

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

2 Charlie 22 Male Analyst

In []: