

# **RAJALAKSHMI ENGINEERING COLLEGE**

**RAJALAKSHMI NAGAR, THANDALAM – 602 105**



## **RAJALAKSHMI ENGINEERING COLLEGE**

**CS23A34**

**USER INTERFACE AND DESIGN LAB**

**Laboratory Observation NoteBook**

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**Semester : IV**

# Academic Year: 2024-25

Ex. No. : 10

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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;
```

```
  background-color: #f5f7fa;
```

```
}
```

```
h1 {
```

```
  color: #2c3e50;
```

```
  margin-bottom: 40px;
```

```
}
```

```
.charts-container {
```

```
  display: flex;
```

```
  flex-wrap: wrap;
```

```
  justify-content: center;
```

```
  gap: 40px;
```

```
}
```

```
    canvas {  
        background-color: #fff;  
        border-radius: 8px;  
        box-shadow: 0 5px 15px rgba(0,0,0,0.1);  
        padding: 10px;  
    }  
  
</style>  
  
</head>  
  
<body>  
  
    <h1>Inventory Management System</h1>  
  
    <div class="charts-container">  
  
        <canvas id="pieChart" width="400" height="400"></canvas>  
  
        <canvas id="barChart" width="400" height="400"></canvas>  
  
    </div>  
  
    <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.

```
// 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:

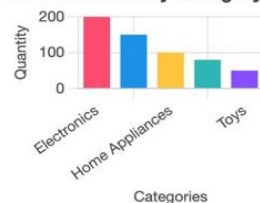
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### Inventory Management System

Inventory Distribution



Items in Stock by Category



**RESULT:**

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