main

```
C:\Users\Dhiraj\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/Dhiraj/PycharmProjects/pythonProject1/main.py
      Name  Eng  Maths  IP
0    Abhay   66     85  95
1   Bharat   69     82  82
2   Chandu   75     84  63
3  Dharmik   74     80  84
4    Ervin   70     75  90
5    Firoz   76     80  84

Process finished with exit code 0
```

pythonProject1 - main.py

pythonProject1 〉 main.py

main

main.py

```
1  import pandas as pd
2  def df_addRow():
3      stu_XII={'Name':['Abhay','Bharat','Chandu','Dharmik','Ervin'],
4               'Eng':[66,69,75,74,70],'Maths':[85,82,84,80,75],'IP':[95,82,63,84,90]}
5      df=pd.DataFrame(stu_XII)
6      df=df.append({'Name':'Firoz','Eng':76,'Maths':80,'IP':84},ignore_index=True)
7      print(df)
8  df_addRow()
```

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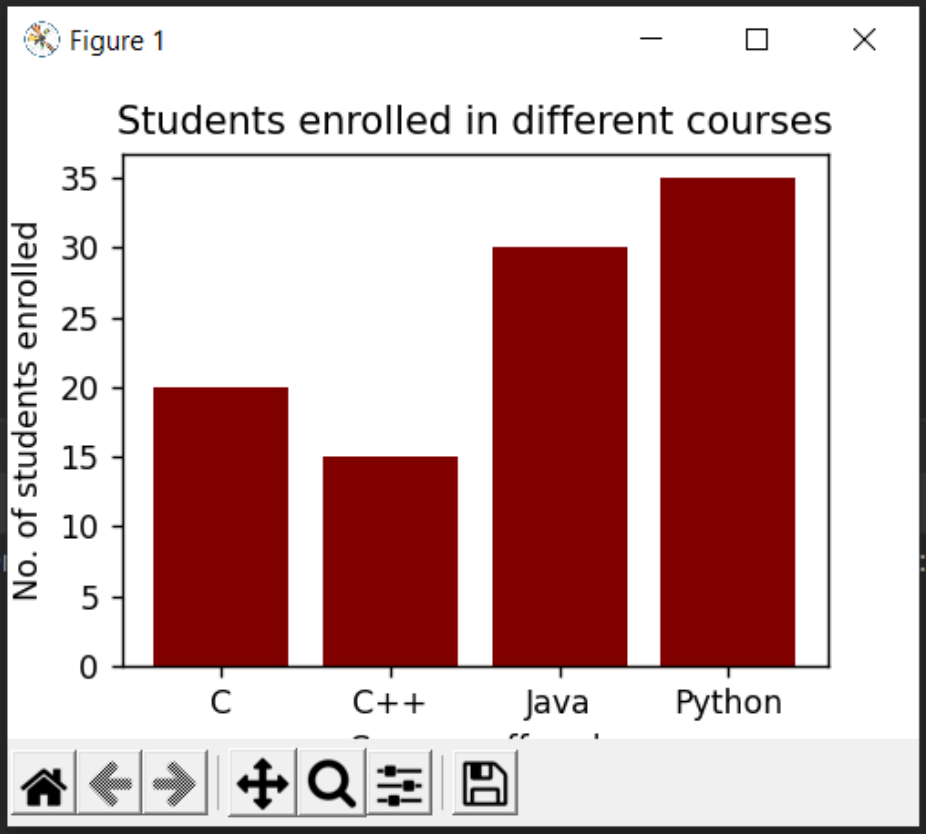
PEP 8: E305 expected 2 blank lines after class or function definition, 8:12 CRLF UTF-8 4 spaces Python 3.9 (pythonProject1)

main.py

```
import matplotlib.pyplot as plt
data = {'C':20, 'C++':15, 'Java':30,'Python':35}
courses = list(data.keys())
values = list(data.values())
plt.bar(courses, values, color ='maroon')

plt.xlabel("Courses offered")
plt.ylabel("No. of students enrolled")
plt.title("Students enrolled in different courses")
plt.show()
```



main

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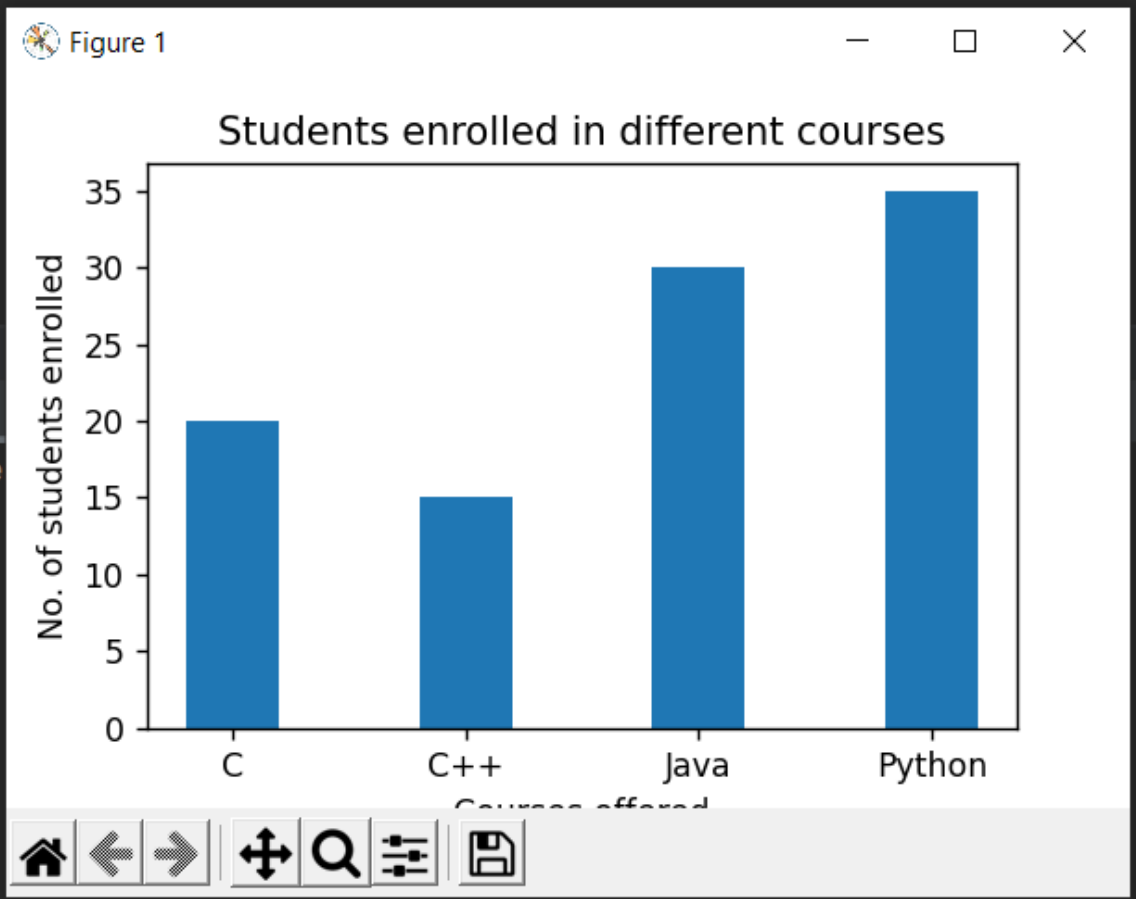
main.py

```
import matplotlib.pyplot as plt
data = {'C':20, 'C++':15, 'Java':30,'Python':35}
courses = list(data.keys())
values = list(data.values())
plt.bar(courses, values,width=0.4)

plt.xlabel("Courses offered")
plt.ylabel("No. of students enrolled")
plt.title("Students enrolled in different courses")
plt.show()
```



Run: main

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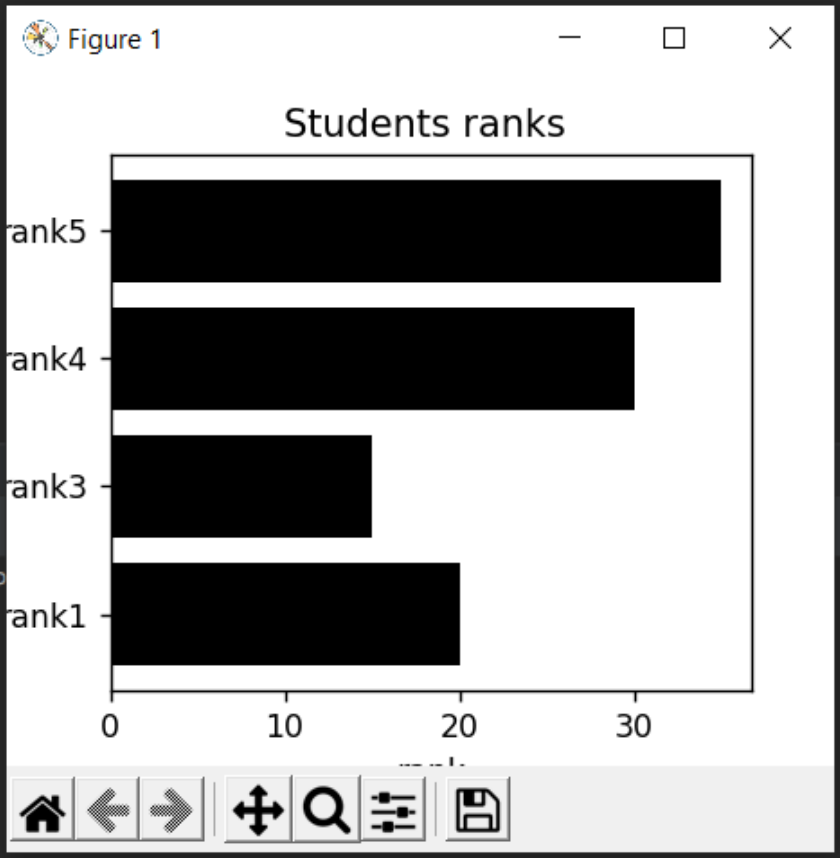
exe C:/Users/D

main.py

```
import matplotlib.pyplot as plt
data = {'rank1':20, 'rank3':15, 'rank4':30,'rank5':35}
courses = list(data.keys())
values = list(data.values())
plt.barh(courses, values, color ='black')

plt.xlabel("rank")
plt.ylabel("No. of students rank")
plt.title("Students ranks ")
plt.show()
```



main

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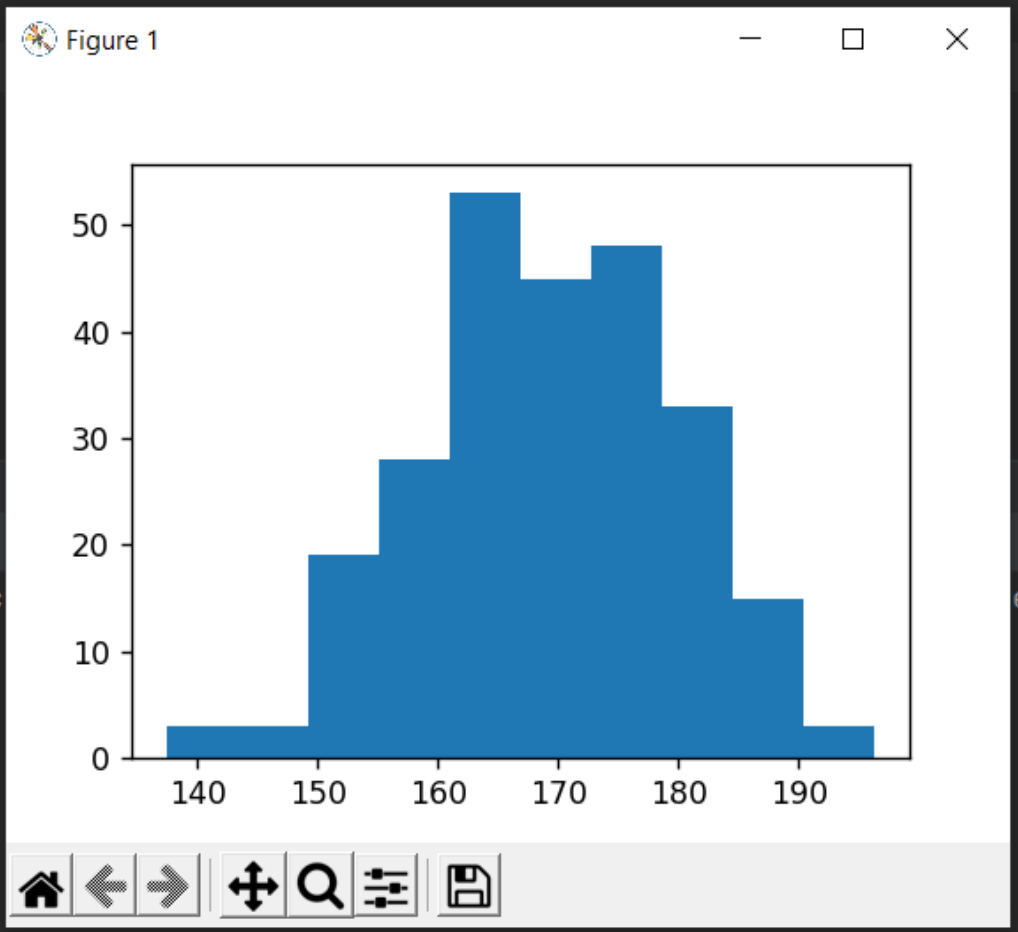
main.py

```
import matplotlib.pyplot as plt
import numpy as np

import matplotlib.pyplot as plt
import numpy as np

x = np.random.normal(170, 10, 250)

plt.hist(x)
plt.show()
```



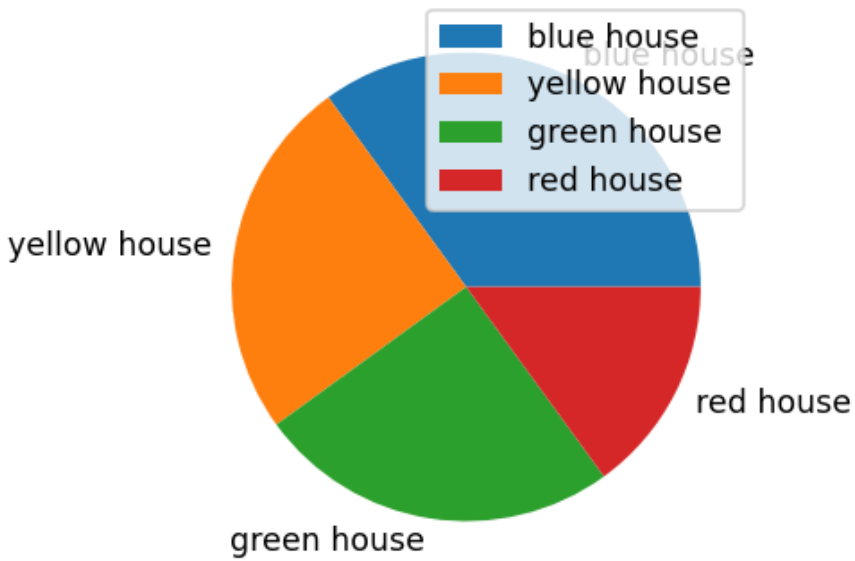
Run: main

C:\Users\Dhiraj\Pyc

main.py

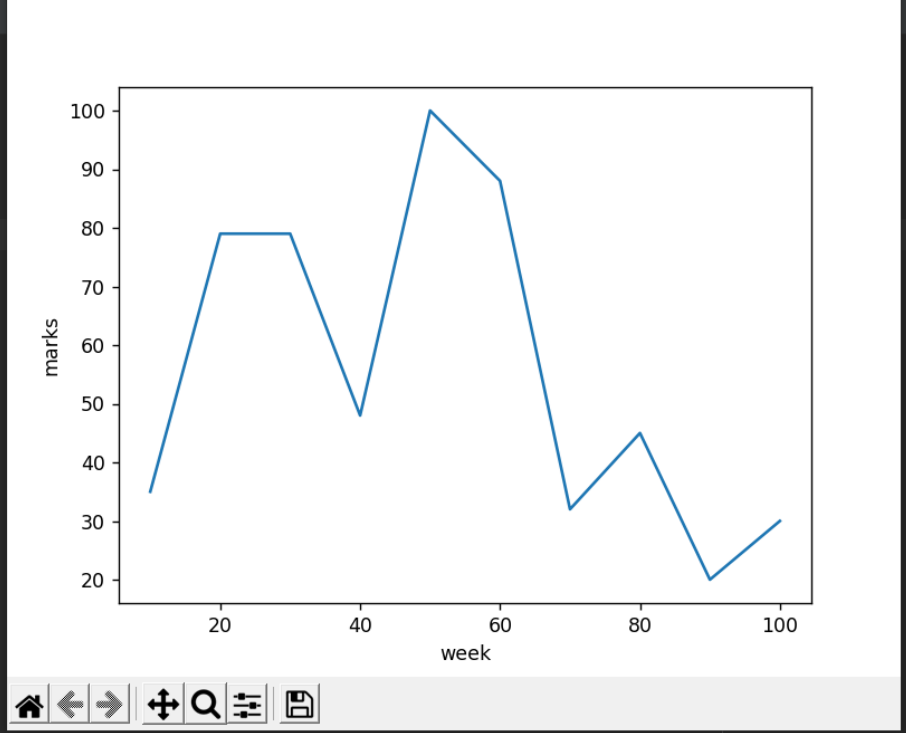
```
import matplotlib.pyplot as plt
import numpy as np

y = np.array([35, 25, 25, 15])
mylabels = ["blue house", "yellow house", "green house", "red house"]

plt.pie(y, labels = mylabels)
plt.legend()
plt.show()
```

Figure 1

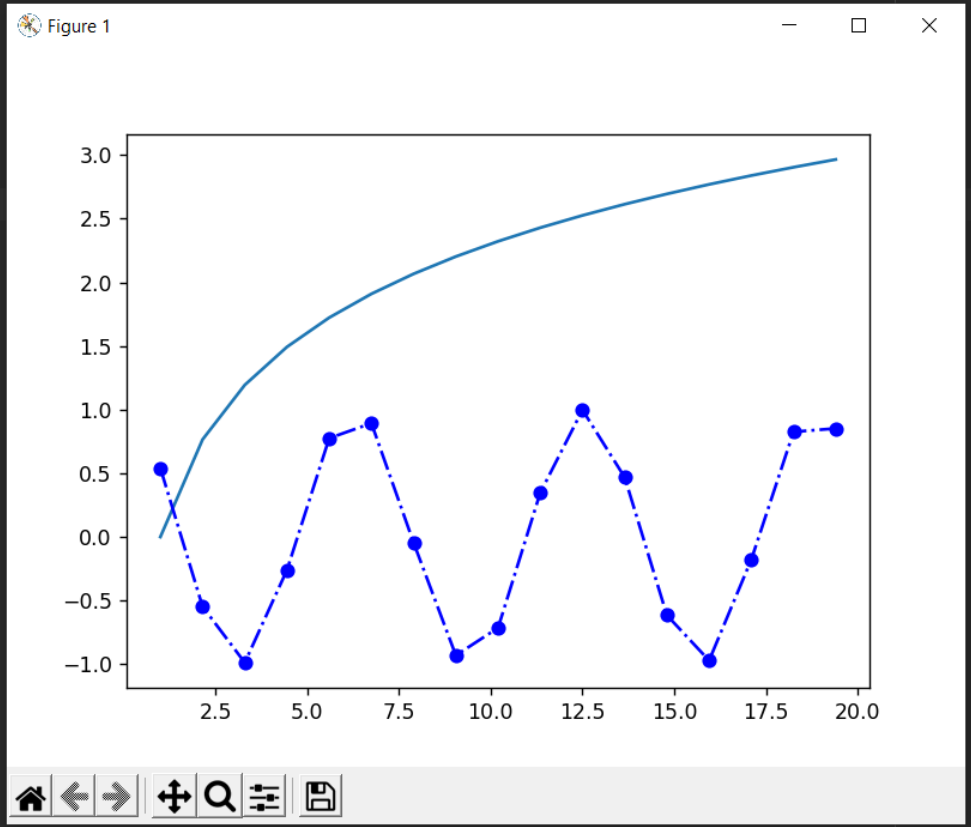


main.py

```python
import matplotlib.pyplot as plt
week = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
marks = [35, 79, 79, 48, 100, 88, 32, 45, 20, 30]
plt.plot(week, marks)
plt.xlabel('week')
plt.ylabel('marks')
plt.show()
```



```
import numpy as np
import matplotlib.pyplot as plt
a = np.arange(1, 20, 1.15)
b = np.log(a)
c = np.cos(a)
plt.plot(a,b)
plt.plot(a,c,'bo', linestyle = 'dashdot')
plt.show()
```



queries.sql 3xjsdg8z2 NEW MYSQL RUN

```sql
create table XIIA (Name char(30),Roll int,subject char(30)
insert into XIIA values("TARUN",49, "MATHS","M");
insert into XIIA values("UTTAM",49, "MATHS","M");
insert into XIIA values("ADITYA",49, "MATHS","M");
insert into XIIA values("SONU",49, "MATHS","M");

select*from XIIA;
```

STDIN

Input for the program (Optional)

Output:

```
TARUN|49|MATHS|M
UTTAM|49|MATHS|M
ADITYA|49|MATHS|M
SONU|49|MATHS|M
```

```
C:\Users\Dhiraj\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/Dhiraj/PycharmProjects/pythonProject1/main.py
                2016  2017  2018  2019
Virat Kohli     2595  2818  2595  2595
Rohit Sharma    2406  2613  2406  2406
Shikhar Dhawan  2378  2295  2378  2378
------------------------------------------------------------
2016    2595
2017    2818
2018    2595
2019    2595
Name: Virat Kohli, dtype: int64
2016    2406
2017    2613
2018    2406
2019    2406
Name: Rohit Sharma, dtype: int64
2016    2378
2017    2295
2018    2378
2019    2378
Name: Shikhar Dhawan, dtype: int64

Process finished with exit code 0
```

pythonProject1 - main.py

pythonProject1 〉 main.py

main

main.py

```python
import pandas as pd
def df_operations():
    sc_4yrs={2016:{'Virat Kohli':2595,'Rohit Sharma':2406,'Shikhar Dhawan':2378},
             2017:{'Virat Kohli':2818,'Rohit Sharma':2613,'Shikhar Dhawan':2295},
             2018:{'Virat Kohli':2595,'Rohit Sharma':2406,'Shikhar Dhawan':2378},
             2019:{'Virat Kohli':2595,'Rohit Sharma':2406,'Shikhar Dhawan':2378}}
    df=pd.DataFrame(sc_4yrs)
    print(df)
    print("------------------------------------------------------------------------")
    for i,row in df.iterrows():
        print(row)
df_operations()
```

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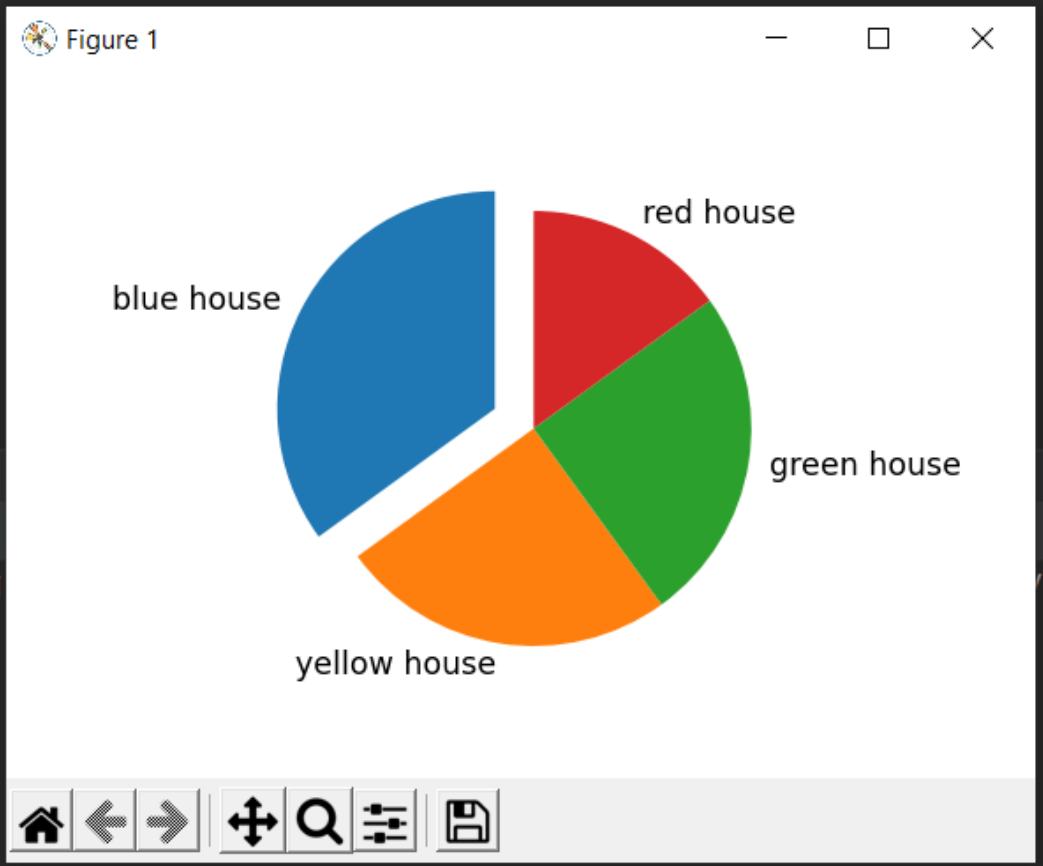
PEP 8: E305 expected 2 blank lines after class or function definitio 12:16 CRLF UTF-8 4 spaces Python 3.9 (pythonProject1)

main.py

```python
import matplotlib.pyplot as plt
import numpy as np

y = np.array([35, 25, 25, 15])
mylabels = ["blue house", "yellow house", "green house", "red house"]
myexplode = [0.2, 0, 0, 0]

plt.pie(y, labels = mylabels, explode = myexplode, startangle = 90)
plt.show()
```



Run: main

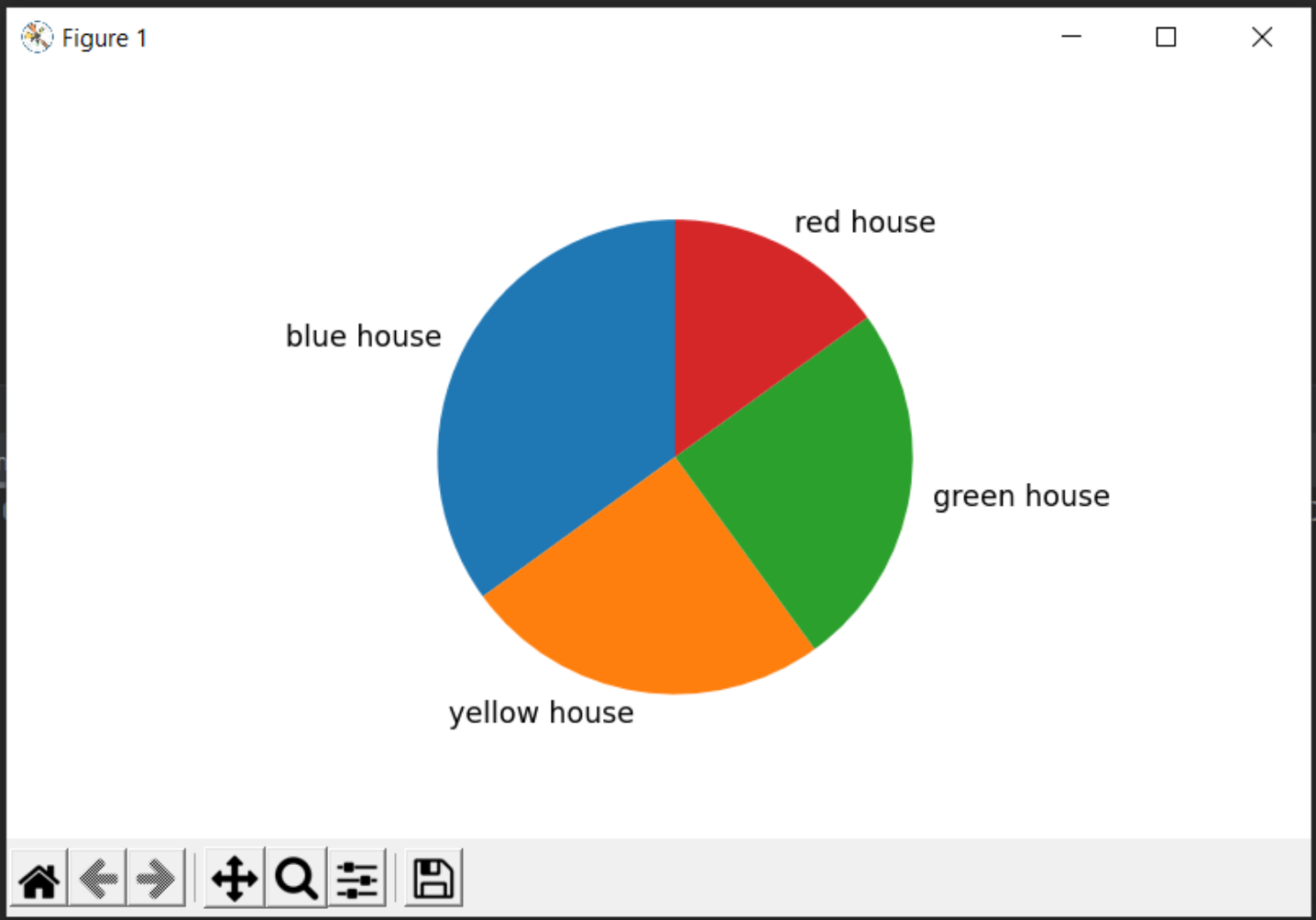
C:\Users\Dhiraj

main.py

```python
import matplotlib.pyplot as plt
import numpy as np

y = np.array([35, 25, 25, 15])
mylabels = ["blue house", "yellow house", "green house", "red house"]


plt.pie(y, labels = mylabels, startangle = 90)
plt.show()
```



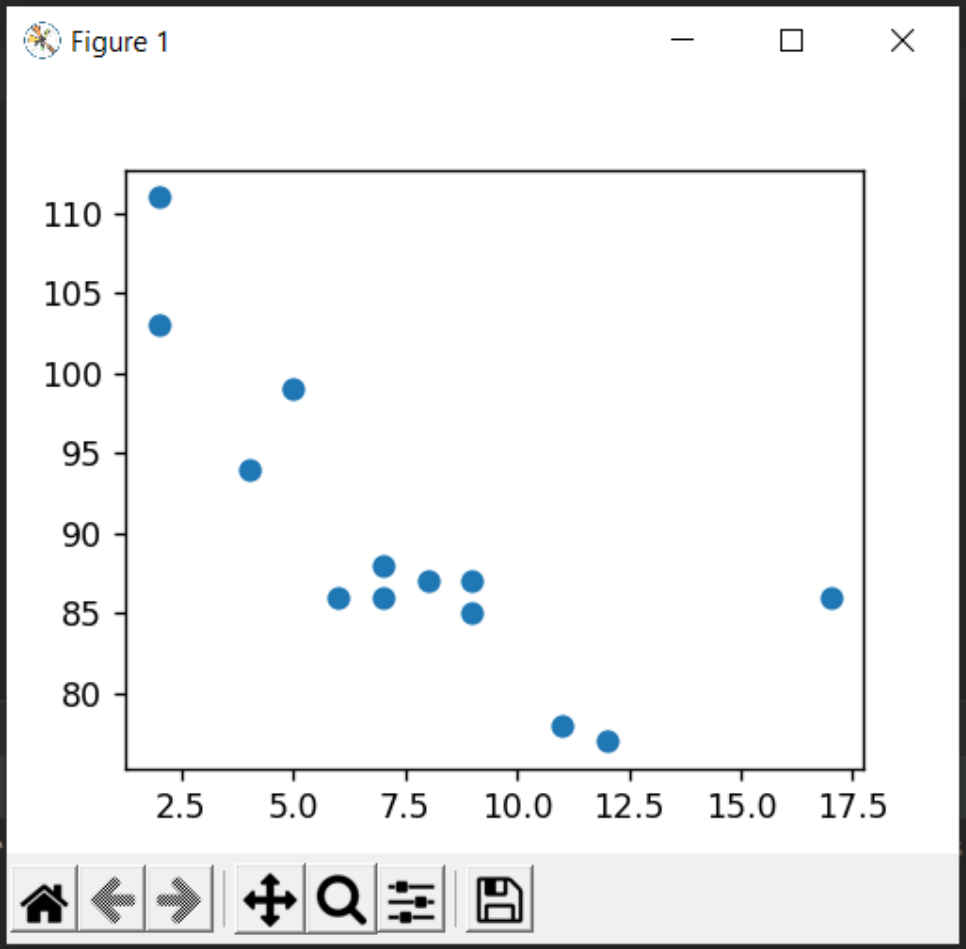
Run: TODO Problems Terminal Python Packages Python Console Event Log

9:12 CRLF UTF-8 4 spaces Python 3.9 (pythonProject1)

```python
import matplotlib.pyplot as plt

x = [5,7,8,7,2,17,2,9,4,11,12,9,6]
y = [99,86,87,88,111,86,103,87,94,78,77,85,86]

plt.scatter(x, y)
plt.show()
```



main

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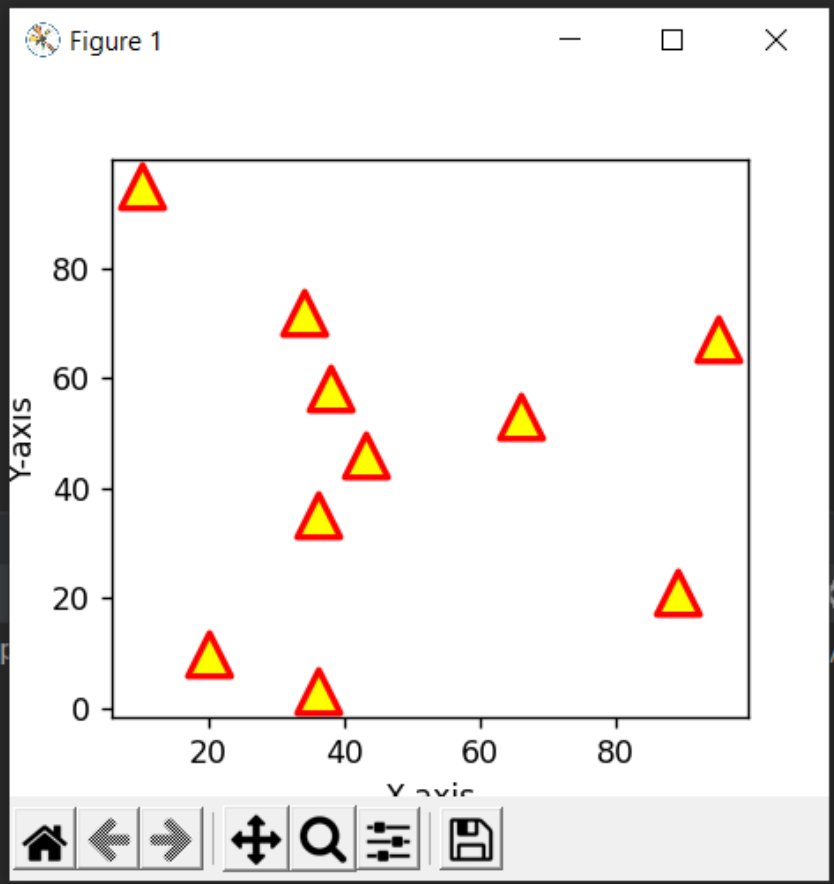
main.py

```
import matplotlib.pyplot as plt

x1 = [89, 43, 36, 36, 95, 10,
      66, 34, 38, 20]

y1 = [21, 46, 3, 35, 67, 95,
      53, 72, 58, 10]
plt.scatter(x1, y1, c="yellow",
            linewidths=2,
            marker="^",
            edgecolor="red",
            s=200)
plt.xlabel("X-axis")
plt.ylabel("Y-axis")
plt.show()
```



Run: main

C:\Users\Dhiraj\PycharmProjects\p

main.py +

```python
import pandas as pd
Population = pd.Series([10927854,8541254,7584264,78451365],
index =['Delhi','Mumbai','Kolkata','Chennai'])
AvgIncome = pd.Series([48547596452,74984684685,4875956812,58422695485],
index = ['Delhi','Mumbai','Kolkata','Chennai'])
percapita = AvgIncome/Population
print("population in four metro cities")
print(Population)
print("Avg.Income in four metro cities")
print(AvgIncome)
print('Percapita income in four merto cities')
print(percapita)
```

```
population in four metro cities
Delhi      10927854
Mumbai      8541254
Kolkata     7584264
Chennai    78451365
dtype: int64
Avg.Income in four metro cities
Delhi      48547596452
Mumbai     74984684685
Kolkata     4875956812
Chennai    58422695485
dtype: int64
Percapita income in four merto cities
Delhi      4442.555368
Mumbai     8779.118931
Kolkata     642.904415
Chennai     744.699541
dtype: float64


** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

main.py

```python
import pandas as pd
zoneA = {'Target': 560004, 'sales': 700025}
zoneB = {'Target': 700025, 'sales': 455852}
zoneC= {'Target': 458212, 'sales': 475891}
zoneD = {'Target': 487525, 'sales': 614400}
sales = [zoneA,zoneB,zoneC,zoneD]
saleDF =pd.DataFrame(sales,index=['zoneA','zoneB','zoneC','zoneD'])
print(saleDF)
```

Run: main

```
C:\Users\Dhiraj\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/Dhiraj/PycharmProjects/pythonProject1/main.py
       Target   sales
zoneA  560004  700025
zoneB  700025  455852
zoneC  458212  475891
zoneD  487525  614400

Process finished with exit code 0
```