

# How can I calculate the mode in a GroupBy object using Pandas?

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June 29, 2024

## RECOMMENDED CITATION

stats writer (2024). *How can I calculate the mode in a GroupBy object using Pandas?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=159426>

Pandas is a popular library in Python used for data analysis. It provides a powerful function, GroupBy, which allows data to be grouped and aggregated based on certain criteria. One of the most commonly used statistical measures in data analysis is the mode, which represents the most frequently occurring value in a dataset. In order to calculate the mode in a GroupBy object using Pandas, one can use the mode() method, which will return the mode value for each group. This allows for efficient and accurate analysis of data, making Pandas a valuable tool for data scientists and analysts.

## **Pandas: Calculate Mode in a GroupBy Object**

**You can use the following syntax to calculate the in a GroupBy object in pandas:**

```
df.groupby().agg(pd.Series.mode)
```

**The following example shows how to use this syntax in practice.**

**Example: Calculate Mode in a GroupBy Object**

**Suppose we have the following pandas DataFrame that shows the points scored by basketball players on various teams:**

```
import pandas as pd
```

```
#create DataFrame
```

```
df = pd.DataFrame({'team': ,
```

```
'points': })
```

```
#view DataFrame
```

```
print(df)
```

```
team points
```

```
0 A 10
```

```
1 A 10
```

```
2 A 12
```

```
3 A 15
```

```
4 B 19
```

```
5 B 23
```

```
6 C 20
```

```
7 C 20
```

```
8 C 26
```

We can use the following syntax to calculate the mode points value for each team:

```
#calculate mode points value for each team
```

```
df.groupby().agg(pd.Series.mode)
```

```
team
```

```
A 10
```

```
B
```

**C 20**

**Name: points, dtype: object**

**Here's how to interpret the output:**

**The mode points value for team A is 10. The mode points values for team B are 19 and 23. The mode points value for team C is 20.**

**If one group happens to have multiple modes then you can use the following syntax to display each mode on a different row:**

```
#calculate mode points value for each team  
df.groupby().apply(pd.Series.mode)
```

**team**

**A 0 10**

**B 0 19**

**1 23**

**C 0 20**

**Name: points, dtype: int64**

**Note: You can find the complete documentation for the GroupBy operation in pandas .**

## Additional Resources

**The following tutorials explain how to perform other common operations in pandas:**

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