In [6]:
```python
import pandas as pd

# Creating the DataFrame
data = {
    "Employee": ["John", "Alice", "Bob", "Emma"],
    "Department": ["IT", "HR", "Finance", "IT"],
    "Salary": [60000, 55000, 70000, 72000],
    "Age": [30, 28, 35, 32]
}

df = pd.DataFrame(data)

# 1. Display the first two rows of the DataFrame
print("First two rows of the DataFrame:")
print(df.head(2))

# 2. Add a new column "Experience" with values [5, 3, 7, 6]
df["Experience"] = [5, 3, 7, 6]

print("\nDataFrame after adding Experience column:")
print(df)

# 3. Find the average salary of all employees
average_salary = df["Salary"].mean()
print(f"\nAverage salary of all employees: {average_salary}")
```

```
First two rows of the DataFrame:
  Employee Department  Salary  Age
0     John         IT   60000   30
1    Alice         HR   55000   28

DataFrame after adding Experience column:
  Employee Department  Salary  Age  Experience
0     John         IT   60000   30           5
1    Alice         HR   55000   28           3
2      Bob    Finance   70000   35           7
3     Emma         IT   72000   32           6

Average salary of all employees: 64250.0
```

In [9]:
```python
# Creating a DataFrame for students
students_data = {
    "Name": ["Ram", "Vishal", "sid", "Vasu", "Rahul"],
    "Math": [85, 78, 90, 88, 76],
    "Science": [92, 89, 85, 95, 80],
    "English": [80, 85, 78, 82, 88]
}

students_df = pd.DataFrame(students_data)

# 1. Display all students who scored more than 80 in Math
high_math_scores = students_df[students_df["Math"] > 80]
print("\nStudents who scored more than 80 in Math:")
print(high_math_scores)

# 2. Sort the DataFrame in descending order based on Science scores
sorted_science_df = students_df.sort_values(by="Science", ascending=False)
print("\nDataFrame sorted by Science scores in descending order:")
print(sorted_science_df)

# 3. Find the student with the highest English score
highest_english_student = students_df.loc[students_df["English"].idxmax()]
print("\nStudent with the highest English score:")
print(highest_english_student)
```

```
Students who scored more than 80 in Math:
   Name  Math  Science  English
0   Ram    85       92       80
2   sid    90       85       78
3  Vasu    88       95       82

DataFrame sorted by Science scores in descending order:
     Name  Math  Science  English
3    Vasu    88       95       82
0     Ram    85       92       80
1  Vishal    78       89       85
2     sid    90       85       78
4   Rahul    76       80       88

Student with the highest English score:
Name       Rahul
Math          76
Science       80
English       88
Name: 4, dtype: object
```

In [ ]: