RAJALAKSHMI ENGINEERING COLLEGE

RAJALAKSHMI NAGAR, THANDALAM – 602 105

RAJALAKSHMI
ENGINEERING COLLEGE

CS23A34 USER INTERFACE AND DESIGN LAB
Laboratory Observation NoteBook

Name : SREE VARSSINI K S
Year/Branch/Section : II/CSE/D
Register No. : 230701332
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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.

```html
html
<!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;
      }
      canvas {
         margin: 20px auto;
      }
    </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>
```

```html
    <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.

```javascript
// 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,
        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,
          title: {
             display: true,
             text: 'Items in Stock by Category'
          },
          scales: {
             yAxes: [{
                ticks: {
                   beginAtZero: true
                }
             }]
          }
       }
});
```
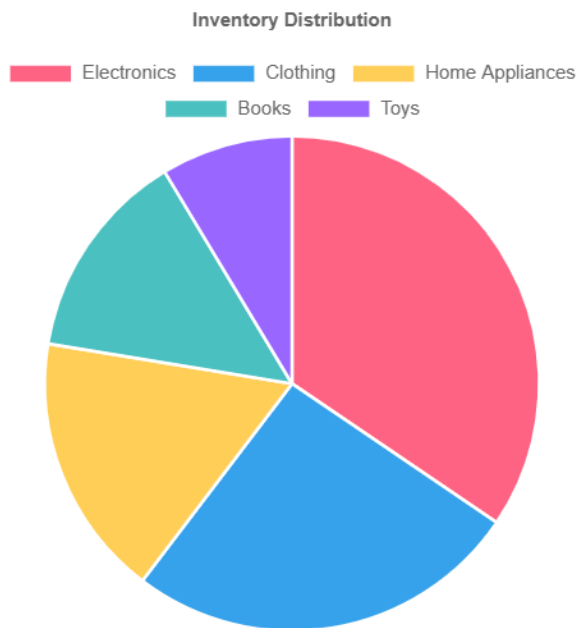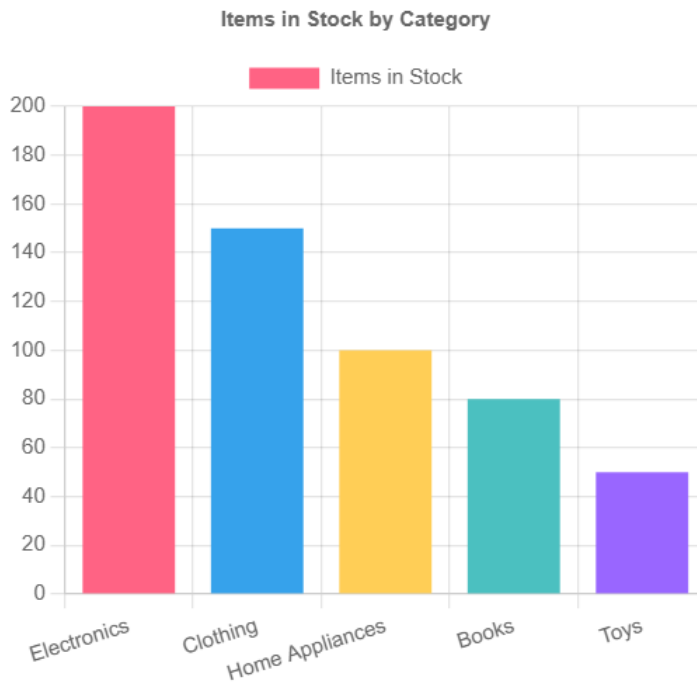
Output :

Items in Stock by Category

Result:

Hence the implementation to create data visualizations, such as pie charts and bar graphs, for an inventory management system using JavaScript has been successfully studied and executed.