

Exercise 16:

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

```
<!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> <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'
        }
    }
});
```

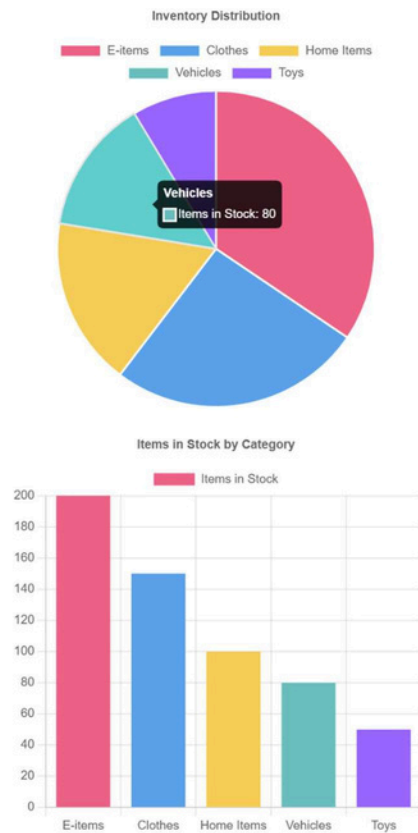
// Creating the Bar Chart

```
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:

Inventory Management System



RESULT:
The output was verified successfully.