

Sorting Rows by Region and Family Members

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 DataCamp course page titled "Sorting rows". The page includes instructions for sorting a DataFrame by multiple columns. The instructions are as follows:

- Sort on one column: `df.sort_values("breed")`
- Sort on multiple columns: `df.sort_values(["breed", "weight_kg"])`
- By combining `.sort_values()` with `.head()`, you can answer questions in the form, "What are the top cases where...?"
- homelessness is available and pandas is loaded as `pd`.

The exercise instructions are:

- Sort `homelessness` by the number of homeless individuals in the `individuals` column, from smallest to largest, and save this as `homelessness_ind`. Print the head of the sorted DataFrame.
- Sort `homelessness` by the number of homeless `family_members` in descending order, and save this as `homelessness_fam`.
- Sort `homelessness` first by region (ascending), and then by number of family members (descending). Save this as `homelessness_reg_fam`.

The solution code in the `script.py` file is:

```
1 # Sort homelessness by region, then descending family members
2 homelessness_reg_fam = ____
3
4 # Print the top few rows
5 print(homelessness_reg_fam.head())
```

The output of the code is shown in the `iPython Shell` window:

	region	state	individuals	family_members	state_pop
32	Mid-Atlantic	New York	39827.0	52878.0	19530351
4	Pacific	California	109008.0	28964.0	39461588
21	New England	Massachusetts	6811.0	13257.0	6882635
9	South Atlantic	Florida	21443.0	9587.0	21244317
43	West South Central	Texas	19199.0	6111.0	28628666

Question

Sort the homelessness DataFrame first by region (in ascending order), then by the number of family members (in descending order). Save this as `homelessness_reg_fam`. Print the head of the sorted DataFrame.

Answer

```
# Sort homelessness by region, then descending family members
homelessness_reg_fam = homelessness.sort_values(
    by=["region", "family_members"], ascending=[True, False]
)
```

```
# Print the top few rows
print(homelessness_reg_fam.head())
```

Code Explanation

Explanation of the code:

1. ``homelessness.sort_values(by=["region", "family_members"], ascending=[True, False])``: Sorts the ``homelessness`` DataFrame by two criteria:
 - ``region``: Sorted in ascending order.
 - ``family_members``: Sorted in descending order (indicated by ``False``).
2. ``homelessness_reg_fam``: Stores the sorted DataFrame for further use.
3. ``print(homelessness_reg_fam.head())``: Displays the first five rows of the sorted DataFrame to verify the sorting.