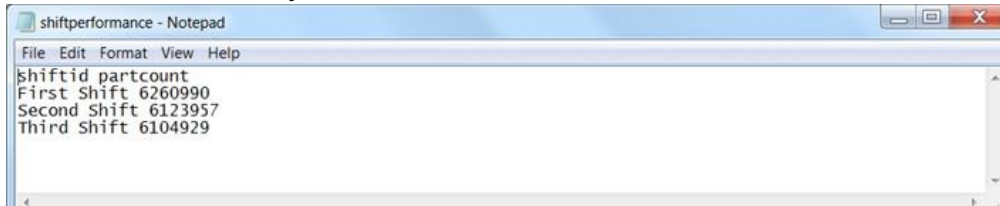# ASSIGNMENT 4
- Shaurya Singh Srinet

-

Task 1: Visualizing the output (total part count) by shift for the manufacturing plant's raw data

Steps:

1. Create the summary file:

2. Download the minimalist pie chart D3-shape sample HTML template document.
3. Open the document in any HTML editor.
4. Modify the HTML code like the following:

```
<!DOCTYPE html>
 <meta charset="utf-8">

<!-add the heading -->

<h1><center>Output by Shift</center></h1>
 <canvas width="960" height="500"></canvas>
 <!-local reference to D3 libraries --->
 <script src="D3.v4.0.0-alpha.4.min.js"></script>
 <script>
```

```javascript
var canvas = document.querySelector("canvas"),
    context = canvas.getContext("2d");
var width =
  canvas.width, height =
  canvas.height,
  radius = Math.min(width, height) / 2;
var colors = ["#ff8c00", "#8a89a6", "#d0743c", "#
6b486b","#a05d56",
 "#d0743c", "#ff8c00"];
var arc = D3.arc()
  .outerRadius(radius - 10)
  .innerRadius(0)
  .context(context);
var labelArc =
D3.arc()
  .outerRadius(radius - 40)
  .innerRadius(radius - 40)
  .context(context);
var pie = D3.pie()
  .sort(null)
  .value(function(d) { return d.partcount; });
context.translate(width / 2, height / 2);

<-- read the summary file-->

D3.requestTsv("data.tsv",

function(d)
{
 d.partcount = +d.partcount;
 return d;
}, function(error, data)
{
 if (error) throw
 error;var arcs =
 pie(data);
 arcs.forEach(function(d, i)
 {
     context.beginPath();
     arc(d);
     context.fillStyle =
```
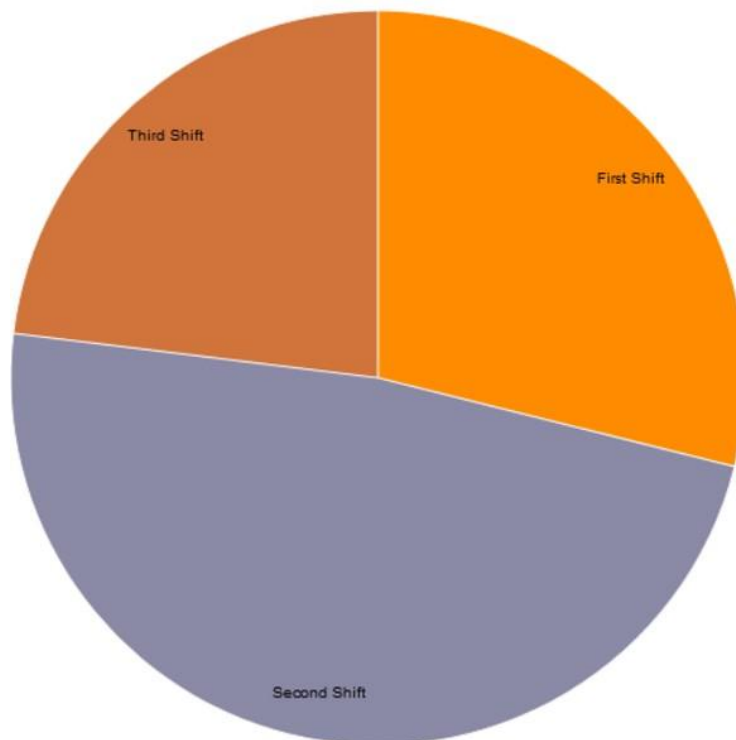
```
            colors[i]; context.fill();
    });
    context.beginPath();
    arcs.forEach(arc);
    context.strokeStyle = "#fff";
    context.stroke();
    context.textAlign = "center";
    context.textBaseline = "middle";
    context.fillStyle = "#000";
    arcs.forEach(function(d)
    {
    var c = labelArc.centroid(d);
    context.fillText(d.data.shiftid, c[0], c[1]);
    });
    });
    </script>
```

5. Save the updated HTML document, and view it using any web browser
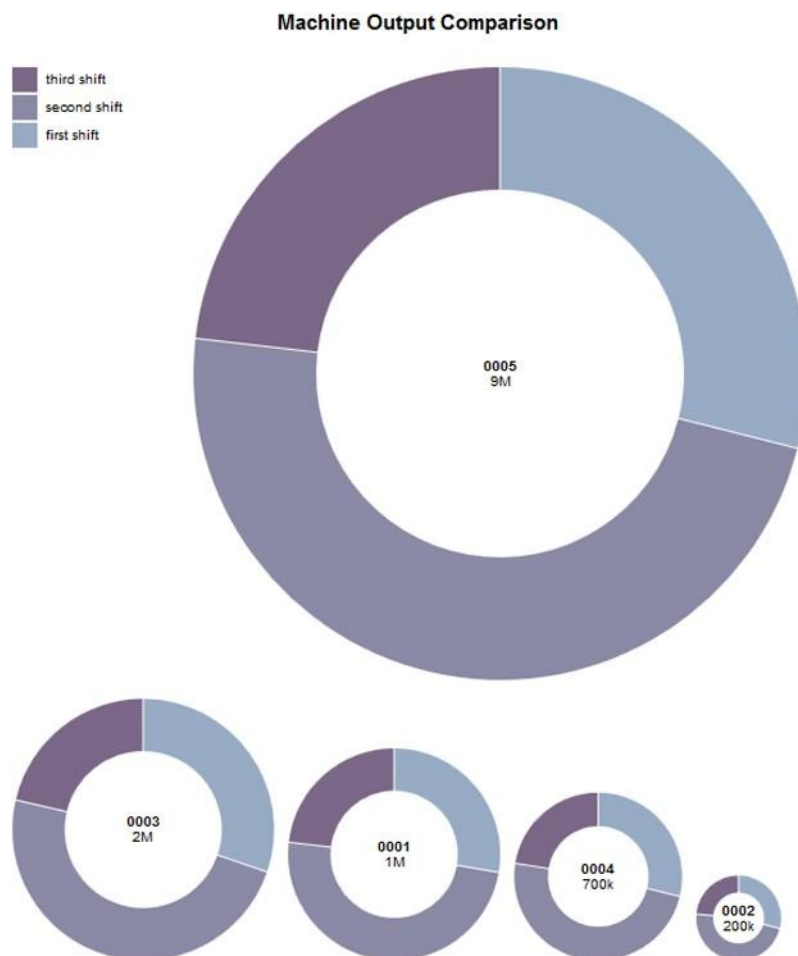6. Visualization:

Output by Shift

Task 2: Visualization displaying each machine's part count (its output) broken out by shift

Steps:

1. Create a summary file:

```
machine,first shift,second shift, third shift
0001,310504,552339,259034,450818,1231572
0002,52083,85640,42153,74257,198724
0003,515910,828669,362642,601943,1804762
0004,202070,343207,157204,264160,754420
0005,2704659,4499890,2159981,3853788,10604510
```

2. Download the sample template and save it as an HTML document.
3. Change the src= reference (to a local reference for the D3 libraries).
4. Change the name of the data file.
5. Add a heading.
6. Visualization:

Task 3: Visualisation update (transition) for each shift.

Steps:
1. Download the HTML template.
2. Modify the HTML code like the following:

```
<center><H1>Parts by Shift</H1></center>

<form>
    <label><input type="radio" name="dataset" value="first"
checked>First Shift </label>
    <label><input type="radio" name="dataset"
value="second">Second Shift </label>
    <label><input type="radio" name="dataset"
value="third">Third Shift </label>
</form>
function
type(d)
  {
    d.first = +d.first || 0;
    d.second = +d.second ||
    0;d.third = +d.third || 0;
    return d;
  }
```

3. Create the summary file:

```
first    second   third
53245    53245    53245
28479    8479     38400
19697    28479    200
24037    1920
40245    90000    1200
```

4. Save the updated HTML document, and view it using any web browser
5. Visualization:

Parts by Shift

Parts by Shift

Parts by Shift