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**Division: A**

**Mern Batch: 1**

**Q) Write a program that demonstrates the following charts Column Chart, Bar Chart, Line Chart, Area Chart and Stacked Chart.**

**CODE:**

<!DOCTYPE HTML>

<html>

<head>

    <script>

        window.onload = function () {

            //Column chart implementation

            var chart = new CanvasJS.Chart("chartContainer", {

                animationEnabled: true,

                theme: 'dark1',

                title:{

                    text: "Placements Registration"

                },

                axisY: {

                    title: "Appeared",

                    titleFontColor: "red",

                    lineColor: "white",

                    labelFontColor: "white",

                    tickColor: "white"

                },

                axisY2: {

                    title: "Placed",

                    titleFontColor: "#39ff14",

                    lineColor: "#C0504E",

                    labelFontColor: "#C0504E",

                    tickColor: "#C0504E"

                },

                toolTip: {

                    shared: true

                },

                data: [{

                    type: "column",

                    name: "Students Appeared",

                    legendText: "Students Appeared",

                    showInLegend: true,

                    dataPoints:[

                        { label: "2015", y: 610 },

                        { label: "2016", y: 620 },

                        { label: "2017", y: 630 },

                        { label: "2018", y: 640 },

                        { label: "2019", y: 650 },

                        { label: "2020", y: 660 }

                    ]

                },

                {

                    type: "column",

                    name: "Students Placed",

                    legendText: "Students Placed",

                    axisYType: "secondary",

                    showInLegend: true,

                    dataPoints:[

                        { label: "2015", y: 500 },

                        { label: "2016", y: 400 },

                        { label: "2017", y: 595 },

                        { label: "2018", y: 475 },

                        { label: "2019", y: 630 },

                        { label: "2020", y: 650 }

                    ]

                }]

            });

            chart.render();

            //Bar chart implementation

            var chart2 = new CanvasJS.Chart("chartContainer2", {

            animationEnabled: true,

            theme: "dark2",

            title:{

                text:"Language Analaysis in India"

            },

            axisX:{

                interval: 1

            },

            axisY2:{

                interlacedColor: "rgba(1,77,101,.2)",

                gridColor: "rgba(1,77,101,.1)",

                title: "Languages"

            },

            data: [{

                type: "bar",

                name: "languages",

                axisYType: "secondary",

                color: "#39ff14",

                dataPoints: [

                    {y: 15, label:"Assamese"},

                    {y: 25, label:"Kutchhi"},

                    {y: 35, label:"Kannada"},

                    {y: 45, label:"Tamil"},

                    {y: 55, label:"Urdu"},

                    {y: 65, label:"Marathi"},

                    {y: 75, label:"Hindi"},

                    {y: 85, label:"Gujarati"},

                ]

            }]

            });

            chart2.render();

            //Line chart implementation

            var chart3 = new CanvasJS.Chart("chartContainer3", {

            animationEnabled: true,

            theme: "dark2",

            title:{

                text: "Lecture Attendance"

            },

            axisX:{

                valueFormatString: "DD MMM, YYYY",

                crosshair: {

                    enabled: true,

                    snapToDataPoint: true

                }

            },

            axisY: {

                title: "Number of Students Attending lectures",

                includeZero: true,

                crosshair: {

                    enabled: true

                }

            },

            toolTip:{

                shared:true

            },

            legend:{

                cursor:"pointer",

                verticalAlign: "bottom",

                horizontalAlign: "left",

                dockInsidePlotArea: true,

            },

            data: [{

                type: "line",

                showInLegend: true,

                name: "Parttimers",

                markerType: "square",

                xValueFormatString: "DD MMM, YYYY",

                color: "blue",

                dataPoints: [

                    { x: new Date(2021, 1, 1), y: 450 },

                    { x: new Date(2021, 2, 1), y: 300 },

                    { x: new Date(2021, 3, 1), y: 350 },

                    { x: new Date(2021, 4, 1), y: 375 },

                    { x: new Date(2021, 5, 1), y: 500 },

                    { x: new Date(2021, 6, 1), y: 480 },

                    { x: new Date(2021, 7, 1), y: 490 },

                ]

            },

            {

                type: "line",

                showInLegend: true,

                name: "Regulars",

                lineDashType: "dash",

                color: "yellow",

                dataPoints: [

                    { x: new Date(2021, 1, 1), y: 300 },

                    { x: new Date(2021, 2, 1), y: 330 },

                    { x: new Date(2021, 3, 1), y: 400 },

                    { x: new Date(2021, 4, 1), y: 350 },

                    { x: new Date(2021, 5, 1), y: 390 },

                    { x: new Date(2021, 6, 1), y: 410 },

                    { x: new Date(2021, 7, 1), y: 200 },

                ]

            }]

        });

        chart3.render();

        //Area chart implementation

        var chart4 = new CanvasJS.Chart("chartContainer4", {

            animationEnabled: true,

            exportEnabled: true,

            theme: "dark2",

            title:{

                text: "Temperature in Mumbai - July 2021"

            },

            axisY: {

                title: "Temperature (°C)",

                suffix: " °C"

            },

            axisX: {

                valueFormatString: "DD MMMM, YYYY"

            },

            data: [

            {

                type: "rangeArea",

                xValueFormatString: "DD MMMM",

                yValueFormatString: "#0.## °C",

                toolTipContent: " <span style=\"color:#4F81BC\">{x}</span><br><b>Min:</b> {y[0]}<br><b>Max:</b> {y[1]}",

                color: "green",

                dataPoints: [

                    { x: new Date(2021,06,20), y:[20, 36] },

                    { x: new Date(2021,06,21), y:[19, 30] },

                    { x: new Date(2021,06,22), y:[23, 33] },

                    { x: new Date(2021,06,23), y:[22, 34] },

                    { x: new Date(2021,06,24), y:[27, 34] },

                    { x: new Date(2021,06,25), y:[24, 29] },

                    { x: new Date(2021,06,26), y:[26, 38] },

                    { x: new Date(2021,06,27), y:[23, 32] },

                    { x: new Date(2021,06,28), y:[20, 40] },

                    { x: new Date(2021,06,29), y:[27, 38] },

                    { x: new Date(2021,06,30), y:[22, 25] }

                ]

            }]

        });

        chart4.render();

        //Stacked chart implementation

        var chart5=new CanvasJS.Chart("chartContainer5",{

            animationEnabled: true,

            theme: "dark1",

            title:{

                text: "Placement Statistics in XYZ college"

            },

            axisX: {

                interval: 1,

                intervalType: "year",

                valueFormatString: "YYYY"

            },

            axisY: {

                suffix: "%"

            },

            toolTip: {

                shared: true

            },

            legend: {

                reversed: true,

                verticalAlign: "center",

                horizontalAlign: "right"

            },

            data: [{

                type: "stackedColumn100",

                name: "Computers",

                showInLegend: true,

                xValueFormatString: "YYYY",

                yValueFormatString: "#,##0\"%\"",

                dataPoints: [

                    { x: new Date(2015,0), y: 50 },

                    { x: new Date(2016,0), y: 51 },

                    { x: new Date(2017,0), y: 52 },

                    { x: new Date(2018,0), y: 53 },

                    { x: new Date(2019,0), y: 54 },

                    { x: new Date(2020,0), y: 55 },

                    { x: new Date(2021,0), y: 56 }

                ]

            },

            {

                type: "stackedColumn100",

                name: "IT",

                showInLegend: true,

                xValueFormatString: "YYYY",

                yValueFormatString: "#,##0\"%\"",

                dataPoints: [

                    { x: new Date(2015,0), y: 20 },

                    { x: new Date(2016,0), y: 18 },

                    { x: new Date(2017,0), y: 19 },

                    { x: new Date(2018,0), y: 17 },

                    { x: new Date(2019,0), y: 21 },

                    { x: new Date(2020,0), y: 20 },

                    { x: new Date(2021,0), y: 20 }

                ]

            },

            {

                type: "stackedColumn100",

                name: "Mechanical",

                showInLegend: true,

                xValueFormatString: "YYYY",

                yValueFormatString: "#,##0\"%\"",

                dataPoints: [

                    { x: new Date(2015,0), y: 10 },

                    { x: new Date(2016,0), y: 11 },

                    { x: new Date(2017,0), y: 9 },

                    { x: new Date(2018,0), y: 12 },

                    { x: new Date(2019,0), y: 11 },

                    { x: new Date(2020,0), y: 13 },

                    { x: new Date(2021,0), y: 10 }

                ]

            },

            {

                type: "stackedColumn100",

                name: "ETRX",

                showInLegend: true,

                xValueFormatString: "YYYY",

                yValueFormatString: "#,##0\"%\"",

                dataPoints: [

                    { x: new Date(2015,0), y: 5 },

                    { x: new Date(2016,0), y: 5 },

                    { x: new Date(2017,0), y: 5 },

                    { x: new Date(2018,0), y: 6 },

                    { x: new Date(2019,0), y: 7 },

                    { x: new Date(2020,0), y: 8 },

                    { x: new Date(2021,0), y: 10 }

                ]

            },

            {

                type: "stackedColumn100",

                name: "EXTC",

                showInLegend: true,

                xValueFormatString: "YYYY",

                yValueFormatString: "#,##0\"%\"",

                dataPoints: [

                    { x: new Date(2015,0), y: 4 },

                    { x: new Date(2016,0), y: 3 },

                    { x: new Date(2017,0), y: 5 },

                    { x: new Date(2018,0), y: 2 },

                    { x: new Date(2019,0), y: 8 },

                    { x: new Date(2020,0), y: 6 },

                    { x: new Date(2021,0), y: 10 }

                ]

            }

        ]

        });

        chart5.render();

        }

    </script>

</head>

<body>

    <h1>Column Chart: </h1>

    <div id="chartContainer" style="height: 370px; width: 100%;"></div>

    <h1>Bar Chart: </h1>

    <div id="chartContainer2" style="height: 370px; width: 100%;"></div>

    <h1>Line Chart: </h1>

    <div id="chartContainer3" style="height: 370px; width: 100%"></div>

    <h1>Area Chart: </h1>

    <div id="chartContainer4" style="height: 370px; width: 100%"></div>

    <h1>Stacked Chart: </h1>

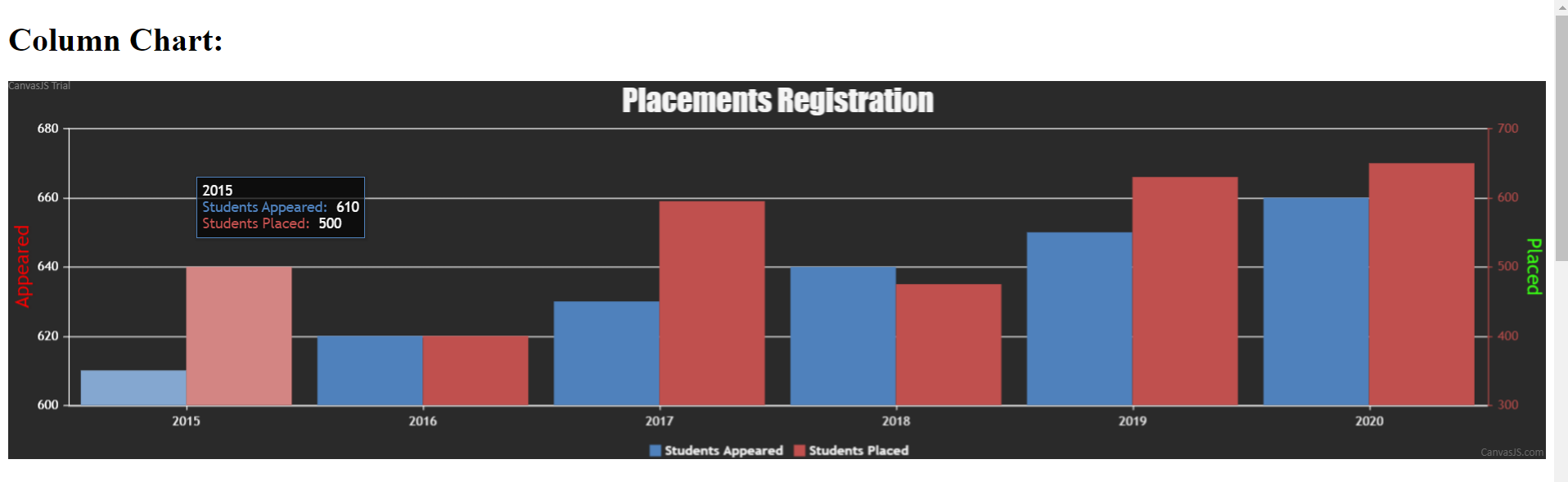
    <div id="chartContainer5" style="height: 370px; width: 100%"></div>

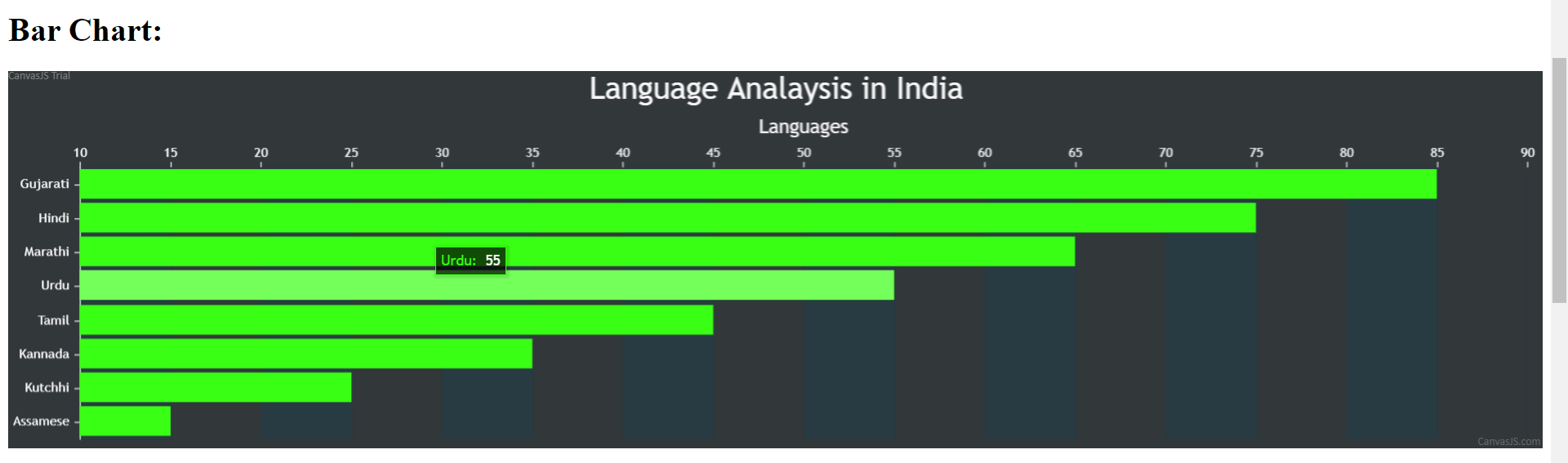
    <script src="https://canvasjs.com/assets/script/canvasjs.min.js"></script>

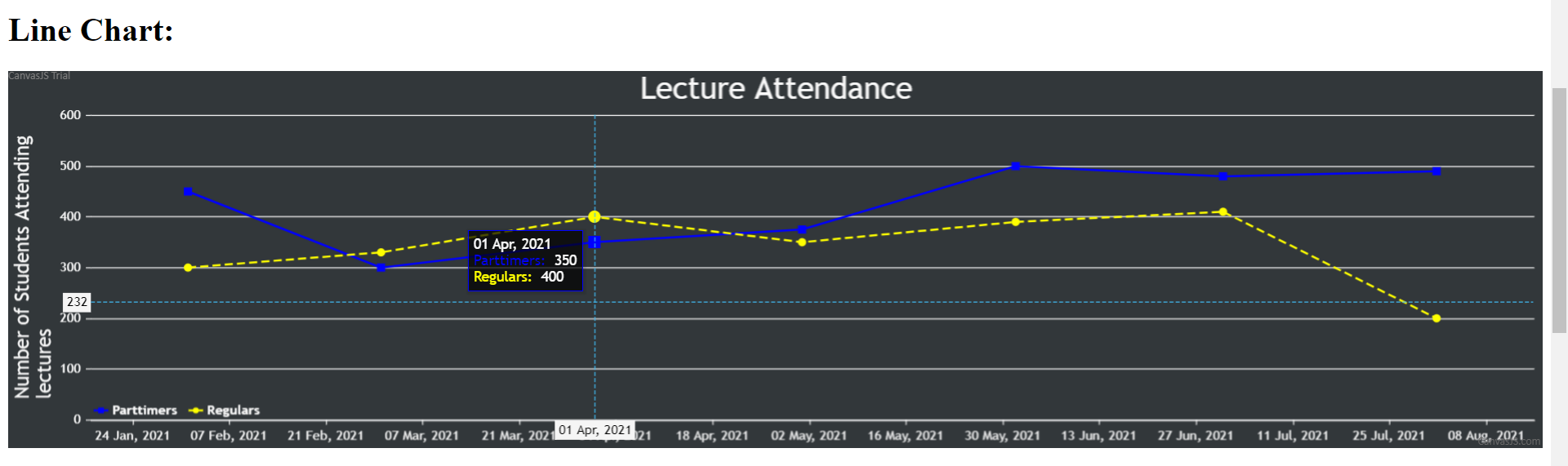
</body>

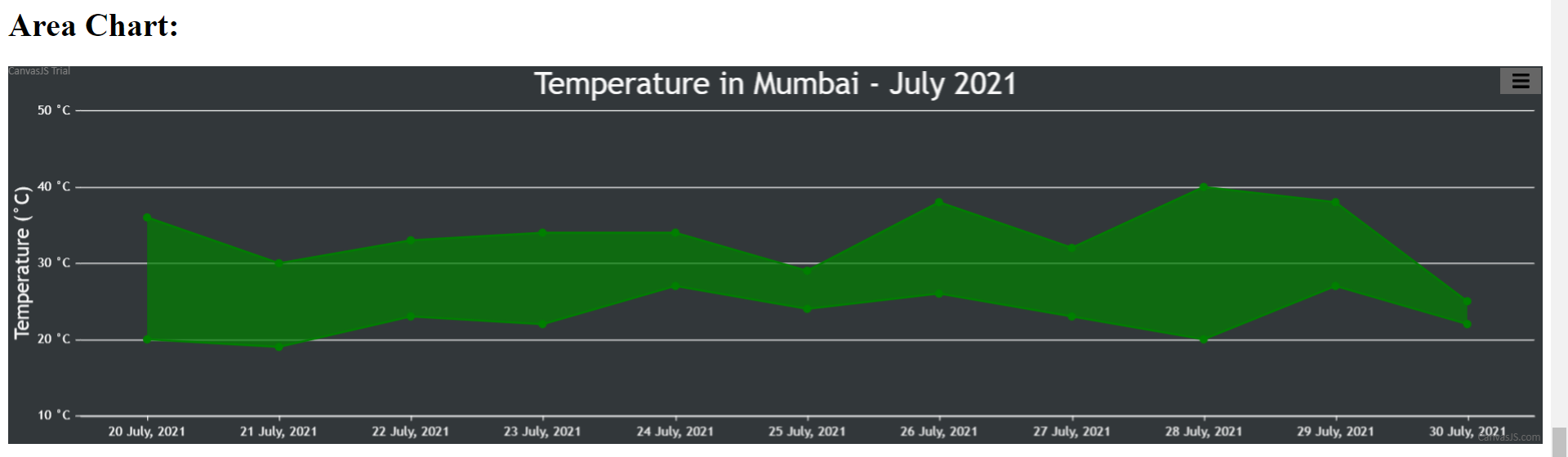
</html>

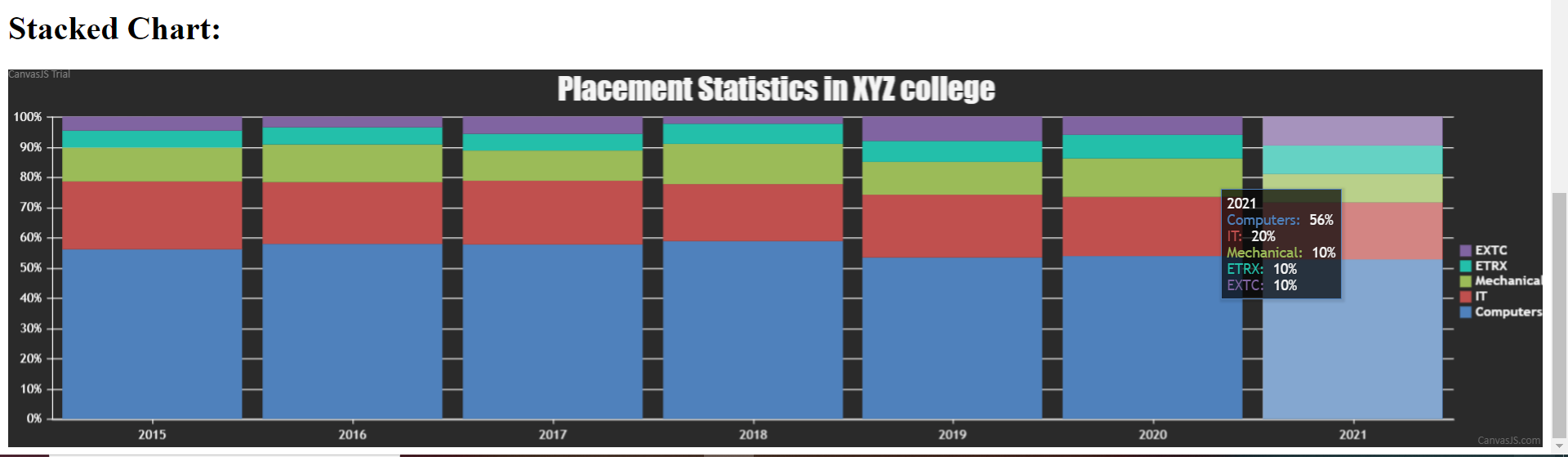
**OUTPUT:**

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