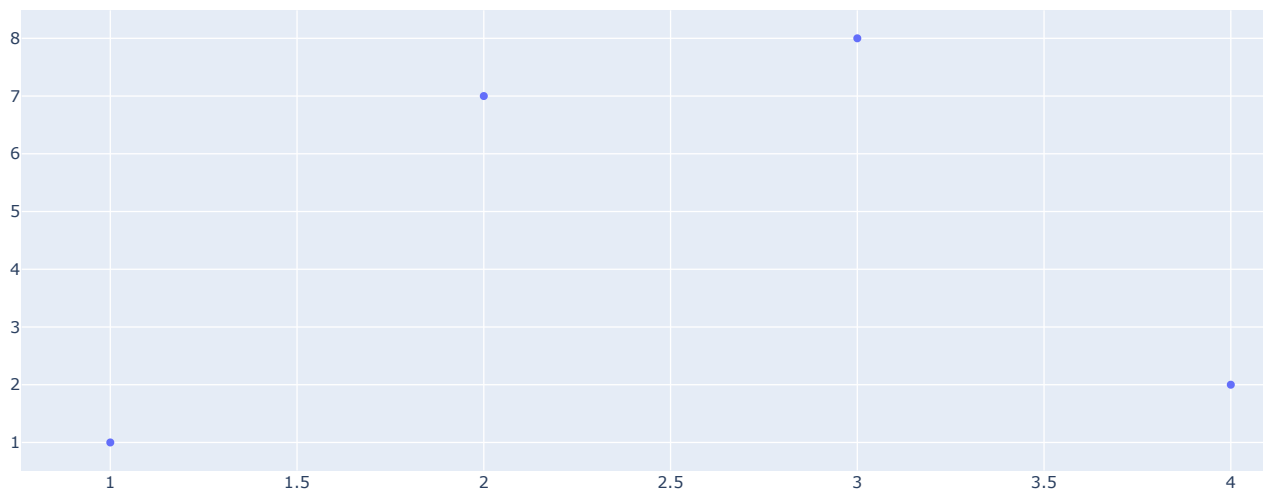```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

import warnings
warnings.filterwarnings("ignore")
```
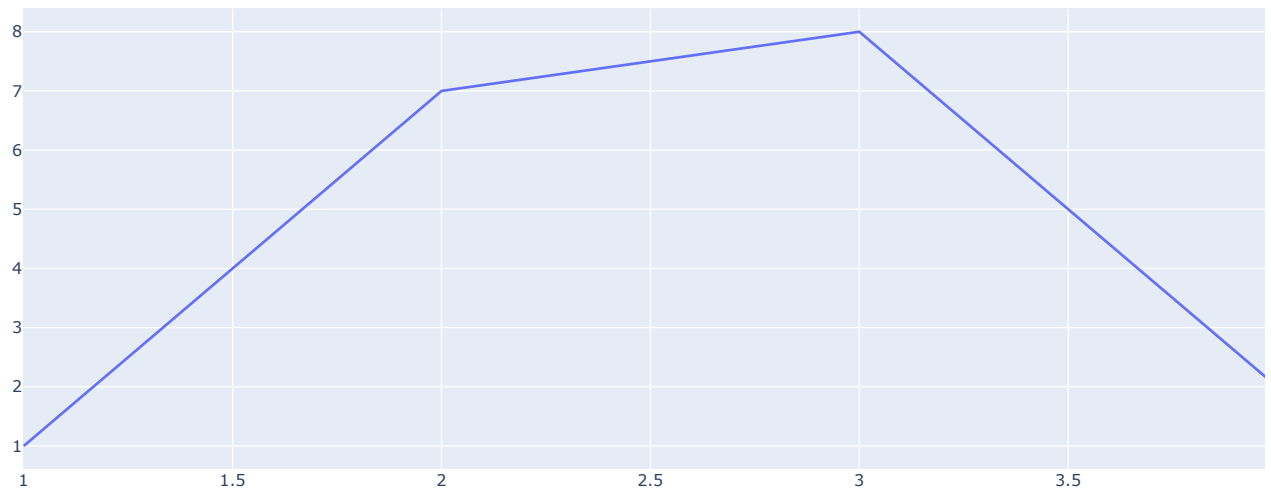
```
#graph_object
#express
import plotly.graph_objects as go
import plotly.express as px
```

```
#using graph object
#add_trace>>adidng data
#scatter plot
fig = go.Figure()
fig.add_trace(go.Scatter(x = [1, 2, 3, 4, 5], y = [1, 7, 8, 2, 6], mode = 'markers'))
```



```
#line chart
fig = go.Figure()
fig.add_trace(go.Scatter(x = [1, 2, 3, 4, 5], y = [1, 7, 8, 2, 6], mode = 'lines'))
```
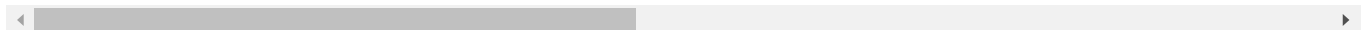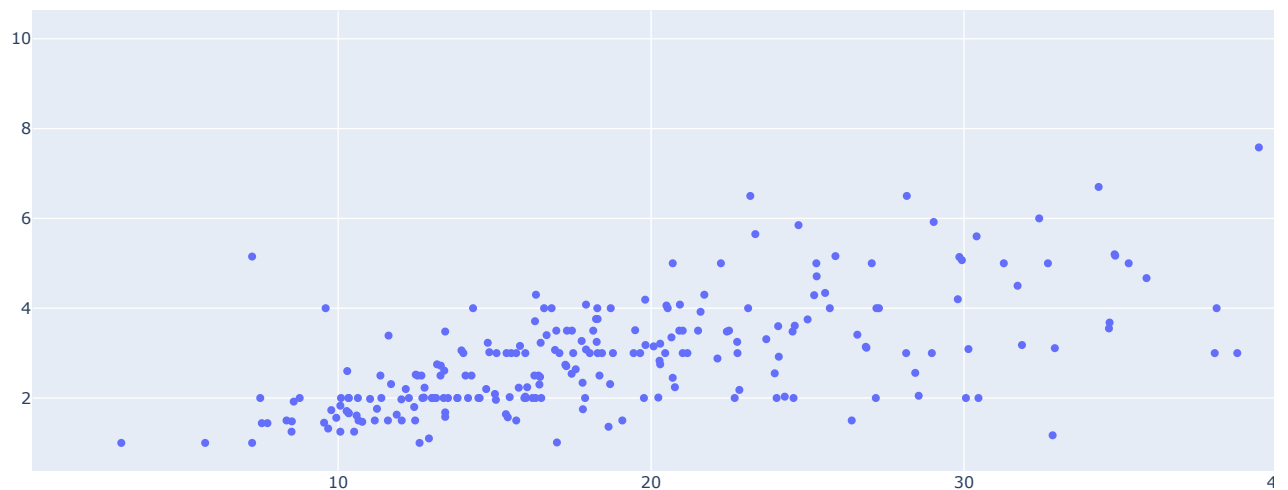
```
tips = sns.load_dataset('tips')
tips
```

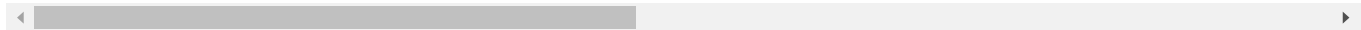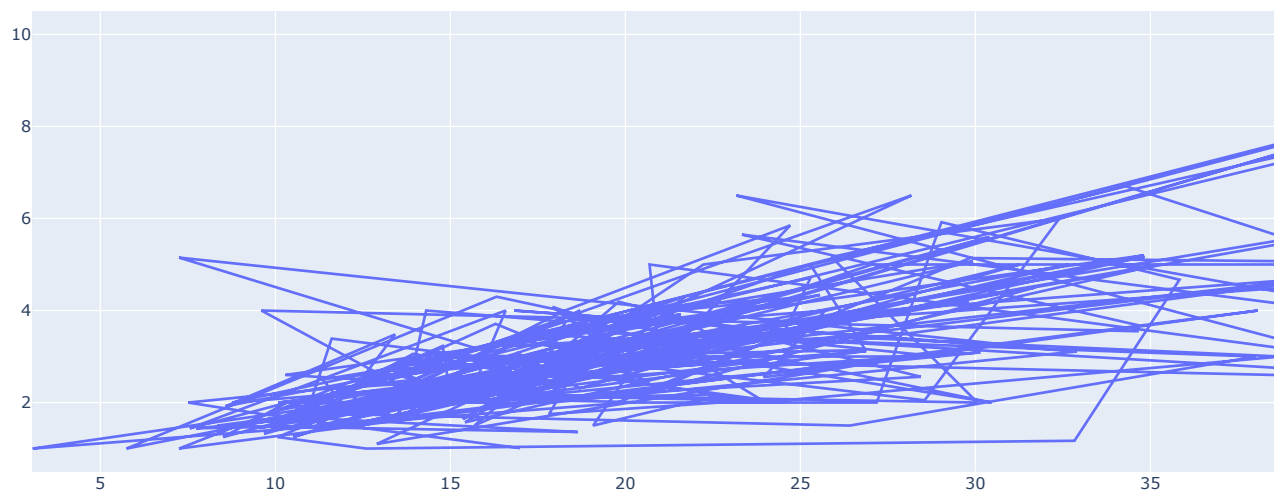|	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4
...	...	...	...	...	...	...	...
239	29.03	5.92	Male	No	Sat	Dinner	3
240	27.18	2.00	Female	Yes	Sat	Dinner	2
241	22.67	2.00	Male	Yes	Sat	Dinner	2
242	17.82	1.75	Male	No	Sat	Dinner	2
243	18.78	3.00	Female	No	Thur	Dinner	2

244 rows × 7 columns

Next steps: Generate code with `tips`   View recommended plots   New interactive sheet
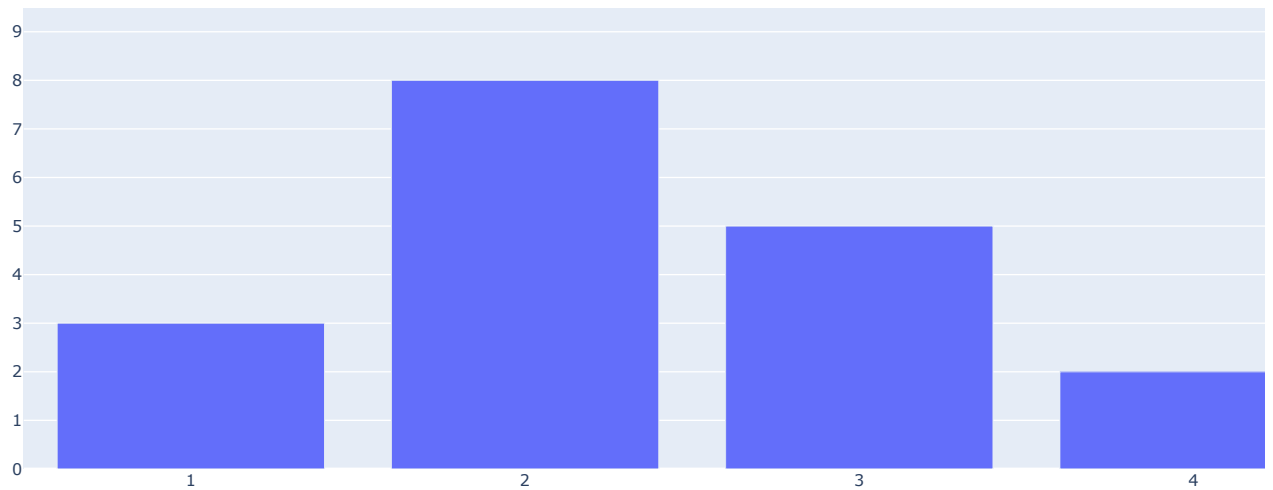
```
fig = go.Figure()
fig.add_trace(go.Scatter(x = tips.total_bill, y = tips.tip, mode = 'markers'))
```
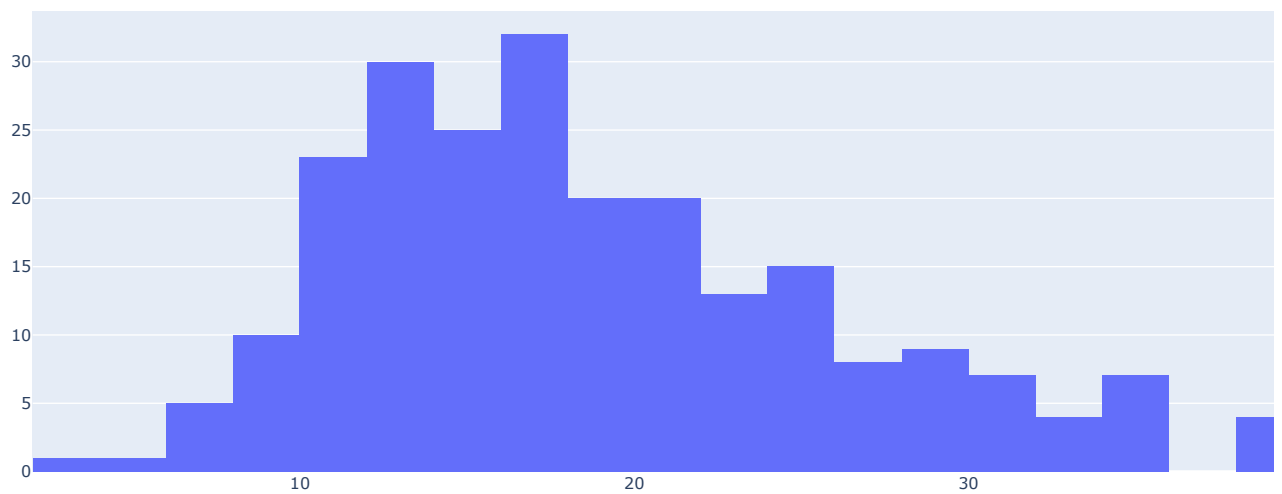
```
fig = go.Figure()
fig.add_trace(go.Scatter(x = tips.total_bill, y = tips.tip, mode = 'lines'))
```
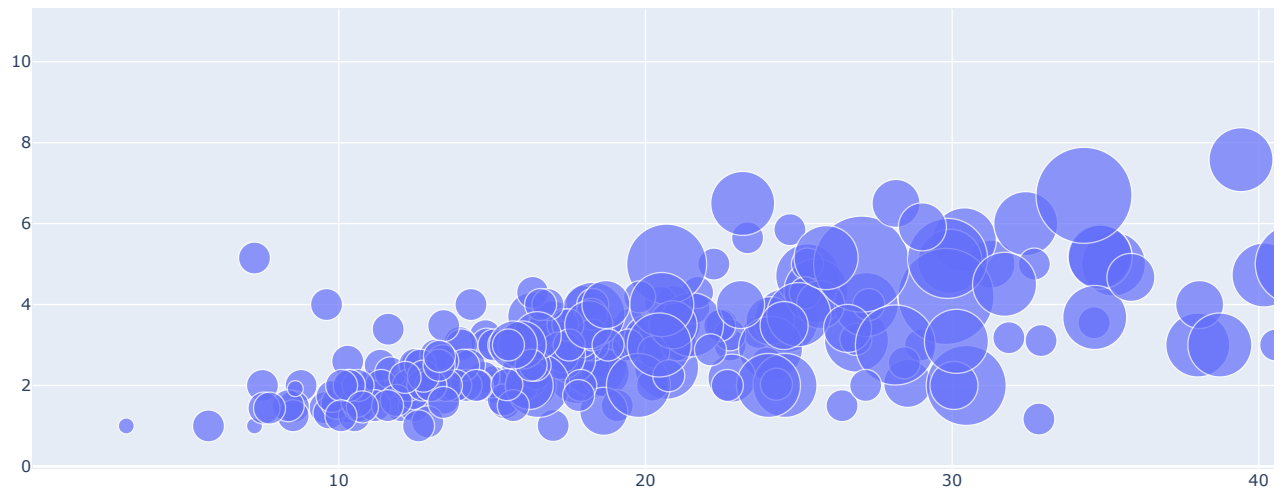


```
fig = go.Figure()
fig.add_trace(go.Bar(x = [1, 2, 3, 4, 5], y = [3, 8, 5, 2, 9]))
```
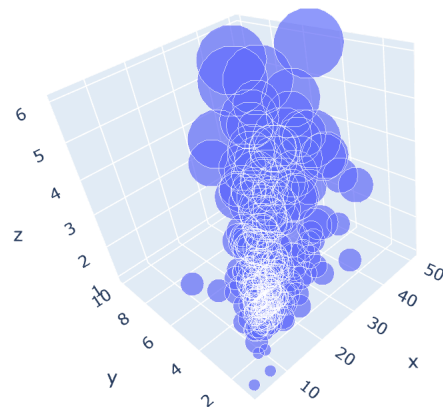
```
fig = go.Figure()
fig.add_trace(go.Histogram(x = tips['total_bill']))
```
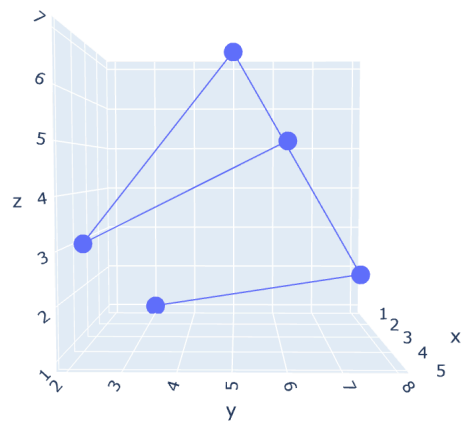


```
fig = go.Figure()
fig.add_trace(go.Scatter(x = tips.total_bill, y = tips.tip, mode = 'markers', marker_size = 12*tips['size']))
```
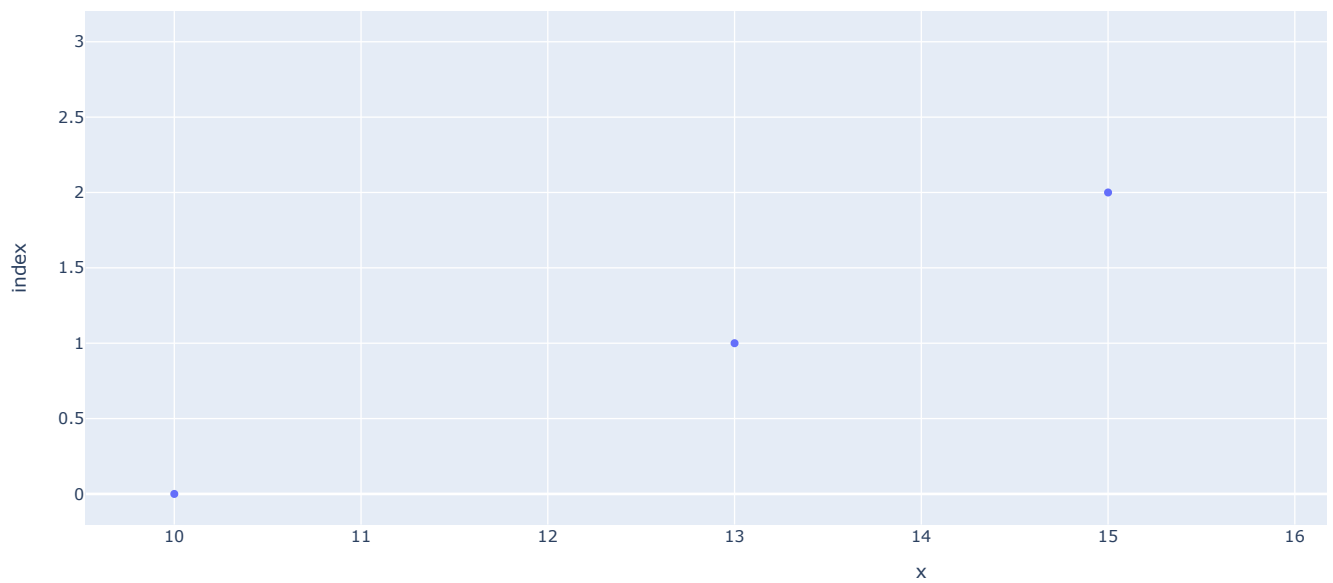
```
fig = go.Figure()
fig.add_trace(go.Scatter3d(x = tips.total_bill, y = tips.tip, mode = 'markers', marker_size = 10*tips['size'], z = tips['size']))
```
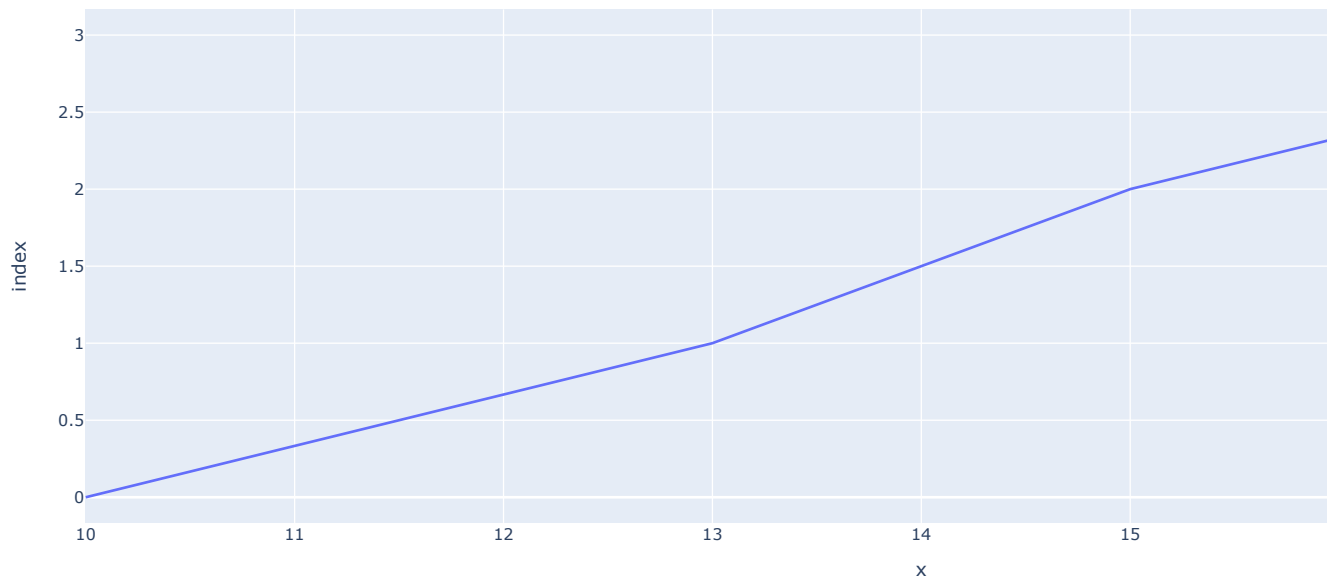


```
fig = go.Figure()
fig.add_trace(go.Scatter3d(x = [1, 2, 3, 4, 5], y = [3, 8, 5, 2, 6], z = [1, 2, 7, 3, 5]))
```
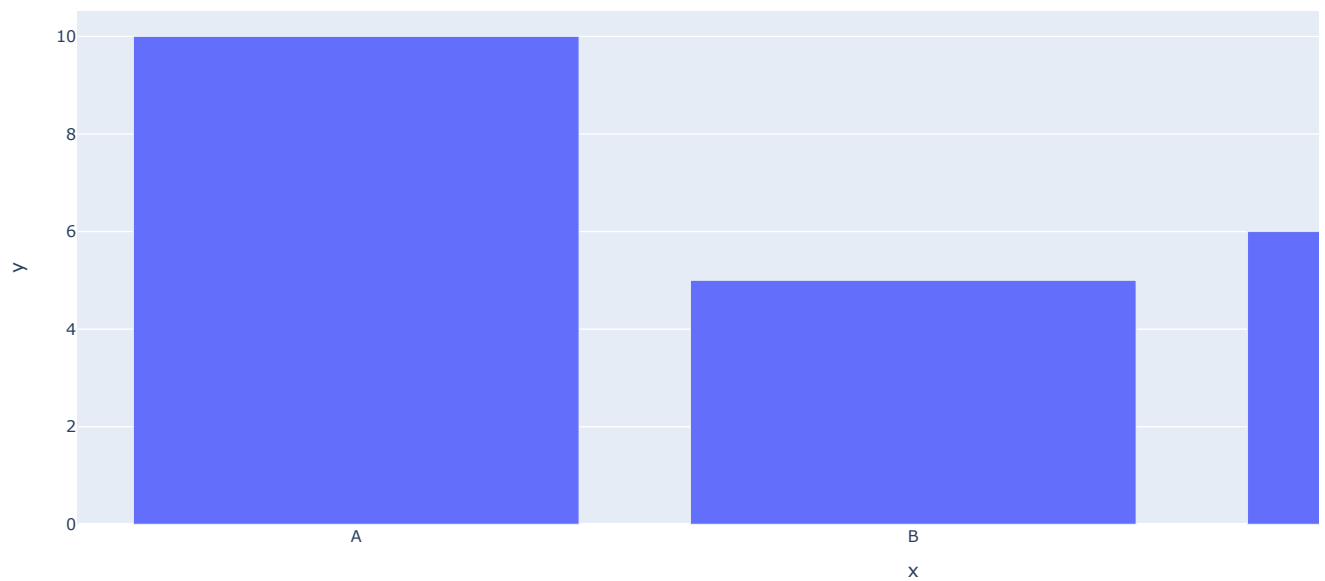
```
#using plotly express px
x = [1, 2, 3, 4]
y = [10, 13, 15, 18]
fig = px.scatter(x, y)
fig.show()
```
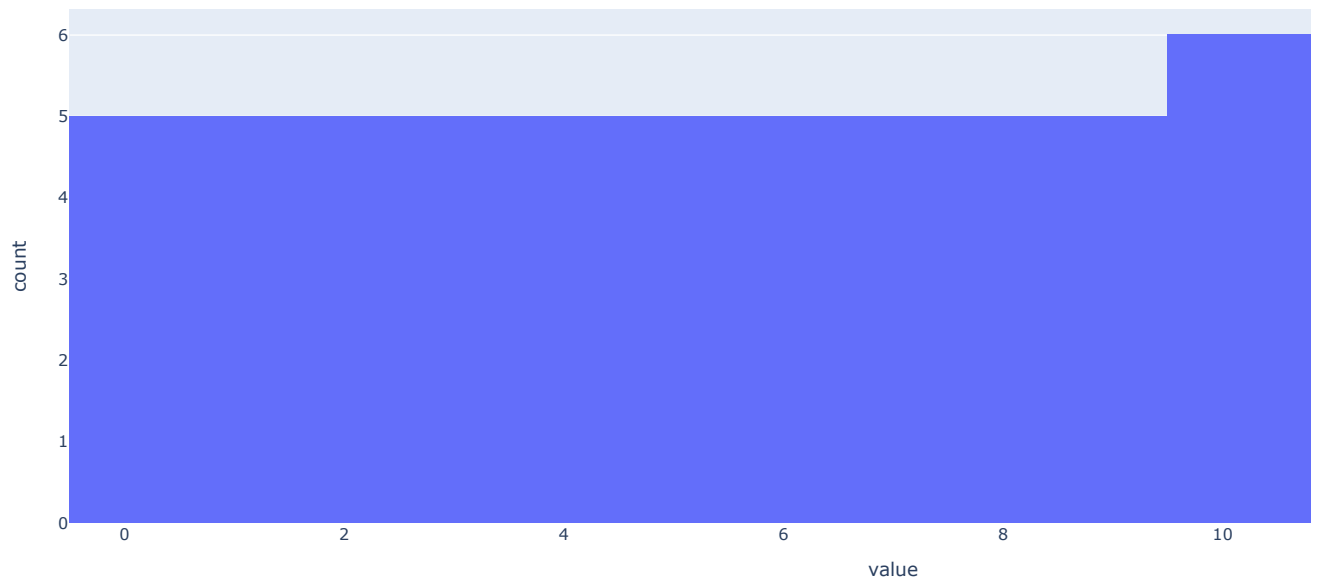


```
fig = px.line(x, y)
fig.show()
```
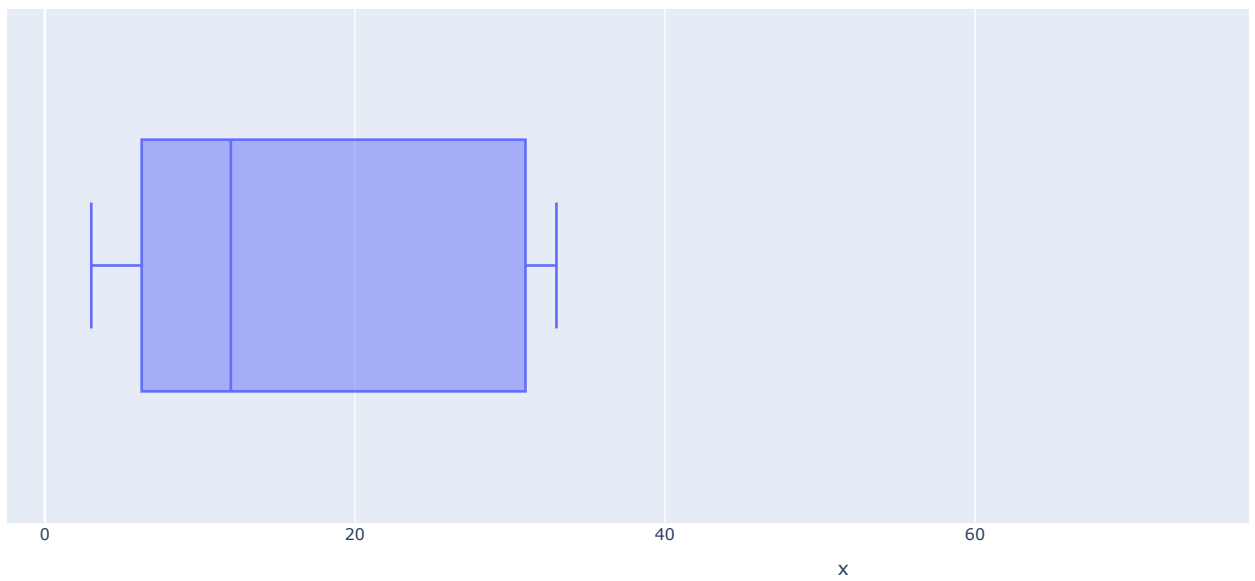
```
x = ['A', 'B', 'C']
y = [10, 5, 6]
fig = px.bar(x = x, y = y)
fig.show()
```
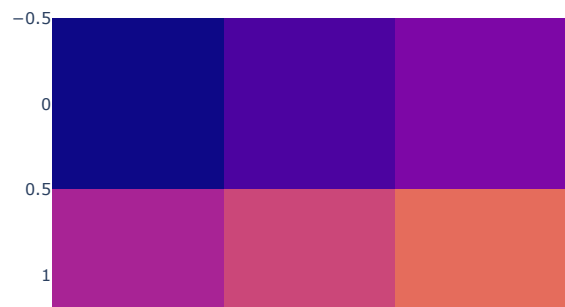


```
x = [5, 10, 3, 4, 5, 5, 6, 6, 10, 10, 3, 11, 11, 12, 3, 4,]
fig = px.histogram(x)
fig.show()
```

```
x = ['A', 'B', 'C']
y = [5, 10, 3, 25, 12, 33, 100]
fig = px.box(x,y)
fig.show()
```



```
#plotting heatmap
data = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
fig = px.imshow(data)
fig.show()
```

```
#bubble chart
x = [1, 2, 3, 4]
y = [5, 8, 12, 3]
fig = px.scatter(x, y, size = [30, 10, 50, 100])
fig.show()
```