

How can I check if a Pandas DataFrame is empty?

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June 25, 2024

RECOMMENDED CITATION

stats writer (2024). *How can I check if a Pandas DataFrame is empty?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=151998>

A Pandas DataFrame can be checked for emptiness by using the `empty` function, which returns a boolean value indicating whether the DataFrame contains any data or not. This function can be used to quickly determine if the DataFrame needs further processing or if it can be skipped. Additionally, the `shape` attribute can also be used to check the dimensions of the DataFrame, with an empty DataFrame having a shape of (0,0). These methods can be helpful in data analysis and manipulation tasks.

Check if a Pandas DataFrame is Empty (With Example)

You can use the following syntax to check if a pandas DataFrame is empty:

```
len(df.index) == 0
```

This particular syntax checks if the length of the index column in the DataFrame is equal to zero, which is equivalent to checking if the entire DataFrame is empty.

If the DataFrame is empty, this syntax will return True. Otherwise, it will return False.

If you would like to print custom text that tells you whether a DataFrame is empty, you can use a simple if else function:

```
if len(df.index) == 0:  
    print('df is empty')  
else:
```

```
print('df is not empty')
```

The following example shows how to use these functions in practice.

Example: Check if Pandas DataFrame is Empty

Suppose we have the following empty pandas DataFrame:

```
import pandas as pd
```

```
#create empty DataFrame
```

```
df = pd.DataFrame(columns=)
```

```
#view DataFrame
```

```
print(df)
```

Empty DataFrame

Columns:

Index:

We can use the following code to check if the pandas DataFrame is empty:

```
#check if DataFrame is empty
```

```
len(df.index) == 0
```

True

The function returns True, which tells us that the DataFrame is indeed empty.

We could also use the following code to print custom text that tells us whether or not the DataFrame is empty:

```
#check if DataFrame is empty and return output
```

```
if len(df.index) == 0:
```

```
print('df is empty')
```

```
else:
```

```
print('df is not empty')
```

```
df is empty
```

The output tells us that the DataFrame is empty.

By contrast, suppose we have a DataFrame that is not empty:

```
import pandas as pd
```

```
#create DataFrame
```

```
df_full = pd.DataFrame({'team': ,  
'points': ,  
'assists': ,  
'rebounds': })
```

```
#view DataFrame
```

```
print(df_full)
```

```
team points assists rebounds
```

```
0 A 18 5 11
```

```
1 B 22 7 8
```

```
2 C 19 7 10
```

```
3 D 14 9 6
```

```
4 E 14 12 6
```

```
5 F 11 9 5
```

```
6 G 20 9 9
```

```
7 H 28 4 12
```

We can use the `len()` function to check if the DataFrame is empty:

```
#check if DataFrame is empty
```

```
len(df_full.index) == 0
```

```
False
```

The function returns **False**, which tells us that the **DataFrame** is not empty.

And if we use an **if else** function, we can return custom output:

```
#check if DataFrame is empty and return output
if len(df_full.index) == 0:
    print('df is empty')
else:
    print('df is not empty')
```

df is not empty

The output tells us that the **DataFrame** is not empty.

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