In [122]:
```
import pandas as pd
```

Data Frame

In [278]:
```
#Exercise 1:Create a dataframe with the following columns: name, age, and gender.
#The dataframe should have 10 rows of data, with the following values

# Create a dictionary with the data
data = {"Name": ['Alice', 'Bob', 'Charlie', 'David', 'Eve', 'Frank', 'Grace', 'Hannah', 'Ivy', 'Jack'],
       "Age":[25, 30, 22, 35, 28, 40, 29, 26, 24, 32],
        "Gender": ['Female', 'Male', 'Male', 'Male', 'Female', 'Male', 'Female', 'Female', 'Female', 'Male']
       }

# Create a DataFrame
df = pd.DataFrame(data)
df
```

Out[278]:

	Name	Age	Gender
0	Alice	25	Female
1	Bob	30	Male
2	Charlie	22	Male
3	David	35	Male
4	Eve	28	Female
5	Frank	40	Male
6	Grace	29	Female
7	Hannah	26	Female
8	Ivy	24	Female
9	Jack	32	Male

In [279]:
```
#Exercise 2:Add a new column to the data frame created in question 1, called occupation. The values for
#this column should be Programmer, Manager, and Analyst, corresponding to the rows in the dataframe.

# Add a new 'occupation' column
df["Occupation"] = (['Programmer', 'Manager', 'Analyst','Programmer', 'Manager', 'Analyst',
                     'Programmer', 'Manager', 'Analyst','Programmer'])

df
```

Out[279]:

	Name	Age	Gender	Occupation
0	Alice	25	Female	Programmer
1	Bob	30	Male	Manager
2	Charlie	22	Male	Analyst
3	David	35	Male	Programmer
4	Eve	28	Female	Manager
5	Frank	40	Male	Analyst
6	Grace	29	Female	Programmer
7	Hannah	26	Female	Manager
8	Ivy	24	Female	Analyst
9	Jack	32	Male	Programmer

In [280]:
```
#Exercise 3:Select the rows of the dataframe where the age is greater than or equal to 30.
selected_rows = df[df['Age'] >= 30]
selected_rows
```

Out[280]:

	Name	Age	Gender	Occupation
1	Bob	30	Male	Manager
3	David	35	Male	Programmer
5	Frank	40	Male	Analyst
9	Jack	32	Male	Programmer

In [282]:
```
#Exercise 4:Sort the data frame by age in descending order
sorted_df = df.sort_values(by='Age', ascending=False)
sorted_df
```

Out[282]:

	Name	Age	Gender	Occupation
5	Frank	40	Male	Analyst
3	David	35	Male	Programmer
9	Jack	32	Male	Programmer
1	Bob	30	Male	Manager
6	Grace	29	Female	Programmer
4	Eve	28	Female	Manager
7	Hannah	26	Female	Manager
0	Alice	25	Female	Programmer
8	Ivy	24	Female	Analyst

2	Charlie	22	Male	Analyst

In [ ]: