

# How can I remove the MultiIndex in a pivot table using Pandas?

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## RECOMMENDED CITATION

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Pandas is a widely used Python library for data analysis and manipulation. It offers various functionalities for working with data, including the creation of pivot tables. A pivot table is a powerful tool for summarizing and analyzing data, but it can sometimes have a MultiIndex format, which can make it difficult to work with. To remove the MultiIndex in a pivot table using Pandas, one can use the `reset_index()` function. This function will convert the MultiIndex into a regular index, making the pivot table more manageable and easier to work with.

## Pandas: Remove MultiIndex in Pivot Table

To remove a multiIndex from a pandas pivot table, you can use the `values` argument along with the `reset_index()` function:

```
pd.pivot_table(df, index='col1', columns='col2', values='col3').reset_index()
```

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

### Example: Remove MultiIndex in Pandas Pivot Table

Suppose we have the following pandas DataFrame that contains information about various basketball players:

```
import pandas as pd
```

```
#create DataFrame
```

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

```
'position': ,  
'points': })
```

```
#view DataFrame  
print(df)
```

```
team position points
```

```
0 A G 4
```

```
1 A G 4
```

```
2 A F 6
```

```
3 A F 8
```

```
4 B G 9
```

```
5 B F 5
```

```
6 B F 5
```

```
7 B F 12
```

Now suppose we create the following pivot table to summarize the mean value of points by team and position:

```
#create pivot table to summarize mean points by team  
and position
```

```
pd.pivot_table(df, index='team', columns='position')
```

```
points
```

```
position F G
team
A 7.000000 4.0
B 7.333333 9.0
```

The resulting pivot table summarizes the mean value of points by team and position, but contains a multiIndex.

To remove the multiIndex, we can use the values argument within the pivot\_table() function and add reset\_index() to the end:

```
#create pivot table to summarize mean points by team
and position
pd.pivot_table(df, index='team', columns='position',
values='points').reset_index()
```

```
position team F G
0 A 7.000000 4.0
1 B 7.333333 9.0
```

The resulting pivot table summarizes the mean value of points by team and position and no longer has a multiIndex.

**Note that the `pivot_table()` function calculates the mean value by default.**

**To calculate a different metric, such as the sum, use the `aggfunc` argument as follows:**

```
#create pivot table to summarize sum of points by team  
and position  
pd.pivot_table(df, index='team', columns='position',  
values='points',  
aggfunc='sum').reset_index()
```

```
position team F G  
0 A 14 8  
1 B 22 9
```

**The resulting pivot table summarizes the sum of values of points by team and position and also has no `MultiIndex`.**

**Note: You can find the complete documentation for the `pandas pivot_table()` function .**

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