

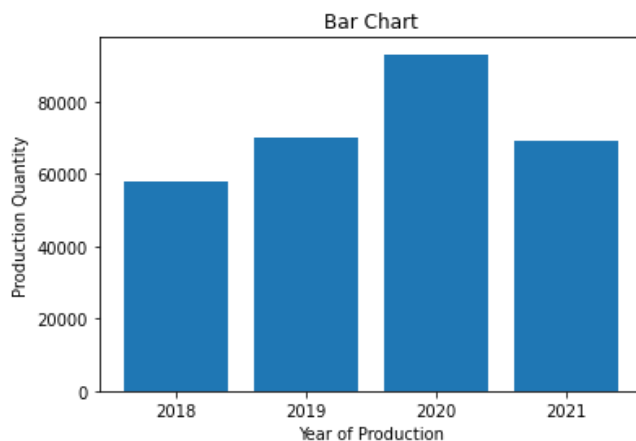
1. Take a data set in a data frame and plot the bar chart example may be year of Production and the Production Quantity. (Take help of Pandas)

```
In [1]: import pandas as pd
import matplotlib.pyplot as plt

data = {'year of production' : ['2018','2019','2020','2021'],
        'production quantity' : [58000, 70000, 93000, 69000]}

df = pd.DataFrame(data)
x = df['year of production']
y = df['production quantity']

plt.bar(x,y)
plt.xlabel("Year of Production")
plt.ylabel("Production Quantity")
plt.title("Bar Chart")
plt.show()
```



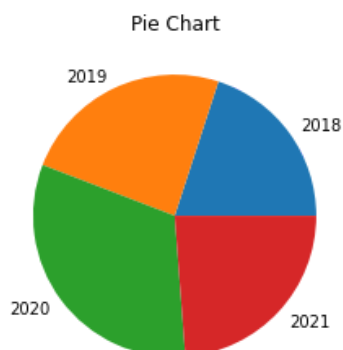
2. Take a data set from the above data frame which you have prepared and plot the pie chart. (Take help of Pandas)

```
In [2]: import pandas as pd
import matplotlib.pyplot as plt

data = {'year of production' : ['2018','2019','2020','2021'],
        'production quantity' : [58000, 70000, 93000, 69000]}

df = pd.DataFrame(data)
x = df['year of production']
y = df['production quantity']

plt.pie(y, labels = x)
plt.title("Pie Chart")
plt.show()
```



3. Take a csv file with name, employee id and salary. Read the datas of salary and plot the bar Chart with employee name on the x axis and employee salary on the y-axis. Just take 5 records in the csv files.

```
In [3]: import pandas as pd
import matplotlib.pyplot as plt

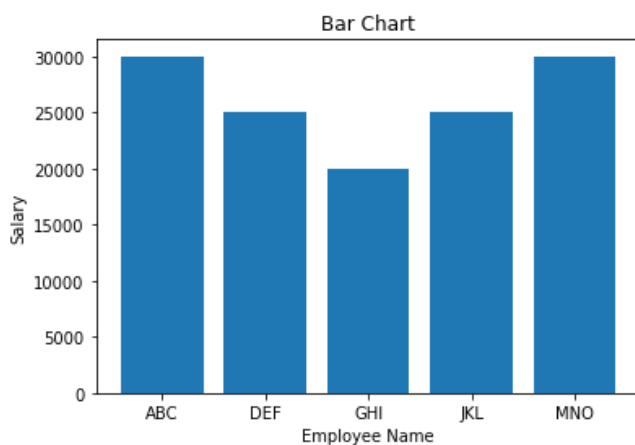
df1 = pd.read_csv(r'C:\Users\Nirmalya Majhi\Desktop\Advanced IT Workshop\mat-data.csv')
df1
```

```
Out[3]:
```

	Name	employee_id	salary
0	ABC	1	30000
1	DEF	2	25000
2	GHI	3	20000
3	JKL	4	25000
4	MNO	5	30000

```
In [5]: x = df1['Name']
y = df1['salary']

plt.bar(x,y)
plt.xlabel("Employee Name")
plt.ylabel("Salary")
plt.title("Bar Chart")
plt.show()
```

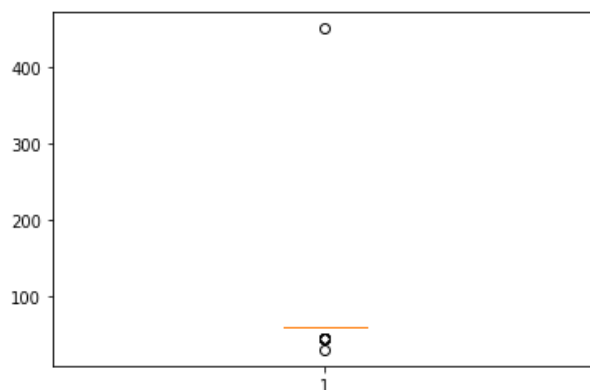


4. Take the dirtydata.csv as an input and plot the box-plot for the column duration and find out How many outliers are there?

```
In [24]: import pandas as pd
import matplotlib.pyplot as plt

df2 = pd.read_csv(r'C:\Users\Nirmalya Majhi\Desktop\Advanced IT Workshop\dirtydata.csv')

x = df2['Duration']
plt.boxplot(x)
plt.show()
```



from the above boxplot, we can say that there is one outlier