

Exercise 10

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
```

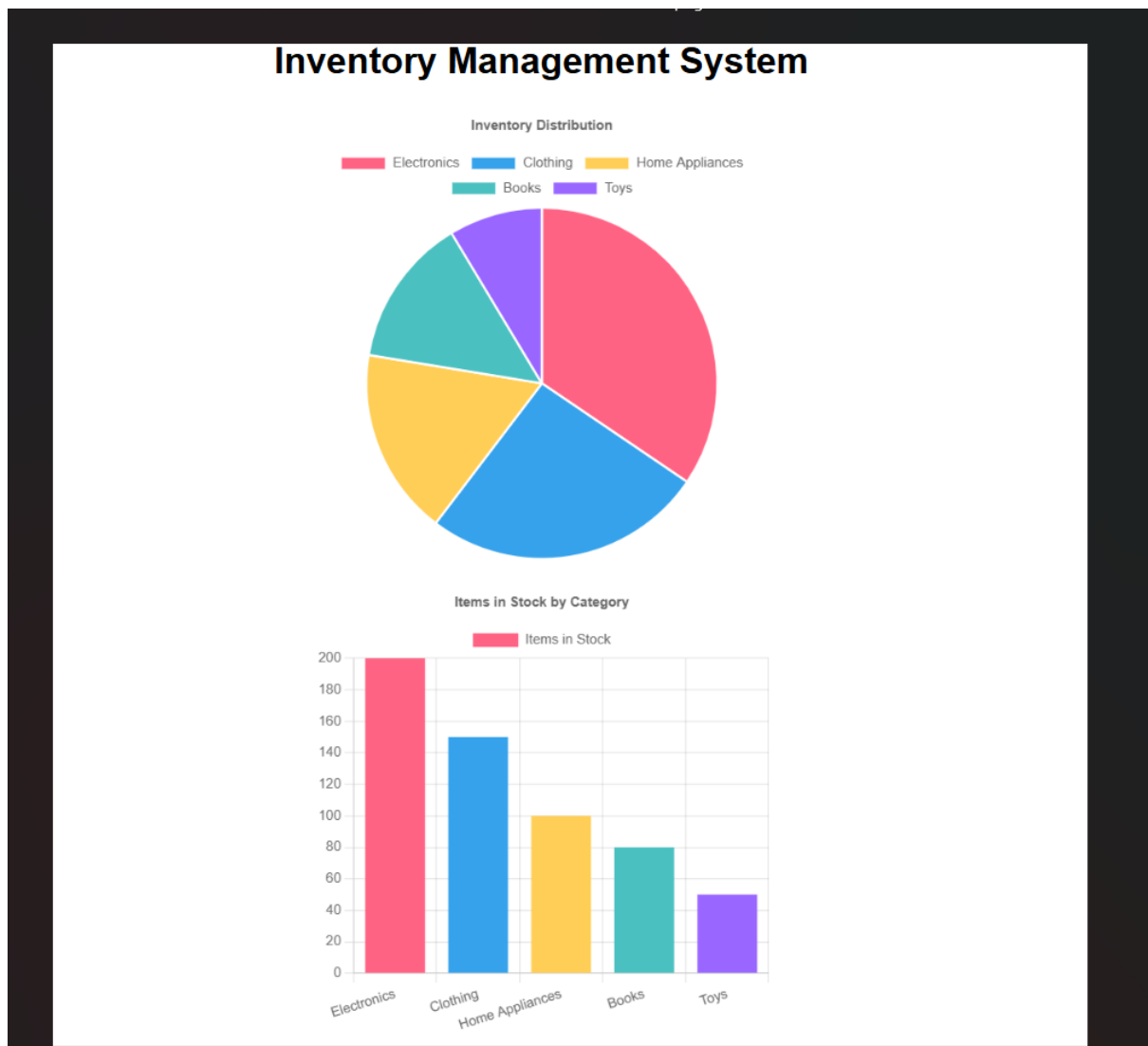
```
const ctxPie = document.getElementById('pieChart').getContext('2d');  
const pieChart = new Chart(ctxPie, {  
  type: 'pie',  
  data: inventoryData,  
  options: {  
    responsive: true,  
    title: {  
      display: true,  
      text: 'Inventory Distribution'  
    }  
  }  
});
```

```
// 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:



Result:

Therefore we created data visualizations, such as pie charts and bar graphs, for an inventory management system using JavaScript.