12.1.4   Create a Pie Chart

Let's summarize what we've done so far:

1. Create a new line chart in Plotly with a single line of code.

2. Create a bar chart.

3. Add layout options, such as title and axis labels.

Roza's joy is uncontained. She can create a beautiful chart in JavaScript with only a few lines of code. She would like to learn to create other types of charts as well. Let's help her do that.

Since the bar dataset is the percentage of total sales comprised by each drink, Roza believes that a pie chart may be helpful in providing an instant view of the relative popularity of each drink. So she creates a pie chart of the bar data:

```javascript
var trace = {
  x: ["nonalcoholic beer", "nonalcoholic wine", "nonalcoholic martini", "non
      "ice tea", "nonalcoholic rum & coke", "nonalcoholic mai tai", "nonalcoh
  y: [22.7, 17.1, 9.9, 8.7, 7.2, 6.1, 6.0, 4.6],
  type: 'pie'
};
var data = [trace];
var layout = {
  title: "'Pie' Chart",
};
Plotly.newPlot("plotArea", data, layout);
```
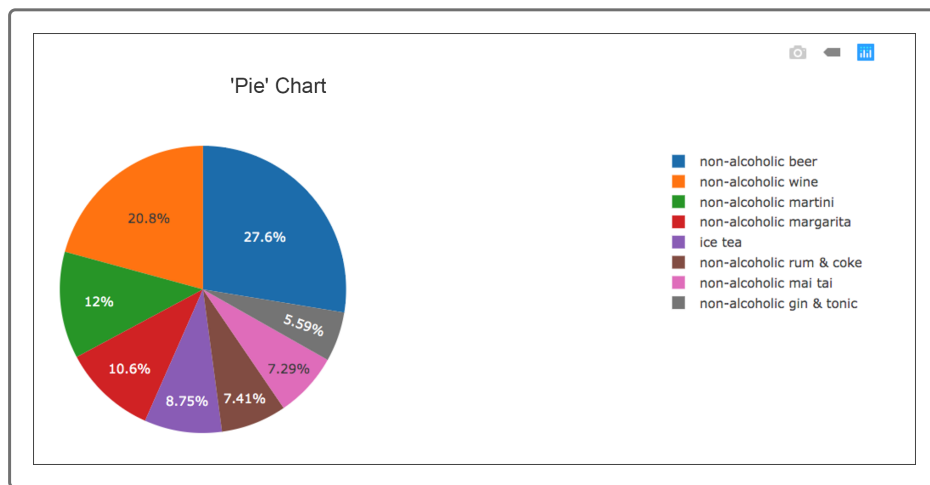
But it doesn't render.

Roza modifies her code:

```
var trace = {
 labels: ["nonalcoholic beer", "nonalcoholic wine", "nonalcoholic martini",
 "ice tea", "nonalcoholic rum & coke", "nonalcoholic mai tai", "nonalcoholic
 values: [22.7, 17.1, 9.9, 8.7, 7.2, 6.1, 6.0, 4.6],
 type: 'pie'
};
var data = [trace];
var layout = {
 title: "'Pie' Chart",
};
Plotly.newPlot("plotArea", data, layout);
```

What did she do differently? In `trace`, the keys for the data are now
assigned appropriately. Instead of `x` and `y`, they are `labels` and `values`.
This is what the pie chart looks like:

She now has a clearer view of the relative contribution of each drink to total sales. Encouraged and empowered, Roza decides to consult the `Plotly.js` documentation to see what other visualizations are possible with Plotly. Fortunately, Plotly is a well-documented library, and the documentation is easy to read.

SKILL DRILL

Use the **Plotly documentation (https://plot.ly/javascript/basic-charts/)** to create a scatter plot from scratch. Be sure to label your axes.

Roza now has a good grasp of creating basic charts with Plotly. This will help her decide which type of chart to use when visualizing data of belly button critters. For example, which type of chart might she use if she were to display the top ten most commonly found bacteria in a person's belly button?