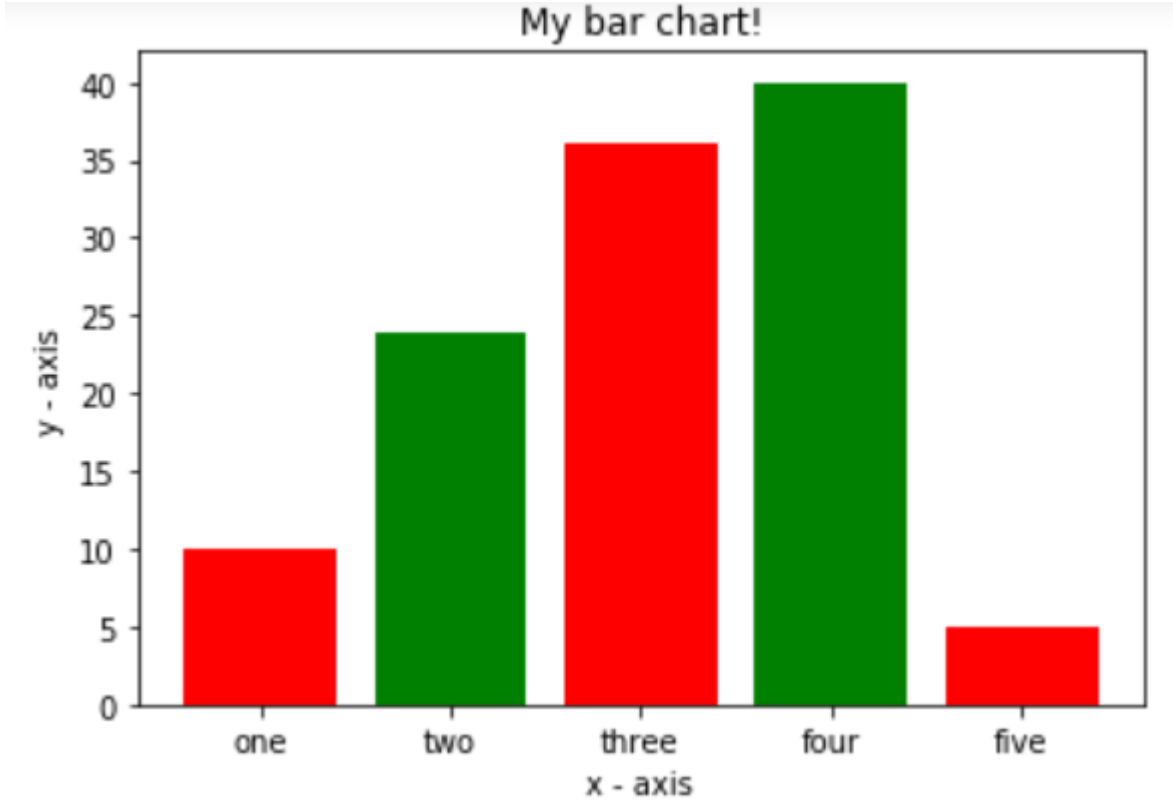
Bar charts

```
1  import matplotlib.pyplot as plt
2
3  left = [1, 2, 3, 4, 5]
4
5  height = [10, 24, 36, 40, 5]
6
7  tick_label = ['one', 'two', 'three', 'four', 'five']
8
9  plt.bar(left, height, tick_label = tick_label,
10         width = 0.8, color = ['red', 'green'])
11
12 plt.xlabel('x - axis')
13 plt.ylabel('y - axis')
14 plt.title('My bar chart!')
15
16 plt.show()
```



Scatter Plot

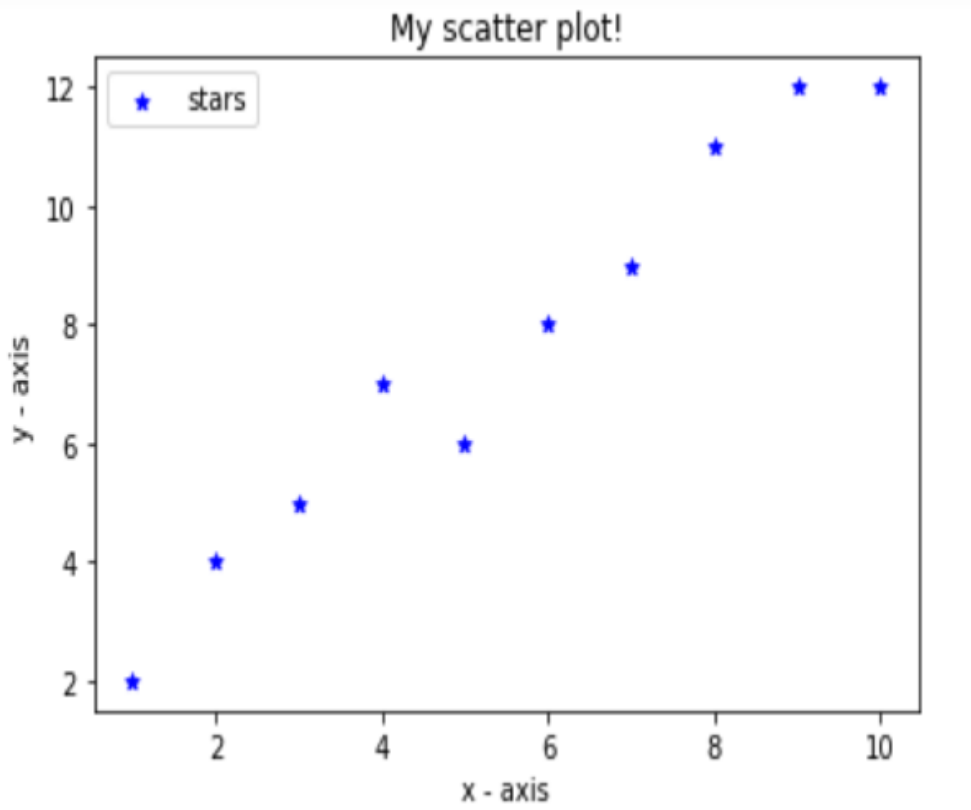
```python
import matplotlib.pyplot as plt

x = [1,2,3,4,5,6,7,8,9,10]
y = [2,4,5,7,6,8,9,11,12,12]

plt.scatter(x, y, label= "stars", color= "blue",
            marker= "*", s=30)

plt.xlabel('x - axis')
plt.ylabel('y - axis')
plt.title('My scatter plot!')
plt.legend()

plt.show()
```



Pie Charts

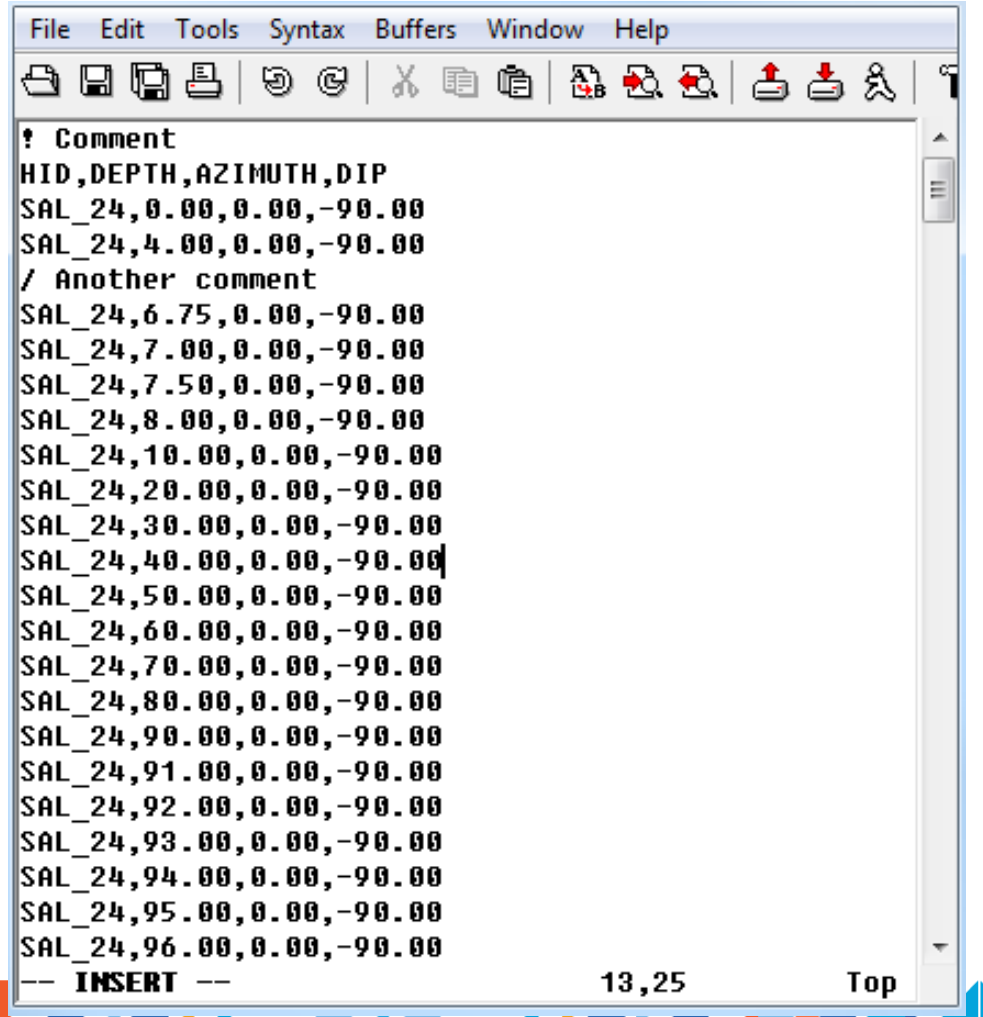
```
1  import matplotlib.pyplot as plt
2
3  activities = ['eat', 'sleep', 'work', 'play']
4  slices = [3, 7, 8, 6]
5
6  colors = ['r', 'y', 'g', 'b']
7
8  plt.pie(slices, labels = activities, colors=colors,
9          autopct = '%1.1f%%')
10
11 plt.legend()
12
13 plt.show()
```

Working with CSV Files

- **CSV** (Comma Separated Values) is a simple **file format** used to store tabular data, such as a spreadsheet or database.
- A CSV file stores tabular data (numbers and text) in plain text.
- Data1, Data2,Data3, Data4
- For working CSV files in python, there is an inbuilt module called **csv**.

CSV files

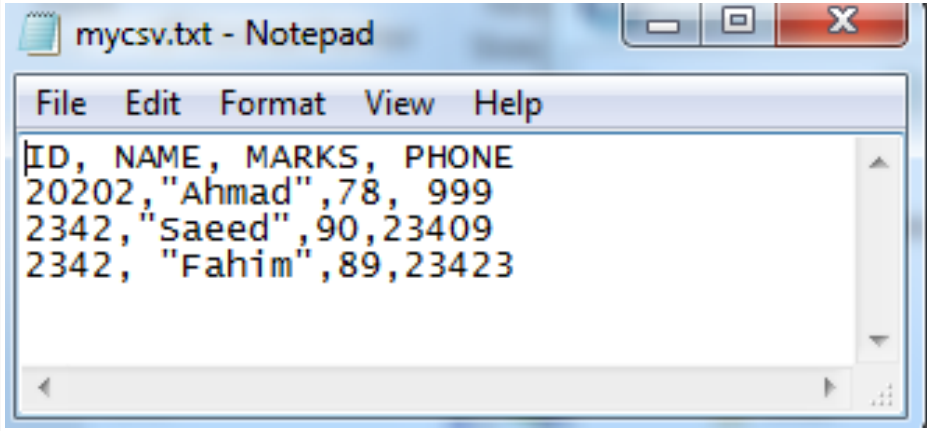
- CSV files are normally created by programs that handle large amounts of data.
- They are a convenient way to export data from spreadsheets and databases as well as import or use it in other programs
- CSV files are very easy to work with programmatically.



Read data using CSV

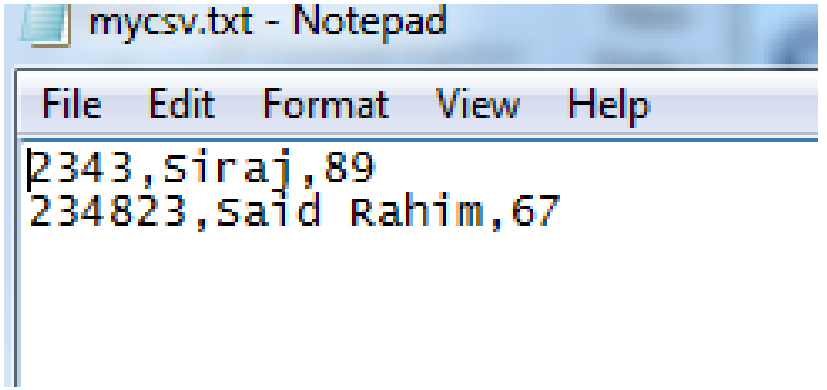
```python
import csv

with open('mycsv.txt') as csv_file:
    csv_reader = csv.reader(csv_file, delimiter=',')
    line_count = 0
    for row in csv_reader:
        if line_count == 0:
            print(f'Columns:{row}')
            line_count += 1
        else:
            print(f'\t{row[0]}  {row[1]}  {row[2]}')
            line_count += 1
```



Writing data into CSV files

```
1  import csv
2
3  with open('mycsv.txt', mode='w') as mycsvFile:
4      csv_writer = csv.writer(mycsvFile, delimiter=',')
5
6      csv_writer.writerow([2343, 'Siraj',89])
7      csv_writer.writerow([234823, 'Said Rahim', 67])
```



Thank You!