Week 7\Lab 7_3\Lab 7_3.js

```
function init() {
    var w = 300; // SVG width
    var h = 300; // SVG height

    // Sample dataset: each object represents a group with apples, oranges, grapes
    var dataset = [
      {apples: 5, oranges: 10, grapes: 22},
      {apples: 4, oranges: 12, grapes: 28},
      {apples: 2, oranges: 19, grapes: 32},
      {apples: 7, oranges: 23, grapes: 35},
      {apples: 23, oranges: 17, grapes: 43}
    ];

    // Create a stack generator for the specified keys
    var stack = d3.stack()
                  .keys(["apples", "oranges", "grapes"]);

    // Apply the stack generator to the dataset
    var series = stack(dataset);

    // Create the SVG container
    var svg = d3.select("#chart")
                .append("svg")
                .attr("width", w)
                .attr("height", h);

    // Create a band scale for the x-axis (one band per group)
    var xScale = d3.scaleBand()
                   .domain(dataset.map(function(d, i) {
                     return i;
                   }))
                   .range([0, w])
                   .padding(0.1);

    // Create a linear scale for the y-axis (stacked total)
    var yScale = d3.scaleLinear()
                   .domain([0, d3.max(dataset, function(d){
                     return d.apples + d.oranges + d.grapes;
                   })])
                   .range([h, 0]);

    // Ordinal color scale for each stack series
    var color = d3.scaleOrdinal(d3.schemeCategory10);

    // Create a group for each series (apples, oranges, grapes)
    var group = svg.selectAll("g")
                   .data(series)
                   .enter()
```

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                    .append("g")
                    .style("fill", function(d, i){
                      return color(i); // Assign color to each group
                    });

    // Draw a rectangle for each segment in the stack
    var rects = group.selectAll("rect")
                    .data(function(d){ return d; }) // d is an array of [y0, y1] for each
group
                    .enter()
                    .append("rect")
                    .attr("x", function(d, i) {
                      return xScale(i); // Position by group index
                    })
                    .attr("y", function(d, i){
                      return yScale(d[1]); // Top of the segment
                    })
                    .attr("height", function(d) {
                      return yScale(d[0]) - yScale(d[1]); // Height of the segment
                    })
                    .attr("width", xScale.bandwidth()); // Width of each bar
}

window.onload = init;

```