

How can I add multiple columns to a Pandas DataFrame?

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Adding multiple columns to a Pandas DataFrame can be achieved by using the "assign" function. This function allows for the creation of new columns and the assignment of values to those columns. The syntax for this is as follows: `df.assign(column_name1=value1, column_name2=value2, ...)`. This will add the specified columns to the DataFrame with the corresponding values. Additionally, the "insert" function can be used to insert columns at a specific position within the DataFrame. Both of these methods provide a simple and efficient way to add multiple columns to a Pandas DataFrame.

Add Multiple Columns to Pandas DataFrame

You can use the following methods to add multiple columns to a pandas DataFrame:

Method 1: Add Multiple Columns that Each Contain One Value

```
df] = pd.DataFrame([], index=df.index)
```

Method 2: Add Multiple Columns that Each Contain Multiple Values

```
df =
```

```
df =
```

```
df =
```

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

```
import pandas as pd
import numpy as np

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

```
#view DataFrame
df
```

```
team points assists
0 A 18 5
1 B 22 7
2 C 19 7
3 D 14 9
4 E 14 12
5 F 11 9
```

Method 1: Add Multiple Columns that Each Contain One Value

The following code shows how to add three new columns to the pandas DataFrame in which each new column only contains one value:

```
#add three new columns to DataFrame
```

```
df] = pd.DataFrame([], index=df.index)
```

```
#view updated DataFrame
```

```
df
```

```
team points assists new1 new2 new3
```

```
0 A 18 5 4 hey NaN
```

```
1 B 22 7 4 hey NaN
```

```
2 C 19 7 4 hey NaN
```

```
3 D 14 9 4 hey NaN
```

```
4 E 14 12 4 hey NaN
```

```
5 F 11 9 4 hey NaN
```

Notice that three new columns - new1, new2, and new3 - have been added to the DataFrame.

Also notice that each new column contains only one specific value.

Method 2: Add Multiple Columns that Each Contain Multiple Values

The following code shows how to add three new columns to the pandas DataFrame in which each new column contains multiple values:

```
#add three new columns to DataFrame
```

```
df =
```

```
df =
```

```
df =
```

```
#view updated DataFrame
```

```
df
```

```
team points assists new1 new2 new3
```

```
0 A 18 5 1 hi 12
```

```
1 B 22 7 5 hey 4
```

```
2 C 19 7 5 hey 4
```

```
3 D 14 9 4 hey 3
```

```
4 E 14 12 3 hello 6
```

```
5 F 11 9 6 yo 7
```

Notice that three new columns - new1, new2, and new3 - have been added to the DataFrame.

Also notice that each new column contains multiple values.

Additional Resources

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