

Scenario: You work for a real estate agency and have been given a dataset containing information about properties for sale. The dataset is stored in a Pandas DataFrame named `property_data`. The DataFrame has columns for property ID, location, number of bedrooms, area in square feet, and listing price. Your task is to analyze the data and answer specific questions about the properties.

Question: Using Pandas DataFrame operations, how would you find the following information from the `property_data` DataFrame:

1. The average listing price of properties in each location.
2. The number of properties with more than four bedrooms.
3. The property with the largest area.

AIM: To analyze real-estate property data by calculating average prices per location, counting properties with more than four bedrooms, and identifying the property with the largest area.

PROCEDURE:

1. Create a pandas DataFrame containing property details such as location, bedrooms, area, and price.
2. Group the data by location and compute the mean price for each location.
3. Filter the DataFrame to count how many properties have more than 4 bedrooms.
4. Find the index of the maximum area value and display the corresponding property details.

```
main.py  Run  Output
1 import pandas as pd
2
3 df = pd.DataFrame({
4     "id": [1, 2, 3, 4],
5     "location": ["A", "A", "B", "C"],
6     "bedrooms": [3, 5, 4, 6],
7     "area": [1200, 2300, 1800, 3000],
8     "price": [250000, 400000, 320000, 550000]
9 })
10
11 print(df.groupby("location")["price"].mean())
12 print(len(df[df["bedrooms"]>4]))
13 print(df.loc[df["area"].idxmax()])
14
```

```
location
A    325000.0
B    320000.0
C    550000.0
Name: price, dtype: float64
2
id      4
location C
bedrooms 6
area     3000
price    550000
Name: 3, dtype: object

=== Code Execution Successful ===
```