UID - 111

EXP : 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.

Code:

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>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <h1>Inventory Management System</h1>
    <div class="chart-container">
        <div>
            <canvas id="pieChart" width="400" height="400"></canvas>
            <p class="chart-title">Inventory Distribution by Category</p>
        </div>
        <div>
            <canvas id="barChart" width="400" height="400"></canvas>
            <p class="chart-title">Inventory Stock Over Time</p>
        </div>
    </div>

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

CSS

```css
/* General styling */
body {
    font-family: Arial, sans-serif;
    text-align: center;
    margin: 50px;
    background-color: #f4f4f9;
}

h1 {
```

```css
    color: #333;
    margin-bottom: 30px;
}

/* Container for both charts */
.chart-container {
    display: flex;
    justify-content: space-around;
    align-items: center;
    flex-wrap: wrap;
    margin-top: 20px;
}

/* Styling for the canvas elements */
canvas {
    border: 2px solid #ccc;
    box-shadow: 0 2px 5px rgba(0, 0, 0, 0.1);
    margin: 10px;
}

/* Chart title styling */
.chart-title {
    font-size: 18px;
    margin-top: 10px;
    color: #333;
}
```

JAVA SCRIPT
```javascript
// Data for Pie Chart - Inventory Distribution by Category
const pieChartData = {
    labels: ['Electronics', 'Clothing', 'Furniture', 'Toys', 'Books'],
    datasets: [{
        data: [300, 50, 100, 80, 150], // Inventory quantities
        backgroundColor: [
            '#E6E6FA', // Lavender
            '#FFB6C1', // Pink
            '#ADD8E6', // Blue
            '#FF6347', // Red
            '#000000' // Black
        ],
        hoverBackgroundColor: [
            '#D8BFD8', // Light Lavender
            '#FF69B4', // Hot Pink
            '#87CEFA', // Light Blue
            '#FF4500', // Orange Red
            '#333333' // Darker Black
        ],
        borderWidth: 1,
    }]
};
```

```javascript
// Data for Bar Chart - Inventory Stock Over Time (Monthly Data)
const barChartData = {
    labels: ['January', 'February', 'March', 'April', 'May'],
    datasets: [{
        label: 'Inventory Stock',
        data: [200, 300, 250, 400, 350], // Stock over months
        backgroundColor: 'rgba(75, 192, 192, 0.2)', // Light green
        borderColor: 'rgba(75, 192, 192, 1)',    // Darker green
        borderWidth: 1
    }]
};

// Configuration for Pie Chart
const pieConfig = {
    type: 'pie',
    data: pieChartData,
    options: {
        responsive: true,
        plugins: {
            legend: {
                position: 'top',
                labels: {
                    font: {
                        size: 14
                    }
                }
            },
            tooltip: {
                callbacks: {
                    label: function(tooltipItem) {
                        const value = tooltipItem.raw;
                        return tooltipItem.label + ': ' + value + ' items';
                    }
                }
            }
        }
    }
};

// Configuration for Bar Chart
const barConfig = {
    type: 'bar',
    data: barChartData,
    options: {
        responsive: true,
        plugins: {
            title: {
                display: true,
                text: 'Monthly Inventory Stock',
```

```
                font: {
                    size: 18
                }
            },
            tooltip: {
                callbacks: {
                    label: function(tooltipItem) {
                        return tooltipItem.dataset.label + ': ' + tooltipItem.raw + ' items';
                    }
                }
            }
        },
        scales: {
            x: {
                beginAtZero: true,
                grid: {
                    display: false
                }
            },
            y: {
                beginAtZero: true,
                grid: {
                    display: true
                },
                ticks: {
                    stepSize: 50
                }
            }
        }
    }
};


// Create the Pie Chart
const pieCtx = document.getElementById('pieChart').getContext('2d');
new Chart(pieCtx, pieConfig);

// Create the Bar Chart
const barCtx = document.getElementById('barChart').getContext('2d');
new Chart(barCtx, barConfig);
```
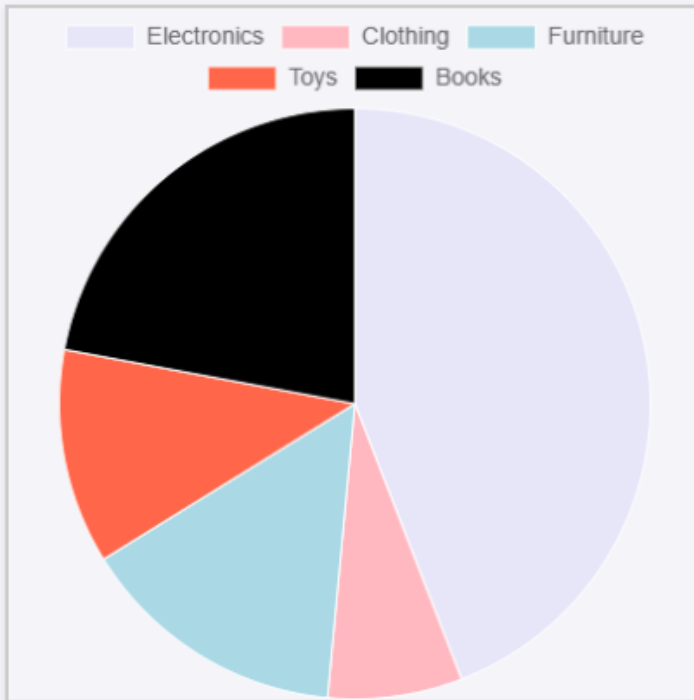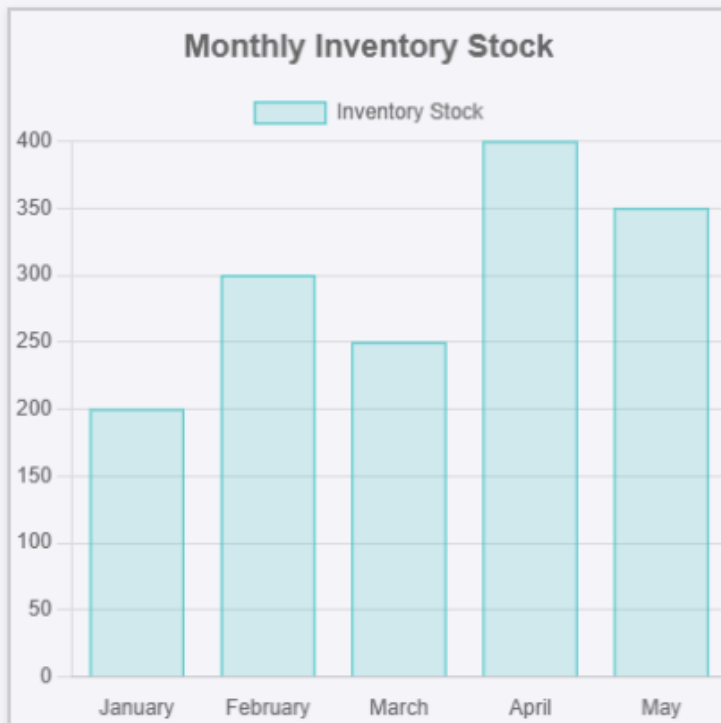
Output:

Inventory Distribution by Category

Inventory Stock Over Time