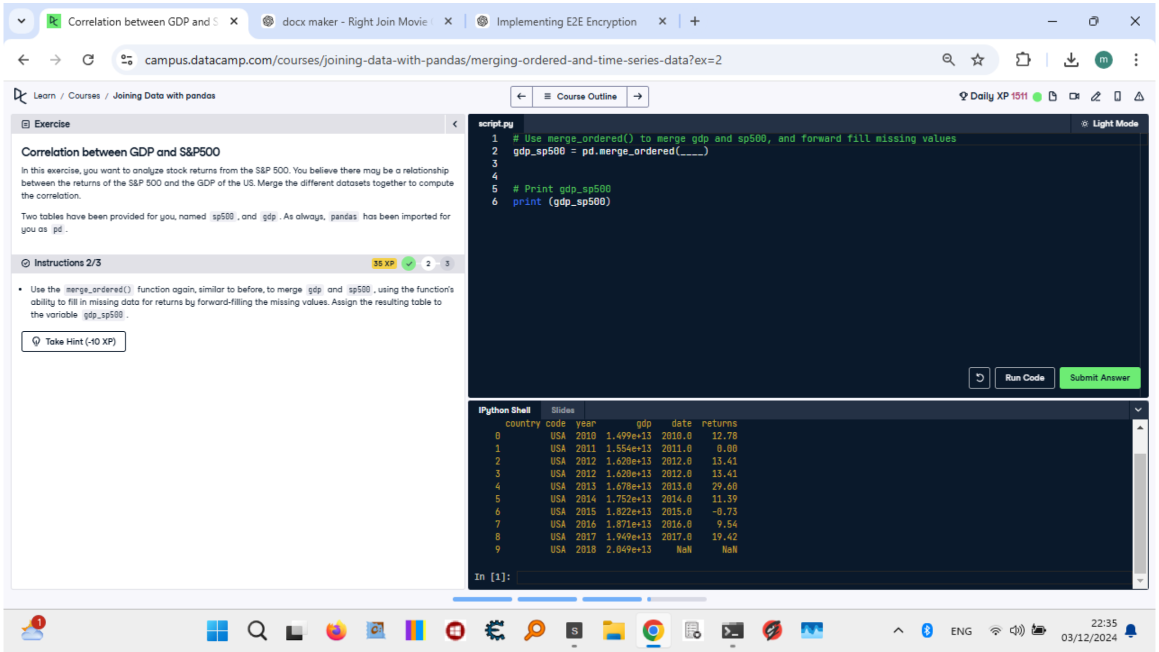
Correlation between GDP and S&P500



Question:

Use the merge_ordered() function again, similar to before, to merge gdp and sp500, using the function's ability to fill in missing data for returns by forward-filling the missing values. Assign the resulting table to the variable gdp_sp500.

Answer:

```
# Import pandas as pd
import pandas as pd

# Assuming gdp and sp500 dataframes are already loaded
# Use merge_ordered() to merge gdp and sp500, forward filling missing
values
gdp_sp500 = pd.merge_ordered(
    gdp, sp500,
    left_on='year',
    right_on='date',
    how='left',
    fill_method='ffill'  # Forward-fill the missing values
)

# Print gdp_sp500
print(gdp_sp500)
```

Code Explanation:

1. import pandas as pd:
   Import the pandas library, which is used for data manipulation and analysis.

2. gdp_sp500 = pd.merge_ordered(...):
   This line merges the gdp and sp500 dataframes using the 'merge_ordered' function. The 'left_on' and 'right_on' parameters specify the columns to merge on ('year' in gdp and 'date' in sp500). The 'how' parameter is set to 'left', ensuring all rows from gdp are preserved. The 'fill_method='ffill'' argument is used to forward-fill missing values by propagating the last valid data point.

3. print(gdp_sp500):
   This line displays the merged and processed dataframe.