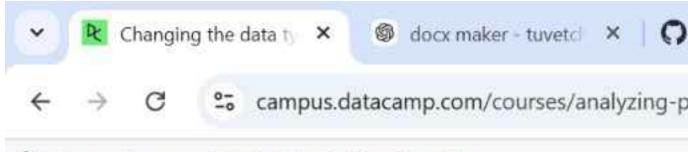# Changing the Data Type to Category

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▤ Exercise

Changing the data type to category

Since the `rating` column only has a few possible values, you'll change its data type to categ
also specify a logical order for the categories, which will be useful for future exercises.

⊘ Instructions

- Create a `CategoricalDtype` object called `cats` that lists the weather ratings in a logical
  that the categories should be treated as ordered.
- Use the `cats` object to change the data type of the `rating` column from object to categ
- Examine the head of the `rating` column to confirm that the categories are logically order

> ⚘ Take Hint (-30 XP)

Question:

Since the 'rating' column only has a few possible values, you'll change its data type to
category in order to store the data more efficiently. You'll also specify a logical order
for the categories, which will be useful for future exercises.

Instructions:
1. Create a CategoricalDtype object called `cats` that lists the weather ratings in logical order:
   'good', 'bad', 'worse'. Make sure to specify that the categories should be treated as ordered.
2. Use the `cats` object to change the data type of the `rating` column from object to category.
3. Examine the head of the `rating` column to confirm that the categories are logically ordered.

Correct Answer:

```
# Specify the logical order of the weather ratings
cats = pd.CategoricalDtype(['good', 'bad', 'worse'], ordered=True)

# Change the data type of 'rating' to category
weather['rating'] = weather['rating'].astype(cats)

# Examine the head of 'rating'
print(weather['rating'].head())
```

Explanation of the Code:

1. The `pd.CategoricalDtype` is used to define a new data type for the categorical column.
   - `['good', 'bad', 'worse']`: Defines the order of the categories.
   - `ordered=True`: Specifies that the order should be considered.

2. The `astype` method is used to convert the `rating` column into the newly defined
   categorical data type.

3. The `head` method is used to display the first few rows of the `rating` column, allowing

verification that the conversion has been successful and the categories are in the correct
logical order.