import pandas as pd

df = pd.read\_csv("dataset4.csv")

print("Original DataFrame:")

print(df)

#Filter employees from Pune

pune\_employees = df[df['City'] == 'Pune']

print("Employees from Pune:")

print(pune\_employees)

#Calculate the average salary

average\_salary = df['Salary'].mean()

print("Average Salary:", average\_salary)

#Count employees by gender

gender\_counts = df['Gender'].value\_counts()

print("Employee Gender Counts:")

print(gender\_counts)

#Sort employees by salary in descending order

sorted\_df = df.sort\_values('Salary', ascending=False)

print("Employees Sorted by Salary:")

print(sorted\_df)

#Group employees by designation and calculate the average salary for each group

designation\_salary = df.groupby('Designation')['Salary'].mean()

print("Average Salary by Designation:")

print(designation\_salary)

#Add a new column 'Age' with default value 0

df['Age'] = 0

print("DataFrame with 'Age' Column:")

print(df)

#Select only the 'Name' and 'Salary' columns

selected\_columns = df[['Name', 'Salary']]

print("Selected Columns:")

print(selected\_columns)

#Filter employees with a salary greater than 100,000

high\_salary\_employees = df[df['Salary'] > 100000]

print("Employees with High Salary:")

print(high\_salary\_employees)

# Calculate the total salary for each city

city\_salary\_total = df.groupby('City')['Salary'].sum()

print("Total Salary by City:")

print(city\_salary\_total)

# Calculate the age based on the current year and assuming all employees are born in 1980

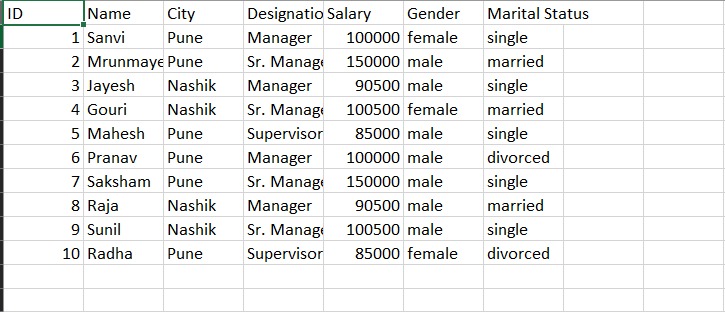
current\_year = 2023

df['Age'] = current\_year - 1980

print("DataFrame with Age Column:")

print(df)

Dataset:



OUTPUT:

[Running] python -u "e:\\_school\sem 2\EDS\assign\_4.py"

Original DataFrame:

   ID       Name    City  Designation  Salary  Gender Marital Status

0   1      Sanvi    Pune      Manager  100000  female         single

1   2  Mrunmayee    Pune  Sr. Manager  150000    male        married

2   3     Jayesh  Nashik      Manager   90500    male         single

3   4      Gouri  Nashik  Sr. Manager  100500  female        married

4   5     Mahesh    Pune   Supervisor   85000    male         single

5   6     Pranav    Pune      Manager  100000    male       divorced

6   7    Saksham    Pune  Sr. Manager  150000    male         single

7   8       Raja  Nashik      Manager   90500    male        married

8   9      Sunil  Nashik  Sr. Manager  100500    male         single

9  10      Radha    Pune   Supervisor   85000  female       divorced

Employees from Pune:

   ID       Name  City  Designation  Salary  Gender Marital Status

0   1      Sanvi  Pune      Manager  100000  female         single

1   2  Mrunmayee  Pune  Sr. Manager  150000    male        married

4   5     Mahesh  Pune   Supervisor   85000    male         single

5   6     Pranav  Pune      Manager  100000    male       divorced

6   7    Saksham  Pune  Sr. Manager  150000    male         single

9  10      Radha  Pune   Supervisor   85000  female       divorced

Average Salary: 105200.0

Employee Gender Counts:

Gender

male      7

female    3

Name: count, dtype: int64

Employees Sorted by Salary:

   ID       Name    City  Designation  Salary  Gender Marital Status

1   2  Mrunmayee    Pune  Sr. Manager  150000    male        married

6   7    Saksham    Pune  Sr. Manager  150000    male         single

3   4      Gouri  Nashik  Sr. Manager  100500  female        married

8   9      Sunil  Nashik  Sr. Manager  100500    male         single

0   1      Sanvi    Pune      Manager  100000  female         single

5   6     Pranav    Pune      Manager  100000    male       divorced

2   3     Jayesh  Nashik      Manager   90500    male         single

7   8       Raja  Nashik      Manager   90500    male        married

4   5     Mahesh    Pune   Supervisor   85000    male         single

9  10      Radha    Pune   Supervisor   85000  female       divorced

Average Salary by Designation:

Designation

Manager         95250.0

Sr. Manager    125250.0

Supervisor      85000.0

Name: Salary, dtype: float64

DataFrame with 'Age' Column:

   ID       Name    City  Designation  Salary  Gender Marital Status  Age

0   1      Sanvi    Pune      Manager  100000  female         single    0

1   2  Mrunmayee    Pune  Sr. Manager  150000    male        married    0

2   3     Jayesh  Nashik      Manager   90500    male         single    0

3   4      Gouri  Nashik  Sr. Manager  100500  female        married    0

4   5     Mahesh    Pune   Supervisor   85000    male         single    0

5   6     Pranav    Pune      Manager  100000    male       divorced    0

6   7    Saksham    Pune  Sr. Manager  150000    male         single    0

7   8       Raja  Nashik      Manager   90500    male        married    0

8   9      Sunil  Nashik  Sr. Manager  100500    male         single    0

9  10      Radha    Pune   Supervisor   85000  female       divorced    0

Selected Columns:

        Name  Salary

0      Sanvi  100000

1  Mrunmayee  150000

2     Jayesh   90500

3      Gouri  100500

4     Mahesh   85000

5     Pranav  100000

6    Saksham  150000

7       Raja   90500

8      Sunil  100500

9      Radha   85000

Employees with High Salary:

   ID       Name    City  Designation  Salary  Gender Marital Status  Age

1   2  Mrunmayee    Pune  Sr. Manager  150000    male        married    0

3   4      Gouri  Nashik  Sr. Manager  100500  female        married    0

6   7    Saksham    Pune  Sr. Manager  150000    male         single    0

8   9      Sunil  Nashik  Sr. Manager  100500    male         single    0

Total Salary by City:

City

Nashik    382000

Pune      670000

Name: Salary, dtype: int64

DataFrame with Age Column:

   ID       Name    City  Designation  Salary  Gender Marital Status  Age

0   1      Sanvi    Pune      Manager  100000  female         single   43

1   2  Mrunmayee    Pune  Sr. Manager  150000    male        married   43

2   3     Jayesh  Nashik      Manager   90500    male         single   43

3   4      Gouri  Nashik  Sr. Manager  100500  female        married   43

4   5     Mahesh    Pune   Supervisor   85000    male         single   43

5   6     Pranav    Pune      Manager  100000    male       divorced   43

6   7    Saksham    Pune  Sr. Manager  150000    male         single   43

7   8       Raja  Nashik      Manager   90500    male        married   43

8   9      Sunil  Nashik  Sr. Manager  100500    male         single   43

9  10      Radha    Pune   Supervisor   85000  female       divorced   43

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