

Excercise 10

Date:

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 Dashboard</title>

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

  <style>

    body {

      font-family: Arial, sans-serif;

      padding: 40px;

      background-color: #f4f4f4;

      display: flex;

      flex-direction: column;

      align-items: center;

    }

    h2 {
```

```
    margin-bottom: 20px;
  }
  .chart-container {
    width: 600px;
    margin-bottom: 40px;
    background: white;
    padding: 20px;
    border-radius: 12px;
    box-shadow: 0 4px 12px rgba(0, 0, 0, 0.1);
  }
</style>
</head>
<body>

<h2>Inventory Management Dashboard</h2>

<div class="chart-container">

  <canvas id="barChart"></canvas>

</div>

<div class="chart-container">

  <canvas id="pieChart"></canvas>

</div>

<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:

```
// Sample inventory data

const inventoryData = [

  { category: 'Electronics', quantity: 120 },

  { category: 'Clothing', quantity: 80 },

  { category: 'Home & Kitchen', quantity: 60 },

  { category: 'Toys', quantity: 40 },

  { category: 'Books', quantity: 100 },

];


// Extract labels and quantities

const labels = inventoryData.map(item => item.category);

const quantities = inventoryData.map(item => item.quantity);


// ===== Bar Chart =====

const barCtx = document.getElementById('barChart').getContext('2d');

const barChart = new Chart(barCtx, {

  type: 'bar',

  data: {

    labels: labels,

    datasets: [{

      label: 'Stock Quantity',
```

```

    data: quantities,

    backgroundColor: 'rgba(54, 162, 235, 0.6)',

    borderColor: 'rgba(54, 162, 235, 1)',

    borderWidth: 1,

  }}

},

options: {

  responsive: true,

  scales: {

    y: {

      beginAtZero: true,

      title: { display: true, text: 'Quantity' }

    }

  }

}

});

// ===== Pie Chart =====

const pieCtx = document.getElementById('pieChart').getContext('2d');

const pieChart = new Chart(pieCtx, {

  type: 'pie',

  data: {

    labels: labels,

    datasets: [{

      data: quantities,

      backgroundColor: [

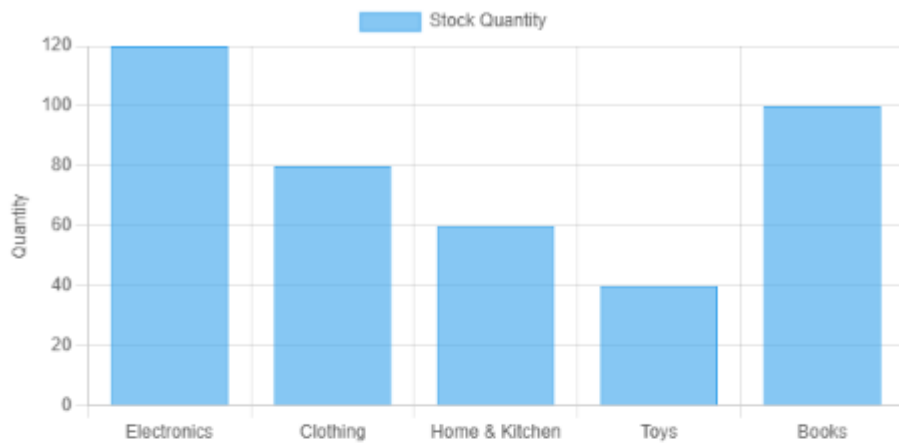
        '#FF6384', '#36A2EB', '#FFCE56', '#4BC0C0', '#9966FF'

```

```
    ]  
  }  
},  
options: {  
  responsive: true,  
  plugins: {  
    legend: {  
      position: 'bottom'  
    }  
  }  
}  
});
```

OUTPUT:

Inventory Management Dashboard



RESULT:

Data visualization (e.g., pie charts, bar graphs) for an inventory management system using javascript has been implemented