Importing the Pandas Library

```
# Importing the Pandas Library
import pandas as pd
```

Checking the version of pandas

```
# Cheching the Version of Pandas
print(pd.__version__)
```

```
1.5.3
```

```
data = {'Name': ['Abba', 'Abdullahi', 'Abubakar', 'Adamu', 'Affan', 'Aisha', 'Aliyu', 'Amina', 'Amir', 'Auwal'],
        'Reg no': [1, 2, 3, 4, 5, 6, 7, 8, 9, 10],
        'Paper I': [61, 62, 58, 67, 60, 69, 60, 65, 57, 57],
        'Paper II': [62, 51, 55, 62, 65, 65, 59, 46, 56, 57],
        'Paper III': [61, 43, 44, 53, 54, 56, 57, 50, 55, 59]}
```

Creat a DataFrame from the dictionary

```
# Creat a DataFrame from the dictionary
df = pd.DataFrame(data)
```

Display the DataFrame

```
print(df)
```

```
         Name  Reg no  Paper I  Paper II  Paper III
0        Abba       1       61        62         61
1   Abdullahi       2       62        51         43
2    Abubakar       3       58        55         44
3      Adamu        4       67        62         53
4      Affan        5       60        65         54
5      Aisha        6       69        65         56
6      Aliyu        7       60        59         57
7      Amina        8       65        46         50
8       Amir        9       57        56         55
9      Auwal       10       57        57         59
```

```
# Get basic information about the DataFrame
print(df.info())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 5 columns):
 #   Column     Non-Null Count  Dtype 
---  ------     --------------  ----- 
 0   Name       10 non-null     object
 1   Reg no     10 non-null     int64 
 2   Paper I    10 non-null     int64 
 3   Paper II   10 non-null     int64 
 4   Paper III  10 non-null     int64 
dtypes: int64(4), object(1)
memory usage: 528.0+ bytes
None
```

Calculate Descriptive Statistics

```
# Calculate descriptive statistics
print(df.describe())
```

```
          Reg no    Paper I   Paper II  Paper III
count  10.00000  10.000000  10.000000   10.00000
mean    5.50000  61.600000  57.800000   53.20000
std     3.02765   4.168666   6.124632    5.95912
min     1.00000  57.000000  46.000000   43.00000
25%     3.25000  58.500000  55.250000   50.75000
50%     5.50000  60.500000  58.000000   54.50000
75%     7.75000  64.250000  62.000000   56.75000
max    10.00000  69.000000  65.000000   61.00000
```

```
print(df.mean())
```

```
Reg no        5.5
Paper I      61.6
Paper II     57.8
Paper III    53.2
dtype: float64
<ipython-input-54-f98cceecb4a0>:1: FutureWarning: The default value of numeric_only in DataFrame.mean is deprecated. In a future
  print(df.mean())
```

Filter rows based on conditions

+ Code + Text

```
# Filter rows based on condition
filtered_df = df[df['Paper II'] > 50]
```

```
filtered_df = df['Paper I'] > 60
```

```
print(filtered_df)
```

```
0     True
1     True
2    False
3     True
4    False
5     True
6    False
7     True
8    False
9    False
Name: Paper I, dtype: bool
```

```
filtered_df = df[df["Paper III"] >= 60]
```

```
print(filtered_df)
```

```
0    61
1    43
2    44
3    53
4    54
5    56
6    57
7    50
8    55
9    59
Name: Paper III, dtype: int64
```

```
filtered_df = df[df == 50]
```

```
print(filtered_df)
```

```
   Name  Reg no  Paper I  Paper II  Paper III
0  NaN     NaN      NaN       NaN        NaN
1  NaN     NaN      NaN       NaN        NaN
2  NaN     NaN      NaN       NaN        NaN
```

```
3  NaN     NaN      NaN       NaN        NaN
4  NaN     NaN      NaN       NaN        NaN
5  NaN     NaN      NaN       NaN        NaN
6  NaN     NaN      NaN       NaN        NaN
7  NaN     NaN      NaN       NaN       50.0
8  NaN     NaN      NaN       NaN        NaN
9  NaN     NaN      NaN       NaN        NaN
```

```
filtered_df = df['Paper I']
```

```
print(filtered_df)
```

```
0    61
1    62
2    58
3    67
4    60
5    69
6    60
7    65
8    57
9    57
Name: Paper I, dtype: int64
```

```
filtered_df = df['Paper I'] >= 60
```

```
print(filtered_df)
```

```
0     True
1     True
2    False
3     True
4     True
5     True
6     True
7     True
8    False
9    False
Name: Paper I, dtype: bool
```

```
filtered_df = df['Paper III']
```

```
print(filtered_df)
```

```
0    61
1    43
2    44
3    53
4    54
5    56
6    57
7    50
8    55
9    59
Name: Paper III, dtype: int64
```