

**YOUTUBE LINK:** <https://youtu.be/kxajGlChVRs>

**GITHUB:** <https://github.com/Harishwar-reddi/ICP-4>

Q1

```
[33] import pandas as pd

# Read File
url = 'https://drive.google.com/uc?id={}'.format('19jhAQZno1RpcFpJAimU0KDYtq-QDnLi5')
df = pd.read_csv(url)

description = df.describe()
print(description)
#nulls
null_values = df.isnull().sum()
print(null_values)

df.fillna(df.mean(numeric_only=True), inplace=True)

aggregated_data = df[['Duration', 'Calories']].agg(['min', 'max', 'count', 'mean'])
print(aggregated_data)

filtered_data = df[(df['Calories'] > 500) & (df['Calories'] < 1000)]

filtered_data_2 = df[(df['Calories'] > 500) & (df['Pulse'] < 100)]

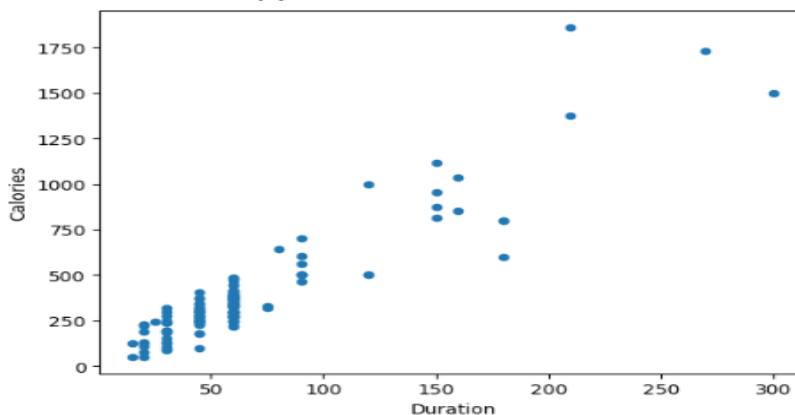
df_modified = df.drop(columns=['Maxpulse'])

#drop
df.drop(columns=['Maxpulse'], inplace=True)

#convert
df['Calories'] = df['Calories'].astype(int)

#plot
df.plot.scatter(x='Duration', y='Calories')
```

```
count    Duration    Pulse    Maxpulse    Calories
mean    63.846154    107.461538    134.047337    375.790244
std     42.299949     14.510259     16.450434     266.379919
min      15.000000     80.000000     100.000000     50.300000
25%      45.000000    100.000000     124.000000     250.925000
50%      60.000000    105.000000     131.000000     318.600000
75%      60.000000    111.000000     141.000000     387.600000
max     300.000000    159.000000     184.000000    1860.400000
Duration    0
Pulse       0
Maxpulse    0
Calories    5
dtype: int64
min    Duration    Calories
max    300.000000    1860.400000
count    169.000000    169.000000
mean     63.846154    375.790244
<Axes: xlabel='Duration', ylabel='Calories'>
```



Q2

1

```
import matplotlib.pyplot as plt

# Data
languages = ['Java', 'Python', 'PHP', 'JavaScript', 'C#', 'C++']
popularity = [22.2, 17.6, 8.8, 8, 7.7, 6.7]

# Create pie chart
colors = ['blue', 'orange', 'green', 'red', 'purple', 'brown']
explode = (0.1, 0, 0, 0, 0, 0)

plt.figure(figsize=(10, 7))
plt.pie(popularity, explode=explode, labels=languages, colors=colors, autopct='%1.1f%%', shadow=True, startangle=140)
plt.title('Popularity of Programming Languages')
plt.axis('equal') # Equal aspect ratio ensures that pie is drawn as a circle.
plt.show()
```

