

Using .melt() to reshape government data - Corrected

The screenshot shows a web browser window with the URL `campus.datacamp.com/courses/joining-data-with-pandas/merging-ordered-and-time-series-data?ex=14`. The page is titled "Using .melt() to reshape government data". It contains instructions for an exercise, a code editor with the following Python code, and a Python Shell.

```
1 # Unpivot everything besides the year column
2 ur_tall = ____
3
4 # Create a date column using the month and year columns of ur_tall
5 ur_tall['date'] = pd.to_datetime(ur_tall['____'] + '-' + ____ + '-')
6
7 # Sort ur_tall by date in ascending order
8 ur_sorted = ____
9
10 # Plot the unempl_rate by date
11 ur_sorted.plot(____)
12 plt.show()
```

The Python Shell shows the output of the code, which is an empty list: `Out [1]: []`.

Question:

The US Bureau of Labor Statistics (BLS) often provides data series in an easy-to-read format. In this exercise, you will reshape a table of US unemployment rate data from the BLS into a format you can plot using `.melt()`. You will need to:

1. Unpivot all of the columns of `ur_wide` except 'year'. Ensure that the columns with the months and values are named 'month' and 'unempl_rate', respectively. Save the result as `ur_tall`.
2. Add a column to `ur_tall` named 'date', which combines the 'month' and 'year' columns into a datetime format.
3. Sort `ur_tall` by date and save as `ur_sorted`.
4. Plot 'unempl_rate' on the y-axis and 'date' on the x-axis.

Answer:

```
# Unpivot everything besides the year column
ur_tall = ur_wide.melt(
    id_vars=['year'],
    var_name='month',
    value_name='unempl_rate'
)
```

```
# Create a date column using the month and year columns of ur_tall
```

```
ur_tall['date'] = pd.to_datetime(
    ur_tall['month'] + '-' + ur_tall['year']
)

# Sort ur_tall by date in ascending order
ur_sorted = ur_tall.sort_values('date')

# Plot the unempl_rate by date
ur_sorted.plot(
    x='date',
    y='unempl_rate'
)
plt.show()
```