In [1]:
```
import pandas as pd
data = {"name": ["Smith", "Kohli", "Kane", "Root"], "age": [23, 24, 25, 26]}
df = pd.DataFrame(data)
print(df)
```

```
    name  age
0  Smith   23
1  Kohli   24
2   Kane   25
3   Root   26
```

In [2]:
```
import pandas as pd
s = pd.Series([1, 3, 5, 7, 9])
print(s)
```

```
0    1
1    3
2    5
3    7
4    9
dtype: int64
```

In [3]:
```
import pandas as pd
data = [10, 20, 30, 40, 50]
df = pd.DataFrame(data, columns=["Numbers"])
print(df)
```

```
   Numbers
0       10
1       20
2       30
3       40
4       50
```

In [4]:
```
import pandas as pd
data = {"col1": [1, 2, 3], "col2": [4, 5, 6]}
df = pd.DataFrame(data)
print(df.head(2))
```

```
   col1  col2
0     1     4
1     2     5
```

In [5]:
```
import pandas as pd
s = pd.Series([1, 2, 3, 4, 5], index=["a", "b", "c", "d", "e"])
print(s)
```

```
a    1
b    2
c    3
d    4
e    5
dtype: int64
```

In [6]:
```
import pandas as pd
s = pd.Series([10, 20, 30, 40, 50])
print(s[1:4])
```

```
1    20
2    30
3    40
dtype: int64
```

In [10]:
```
import pandas as pd
data = {"Product": ["A", "B", "C"], "Price": [10, 20, 30], "Quantity": [100, 150, 200]
df = pd.DataFrame(data)
print(df)
```

```
  Product  Price  Quantity
0       A     10       100
1       B     20       150
2       C     30       200
```

In [11]:
```
import pandas as pd
data = {"A": [1, 2, 3], "B": [4, 5, 6]}
df = pd.DataFrame(data)
df['C'] = df['A'] + df['B']
print(df)
```

```
   A  B  C
0  1  4  5
1  2  5  7
2  3  6  9
```

In [12]:
```
import pandas as pd
data = {"Name": ["Smith", "Kohli", "Root"], "Age": [25, 30, 35], "Score": [85, 90, 95]
df = pd.DataFrame(data)
df = df.set_index("Name")
print(df)
```

```
       Age  Score
Name
Smith   25     85
Kohli   30     90
Root    35     95
```

In [13]:
```
import pandas as pd
data = {"X": [10, 20, 30], "Y": [40, 50, 60]}
df = pd.DataFrame(data)
df["Z"] = df["X"] * df["Y"]
print(df)
```

```
    X   Y     Z
0  10  40   400
1  20  50  1000
2  30  60  1800
```

In [17]:
```
import pandas as pd
data = {"Name": ["Smith", "Smriti", "Kohli"], "Age": [28, 24, 32], "Gender": ["Male",
df = pd.DataFrame(data)
df = df.drop(columns=["Gender"])
print(df)
```

```
     Name  Age
0   Smith   28
1  Smriti   24
2   Kohli   32
```

In [18]:
```
import pandas as pd
data = {"Name": ["Smith", "Kane", "Root"], "Age": [28, 24, 32], "Score": [85, 88, 92]}
df = pd.DataFrame(data)
df = df[df["Age"] > 25]
print(df)
```

```
    Name  Age  Score
0  Smith   28     85
2   Root   32     92
```

In [21]:
```
import pandas as pd
data = {"A": [5, 6, 7], "B": [10, 20, 30], "C": [50, 60, 70]}
df = pd.DataFrame(data)
df = df.rename(columns={"A": "catches","B":"Wickets","C":"Runs"})
print(df)
```

```
   catches  Wickets  Runs
0        5       10    50
1        6       20    60
2        7       30    70
```

In [22]:
```
import pandas as pd
data1 = {"ID": [1, 2, 3], "Name": ["Smith", "Ben", "Jana"]}
data2 = {"ID": [1, 2, 3], "Score": [90, 85, 88]}
df1 = pd.DataFrame(data1)
df2 = pd.DataFrame(data2)
df = pd.merge(df1, df2, on="ID")
print(df)
```

```
   ID   Name  Score
0   1  Smith     90
1   2    Ben     85
2   3   Jana     88
```

In [23]:
```
import pandas as pd
data = {"A": [1, 2, 3], "B": [4, 5, 6], "C": [7, 8, 9]}
df = pd.DataFrame(data)
df["D"] = df.sum(axis=1)
print(df)
```

```
   A  B  C   D
0  1  4  7  12
1  2  5  8  15
2  3  6  9  18
```

In [24]:
```
import pandas as pd
data = {"A": [3, 2, 1], "B": [6, 5, 4], "C": [9, 8, 7]}
df = pd.DataFrame(data)
df = df.sort_values(by="A", ascending=False)
print(df)
```

```
   A  B  C
0  3  6  9
1  2  5  8
2  1  4  7
```

In [25]:
```
import pandas as pd
data = {"A": [1, 2, 3], "B": [4, 5, 6], "C": [7, 8, 9]}
df = pd.DataFrame(data)
df["B"] = df["B"].apply(lambda x: x * 2)
print(df)
```

```
   A   B  C
0  1   8  7
1  2  10  8
2  3  12  9
```

In [26]:
```
import pandas as pd
data = {"Product": ["A", "B", "C", "A"], "Price": [10, 20, 30, 40]}
df = pd.DataFrame(data)
grouped = df.groupby("Product").mean()
print(grouped)
```

```
         Price
Product
A         25.0
B         20.0
C         30.0
```

In [29]:
```
import pandas as pd
data = {"Name": ["Jana", "Dhanshu", "Devi", "Mahi"], "Score": [85, 90, 95, 88]}
df = pd.DataFrame(data)
pivot = df.pivot_table(values="Score", index="Name", aggfunc="mean")
print(pivot)
```

```
         Score
Name
Devi        95
Dhanshu     90
Jana        85
Mahi        88
```

In [30]:
```
import pandas as pd
data = {"A": [1, 2, 3], "B": [None, 2, 3]}
df = pd.DataFrame(data)
df.fillna(0, inplace=True)
print(df)
```

```
   A    B
0  1  0.0
1  2  2.0
2  3  3.0
```

In [ ]: