

# How can I select multiple columns in Pandas?

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## RECOMMENDED CITATION

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Pandas is a popular Python library used for data analysis and manipulation. It provides various functions and methods to efficiently handle and process large datasets. One of the common tasks in data analysis is selecting specific columns from a dataset. In Pandas, this can be done by using the "loc" or "iloc" methods. These methods allow users to select multiple columns by specifying the column names or indexes. Additionally, the "loc" method can also be used to select rows and columns simultaneously. This feature makes Pandas a powerful tool for selecting and manipulating data in a flexible and efficient manner.

## Select Multiple Columns in Pandas (With Examples)

There are three basic methods you can use to select multiple columns of a pandas DataFrame:

### Method 1: Select Columns by Index

```
df_new = df.iloc]
```

### Method 2: Select Columns in Index Range

```
df_new = df.iloc
```

### Method 3: Select Columns by Name

```
df_new = df]
```

The following examples show how to use each method with the following pandas DataFrame:

```
import pandas as pd

#create DataFrame
df = pd.DataFrame({'points': ,
'assists': ,
'rebounds': ,
'blocks': })
```

```
#view DataFrame
```

```
df
```

```
points assists rebounds blocks
```

```
0 25 5 11 4
```

```
1 12 7 8 7
```

```
2 15 7 10 7
```

```
3 14 9 6 6
```

```
4 19 12 6 5
```

```
5 23 9 5 8
```

```
6 25 9 9 9
```

```
7 29 4 12 10
```

Method 1: Select Columns by Index

The following code shows how to select columns in index positions 0, 1, and 3:

```
#select columns in index positions 0, 1, and 3  
df_new = df.iloc]
```

```
#view new DataFrame  
df_new
```

```
points assists blocks
```

```
0 25 5 4
```

```
1 12 7 7
```

```
2 15 7 7
```

```
3 14 9 6
```

```
4 19 12 5
```

```
5 23 9 8
```

```
6 25 9 9
```

```
7 29 4 10
```

**Notice that the columns in index positions 0, 1, and 3 are selected.**

**Note: The first column in a pandas DataFrame is located in position 0.**

**Method 2: Select Columns in Index Range**

**The following code shows how to select columns in the index range 0 to 3:**

```
#select columns in index range 0 to 3
```

```
df_new = df.iloc
```

```
#view new DataFrame
```

```
df_new
```

```
points assists rebounds
```

```
0 25 5 11
```

```
1 12 7 8
```

```
2 15 7 10
```

```
3 14 9 6
```

```
4 19 12 6
```

```
5 23 9 5
```

```
6 25 9 9
```

```
7 29 4 12
```

**Method 3: Select Columns by Name**

**The following code shows how to select columns by name:**

```
#select columns called 'points' and 'blocks'
```

```
df_new = df[
```

```
#view new DataFrame
```

**df\_new**

**points blocks**

**0 25 4**

**1 12 7**

**2 15 7**

**3 14 6**

**4 19 5**

**5 23 8**

**6 25 9**

**7 29 10**

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