

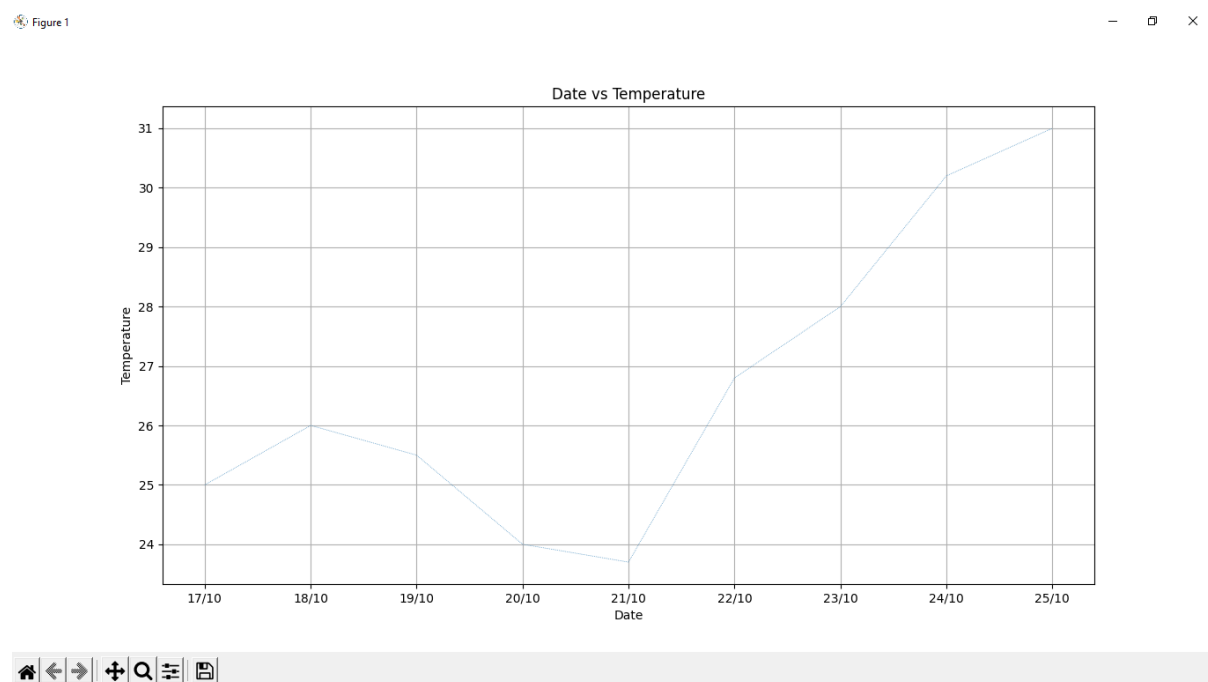
Q1.

```
import matplotlib.pyplot as plt

x=['17/10','18/10','19/10','20/10','21/10','22/10','23/10','24/10','25/10']
y=[25,26,25.5,24,23.7,26.8,28,30.2,31]

plt.figure(figsize=(9,7))
plt.grid()
plt.xlabel("Date")
plt.ylabel("Temperature")
plt.plot(x,y,linewidth=0.5,linestyle='dotted')
plt.title("Date vs Temperature")
plt.show()
```

Output:



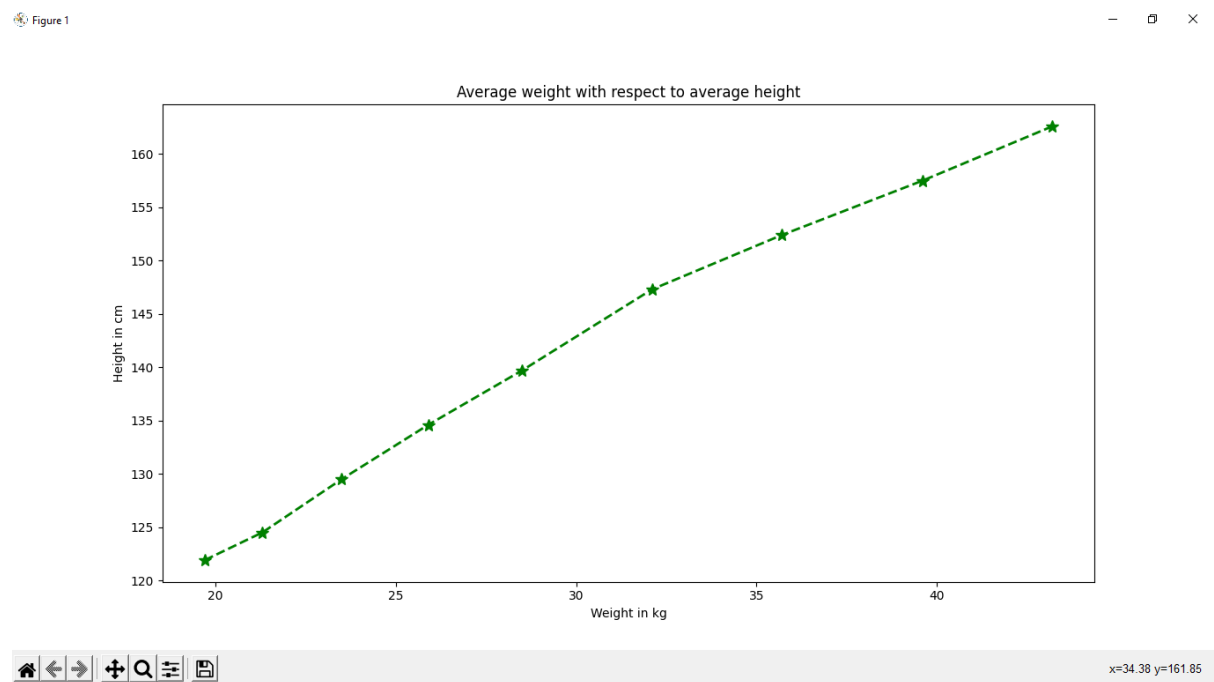
Q2.

```
import matplotlib.pyplot as plt

height = [121.9,124.5,129.5,134.6,139.7,147.3, 152.4, 157.5,162.6]
weight= [19.7,21.3,23.5,25.9,28.5,32.1,35.7,39.6, 43.2]

plt.xlabel("Weight in kg")
plt.ylabel("Height in cm")
plt.title("Average weight with respect to average height")
plt.plot(weight,height,color="green",marker="*",markersize=10,linestyle="dashed",linewidth=2)
plt.show()
```

Output:



Q3.

```
import matplotlib.pyplot as plt

week1=[7500,5500,6100,4500,5700,4000,6500]
week2=[6800,4700,5700,4800,5400,2700,5900]
```

```

week3=[7100,4500,4000,3700,4000,2200,6100]
weekday=['sunday','monday','tuesday','wednesday','thursday','friday','saturday']
weeks=[week1,week2,week3]

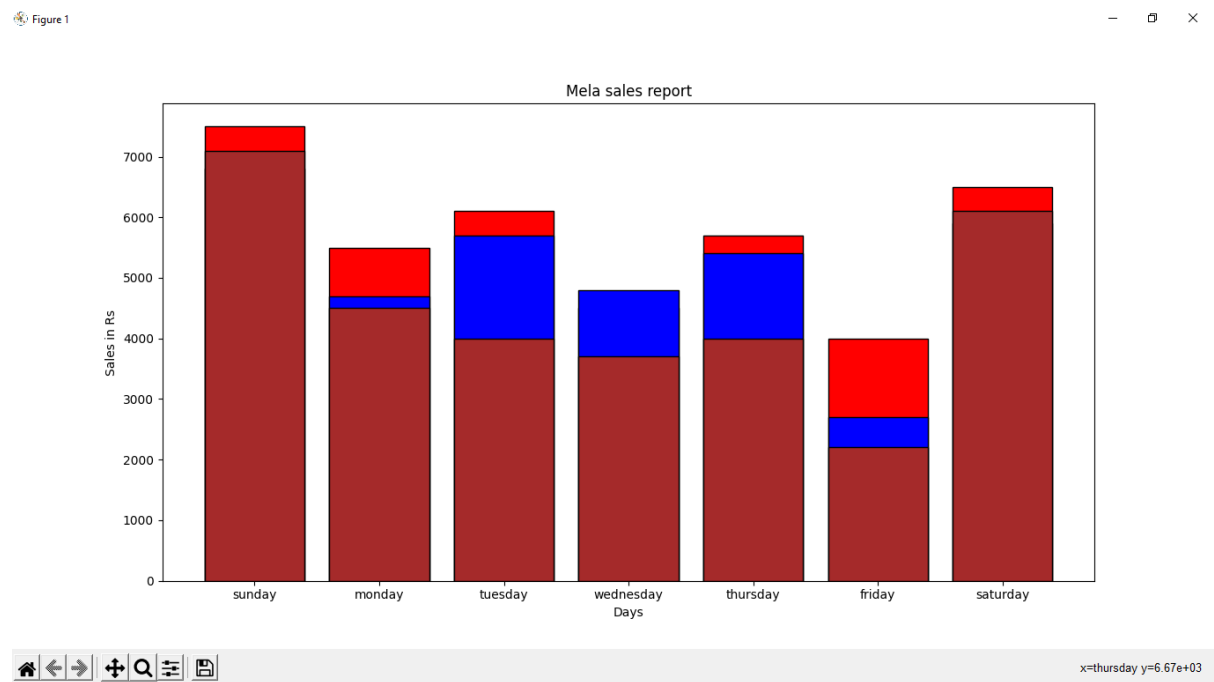
plt.figure(figsize=(10,20))
plt.bar(weekday,week1,color="red",edgecolor="black")
plt.bar(weekday,week2,color="blue",edgecolor="black")
plt.bar(weekday,week3,color="brown",edgecolor="black")

plt.title("Mela sales report")
plt.xlabel("Days")
plt.ylabel("Sales in Rs")

plt.show()

```

Output:



Q4.

```

import matplotlib.pyplot as plt

ForestCover=[66964,28105,17346,17146,18186,12489,7726]

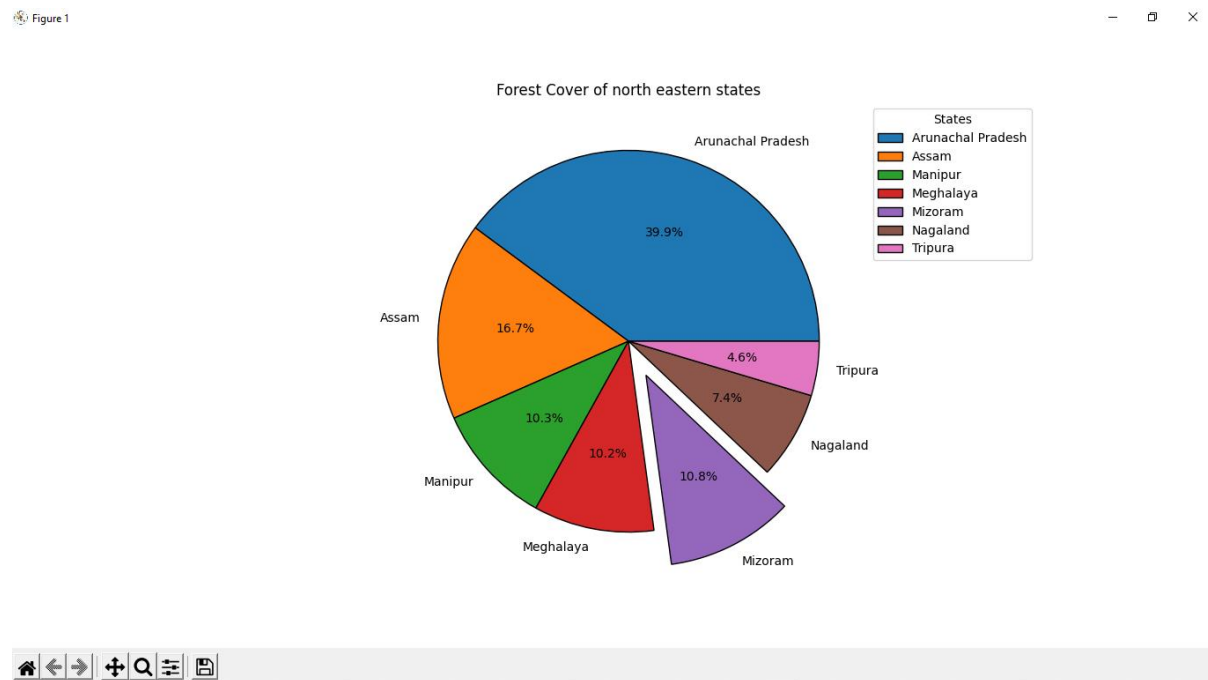
```

```

State=['Arunachal Pradesh','Assam','Manipur','Meghalaya','Mizoram','Nagaland','Tripura']
myexplode=[0,0,0,0,0.2,0,0]
plt.pie(ForestCover,labels=State,wedgeprops={"edgecolor":"black"},explode=myexplode,autopct='%1.1f%%')
plt.title("Forest Cover of north eastern states")
plt.legend(State,title="States",loc="upper left",bbox_to_anchor=(1,0,0,1))
plt.show()

```

Output:



Q5.

```

import matplotlib.pyplot as plt

import pandas as pd

df=pd.read_csv("E:\TYBCS\Python\College\Practice assignment
8\Min_Max_Seasonal_IMD_2017.csv")

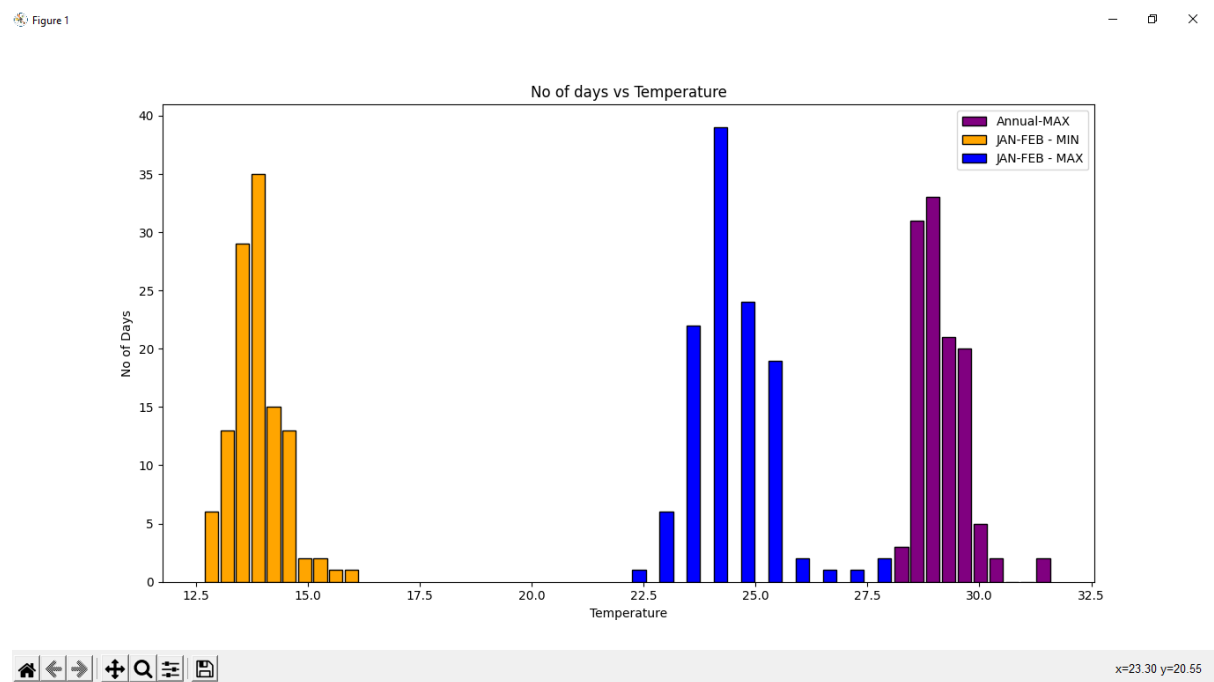
# print(df)

x=df['ANNUAL - MAX']
y=df['JAN-FEB - MIN']
z=df['JAN-FEB - MAX']

```

```
plt.hist(x,edgecolor='black',width=0.3,color="purple",label="Annual-MAX")
plt.hist(y,edgecolor='black',width=0.3,color="orange",label="JAN-FEB - MIN")
plt.hist(z,edgecolor='black',width=0.3,color="blue",label="JAN-FEB - MAX")
plt.xlabel("Temperature")
plt.ylabel("No of Days")
plt.legend()
plt.title("No of days vs Temperature")
plt.show()
```

Output:

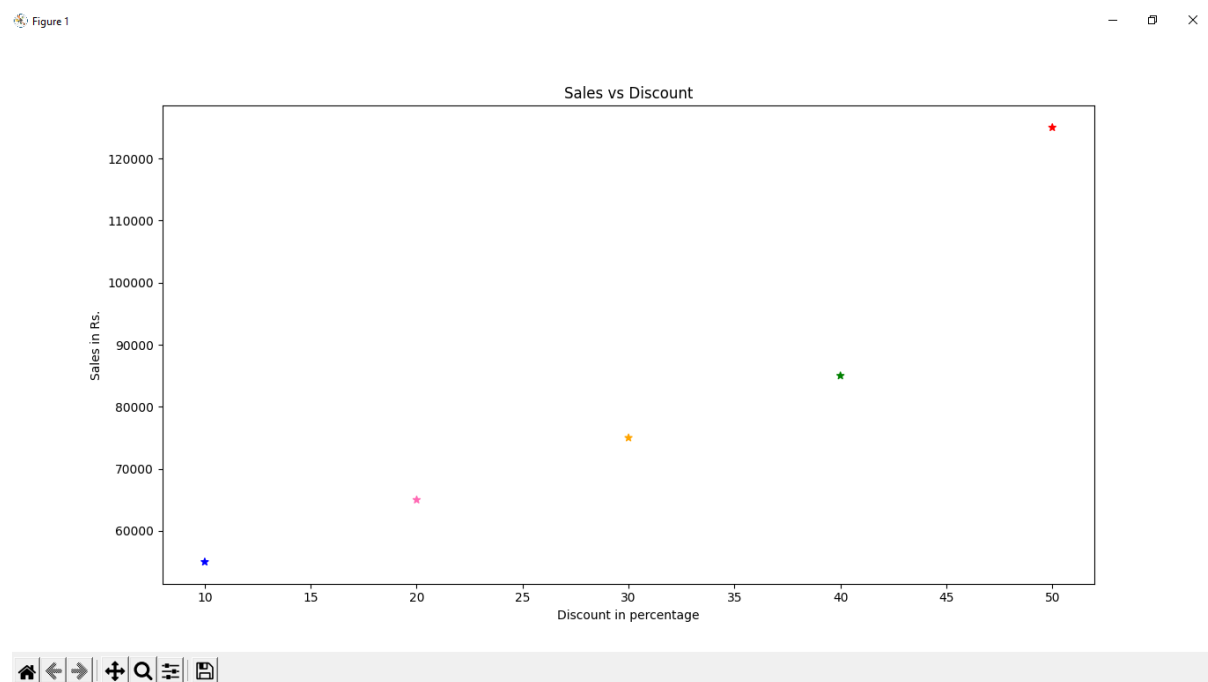


Q6.

```
import matplotlib.pyplot as plt

dc = [10, 20, 30, 40, 50]
sales = [55000, 65000, 75000, 85000, 125000]
mycolors=['blue','hotpink','orange','green','red']
plt.scatter(dc,sales,marker="*",color=mycolors)
plt.title("Sales vs Discount")
plt.xlabel("Discount in percentage")
plt.ylabel("Sales in Rs.")
plt.show()
```

Output:



Q7.

```
import matplotlib.pyplot as plt

import pandas as pd

df=pd.read_csv("E:\TYBCS\Python\College\Practice assignment 8\insurance.csv")
x=df['bmi']
y=df['charges']

plt.scatter(x,y)
plt.xlabel("BMI")
plt.ylabel("Charges")
plt.title("BMI vs Charges Scatter plot")
plt.show()

print(df['region'].value_counts())

x=[364,325,325,324]

lb=['southeast','northwest','southwest','northeast']
plt.pie(x,labels=lb,shadow=True,autopct='%1.1f%%')
plt.legend(loc="upper left",bbox_to_anchor=(1,0,0,1))
plt.show()

x=df['bmi']
```

```
plt.hist(x,width=1.5,color='red')
plt.title('BMI')
plt.xlabel('BMI')
plt.show()

x=df['children']
plt.hist(x,width=0.4,color='blue')
plt.title('Children')
plt.xlabel('Children')
plt.show()

x=df['age']
plt.hist(x,width=1.5,color='green')
plt.title('Age')
plt.xlabel('Age')
plt.show()

x=df['charges']
plt.hist(x,width=5000,color='orange')
plt.title('Charges')
plt.xlabel('Charges')
plt.show()
```

Output:

Figure 1

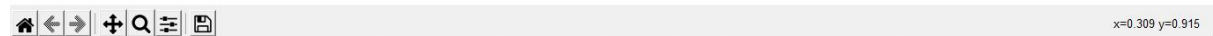
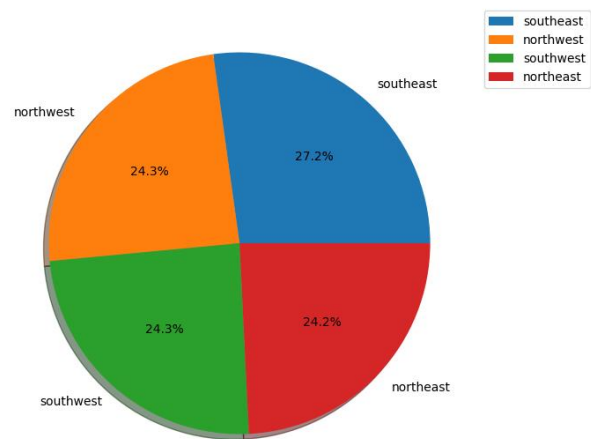
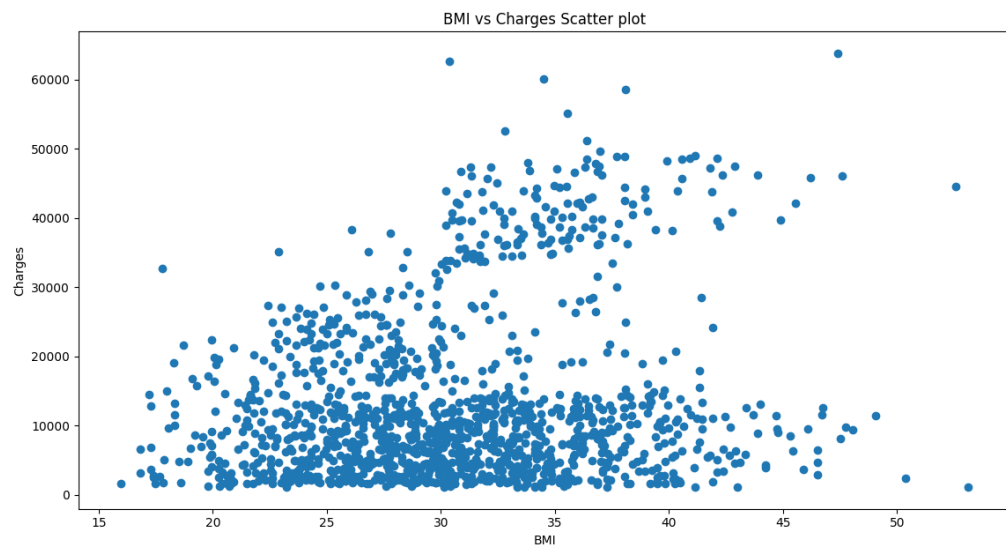
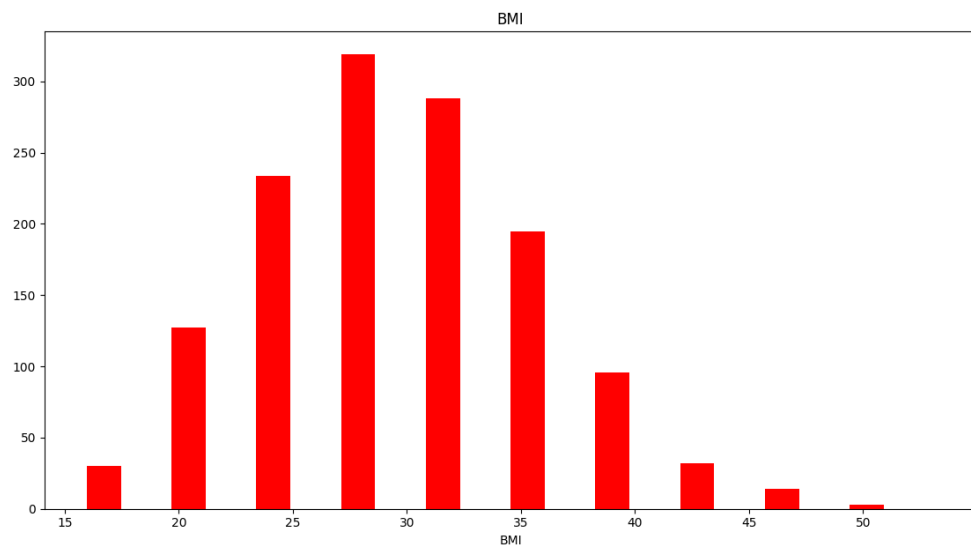
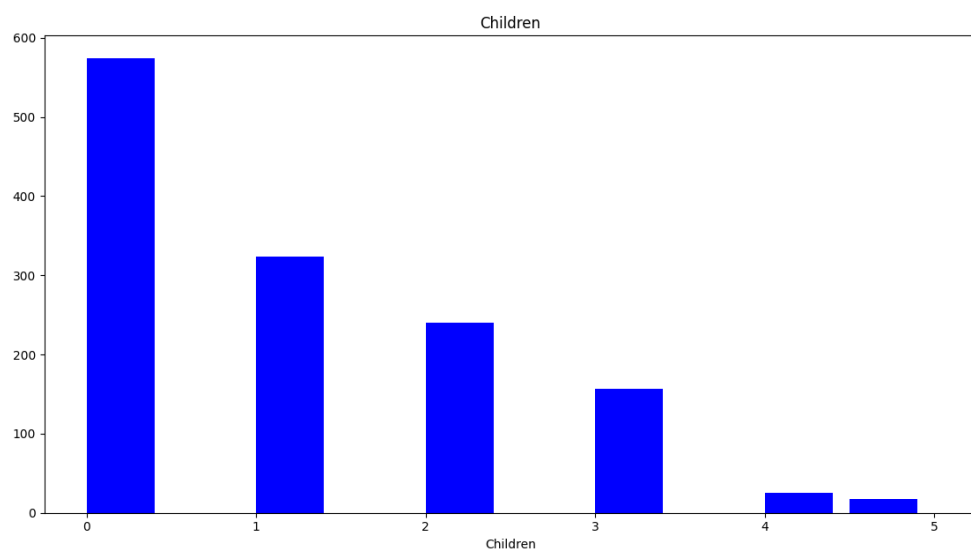
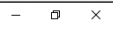


Figure 1



x=33.89 y=257.2

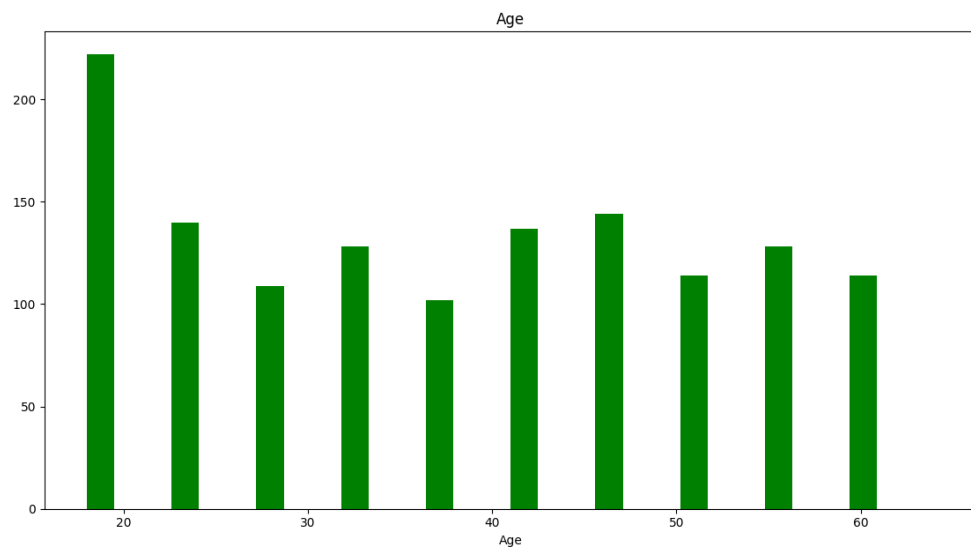
Figure 1



x=1.840 y=508

Figure 1

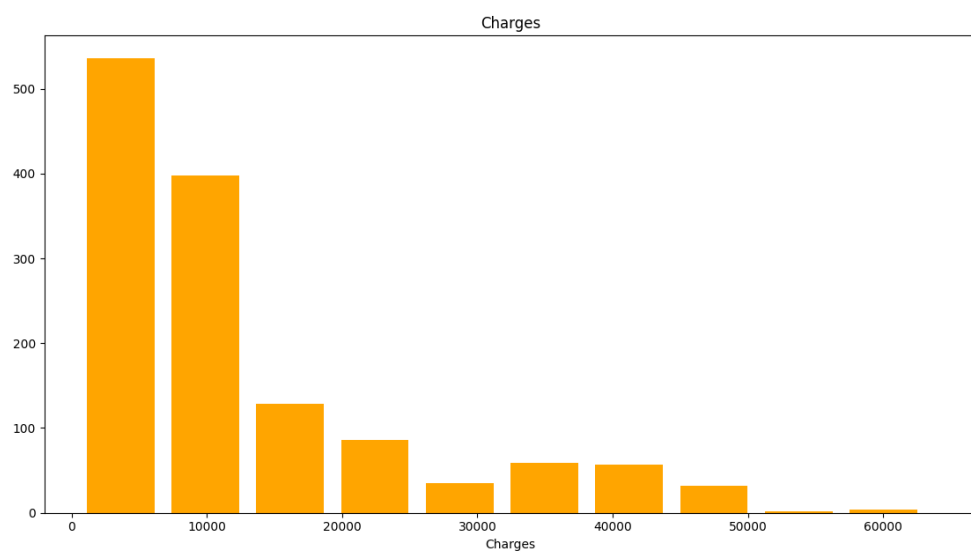
— □ ×



x=37.94 y=186.7

Figure 1

— □ ×



x=2.008e+04 y=544.
