    {
      label: 'Items in Stock',
      data: [200, 150, 100, 80, 50],
```

```
    backgroundColor: [  
      '#FF6384',  
      '#36A2EB',  
      '#FFCE56',  
      '#4BC0C0',  
      '#9966FF'  
    ]  
  }  
]  
};
```

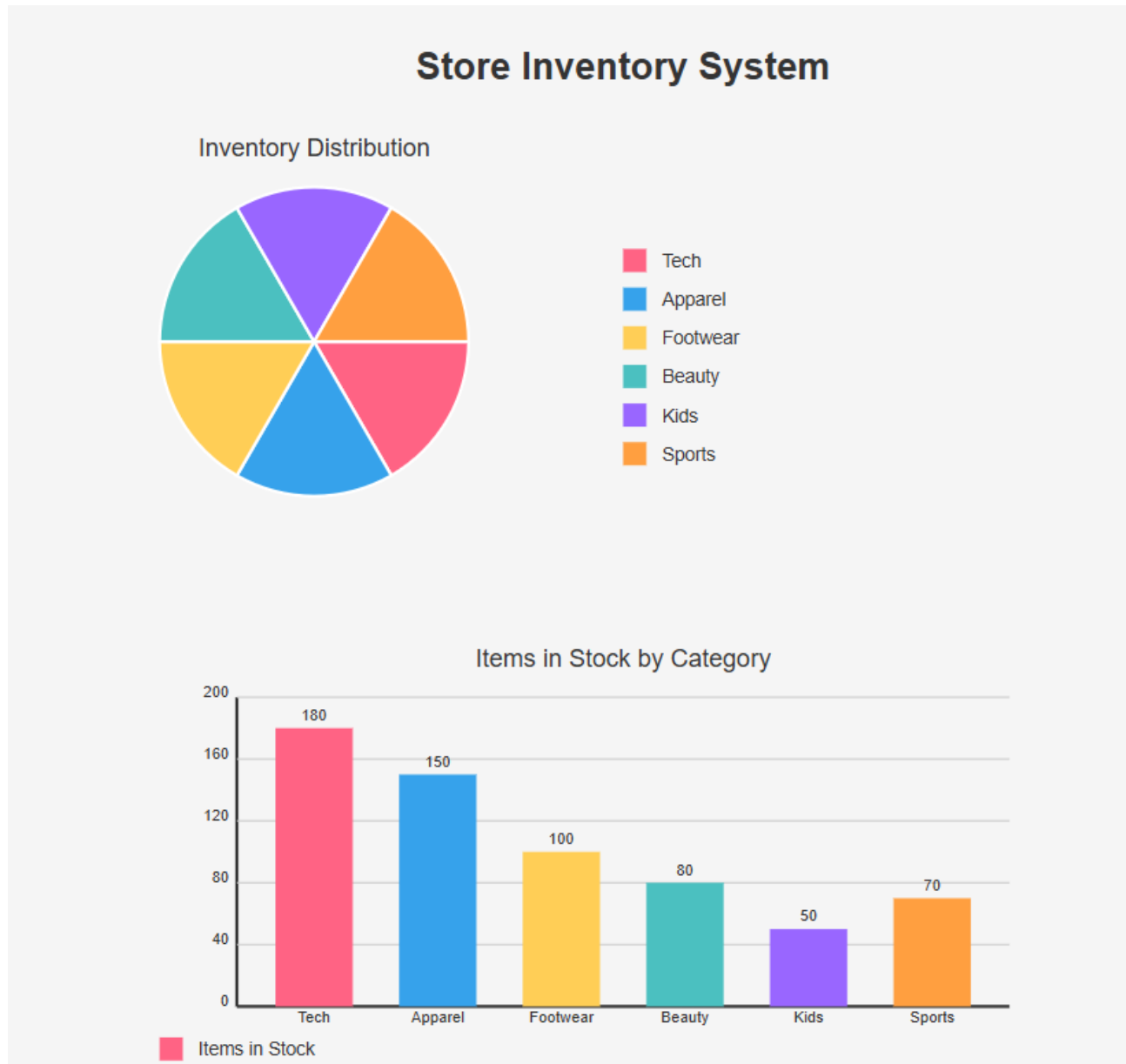
// Creating the Pie Chart

```
const ctxPie = document.getElementById('pieChart').getContext('2d');  
const pieChart = new Chart(ctxPie, {  
  type: 'pie',  
  data: inventoryData,  
  options: {  
    responsive: true,  
    plugins: {  
      title: {  
        display: true,  
        text: 'Inventory Distribution'  
      }  
    }  
  }  
});
```

// Creating the Bar Chart

```
const ctxBar = document.getElementById('barChart').getContext('2d');
const barChart = new Chart(ctxBar, {
  type: 'bar',
  data: inventoryData,
  options: {
    responsive: true,
    plugins: {
      title: {
        display: true,
        text: 'Items in Stock by Category'
      }
    },
    scales: {
      y: {
        beginAtZero: true
      }
    }
  }
});
```

## OUTPUT:



## RESULT:

Data visualizations, such as pie charts and bar graphs, for an inventory management system using JavaScript has been successfully created.