

# How can I select columns in a Pandas DataFrame based on a specific condition?

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## RECOMMENDED CITATION

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Pandas DataFrame is a powerful tool for data analysis and manipulation. In order to select columns based on a specific condition, the user can use the built-in conditional selection feature in Pandas. This feature allows for the selection of columns that meet a certain criteria, such as a certain value or a specific data range. By using this feature, the user can easily filter and extract the desired data from the DataFrame, making it an efficient and effective method for data selection. This allows for more flexibility and accuracy in data analysis and decision making. Overall, the conditional selection feature in Pandas provides an efficient and convenient solution for selecting columns based on a specific condition.

## **Pandas: Select Columns Based on Condition**

**You can use the following methods to select columns in a pandas DataFrame by condition:**

### **Method 1: Select Columns Where At Least One Row Meets Condition**

**#select columns where at least one row has a value greater than 2df.loc**

### **Method 2: Select Columns Where All Rows Meet Condition**

**#select columns where all rows have a value greater than 2df.loc**

### **Method 3: Select Columns Where At Least One Row Meets Multiple Conditions**

**#select columns where at least one row has a value between 10 and 15df.loc**

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

```
import pandas as pd
```

```
#create DataFrame
```

```
df = pd.DataFrame({'apples': ,  
'oranges': ,  
'bananas': },  
index=)
```

```
#view DataFrame
```

```
print(df)
```

```
apples oranges bananas
```

```
Farm1 7 2 5
```

```
Farm2 3 0 0
```

```
Farm3 3 2 4
```

```
Farm4 4 0 0
```

```
Farm5 3 1 12
```

## Example 1: Select Columns Where At Least One Row Meets Condition

We can use the following code to select the columns in the DataFrame where at least one row in the column has a value greater than 2:

```
#select columns where at least one row has a value  
greater than 2  
df.loc
```

```
apples bananas
```

```
Farm1 7 5
```

```
Farm2 3 0
```

```
Farm3 3 4
```

```
Farm4 0 0
```

```
Farm5 3 12
```

Notice that the apples and bananas columns are returned because both of these columns have at least one row with a value greater than 2.

## Example 2: Select Columns Where All Rows Meet Condition

We can use the following code to select the columns in the DataFrame where every row in the column has a

**value greater than 2:**

```
#select columns where every row has a value greater than 2
```

```
df.loc
```

```
apples
```

```
Farm1 7
```

```
Farm2 3
```

```
Farm3 3
```

```
Farm4 4
```

```
Farm5 3
```

**Notice that only the apples column is returned because it is the only column where every row in the column has a value greater than 2.**

**Example 3: Select Columns Where At Least One Row Meets Multiple Conditions**

**We can use the following code to select the columns in the DataFrame where at least one row in the column has a value between 10 and 15:**

```
#select columns where every row has a value greater than 2
```

## **df.loc**

### **bananas**

**Farm1 5**

**Farm2 0**

**Farm3 4**

**Farm4 0**

**Farm5 12**

**Notice that only the bananas column is returned because it is the only column where at least one row in the column has a value between 10 and 15.**

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