

## Inspecting a DataFrame - Column Information

This document includes the question, the solution, and a breakdown of the code provided in the screenshot.

### Uploaded Screenshot

Below is the screenshot of the task:

The screenshot shows a web-based learning interface for a course on Data Manipulation with pandas. The exercise is titled "Inspecting a DataFrame". The instructions state: "When you get a new DataFrame to work with, the first thing you need to do is explore it and see what it contains. There are several useful methods and attributes for this." The instructions list several methods: 

- `.head()` returns the first few rows (the "head" of the DataFrame).
- `.info()` shows information on each of the columns, such as the data type and number of missing values.
- `.shape` returns the number of rows and columns of the DataFrame.
- `.describe()` calculates a few summary statistics for each column.

 The instructions also mention that `homelessness` is a DataFrame containing estimates of homelessness in each U.S. state in 2018, and that `pandas` is imported for you. The exercise is worth 25 XP and has 4 instructions, with 2/4 completed. A "Take Hint (-7 XP)" button is available. The code editor shows the following code: 

```
1 # Print the head of the homelessness data
2 print(homelessness.head())
3
4 # Print information about homelessness
5 print(_____)
```

 The output of the code is displayed in the IPython Shell: 

```
<script.py> output:
   region      state  individuals  family_members  state_pop
0  East South Central  Alabama      2578.0           864.0    4887681
1      Pacific      Alaska      1434.0           582.0     735139
2      Mountain    Arizona      7259.0          2686.0    7158024
3  West South Central  Arkansas      2280.0           432.0    3809733
4      Pacific  California    109008.0         28964.0   39461588
```

### Question

Print information about the column types and missing values in homelessness.

### Answer

```
# Print the head of the homelessness data
print(homelessness.head())
```

```
# Print information about homelessness
print(homelessness.info())
```

### Code Explanation

# Explanation of the code:

1. `print(homelessness.head())`: This prints the first five rows of the `homelessness` DataFrame for a quick preview.

2. ``print(homelessness.info())`` : This provides detailed information about the DataFrame, including:

- The data types of each column.
- The number of non-missing (non-null) values in each column.
- The memory usage of the DataFrame.