

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 browser window with a course page titled "Inspecting a DataFrame". The page contains instructions for a task and a code editor with a solution.

Task Instructions:

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.

- `.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.

`homelessness` is a DataFrame containing estimates of homelessness in each U.S. state in 2018. The `individual` column is the number of homeless individuals not part of a family with children. The `family_members` column is the number of homeless individuals part of a family with children. The `state_pop` column is the state's total population.

`pandas` is imported for you.

Instructions 2/4 (25 XP)

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

Solution Code (script.py):

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

Output:

```
<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    3689733
4 Pacific            California    109008.0         26964.0   39461588
```

Python Shell:

```
In [1]:
```

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.