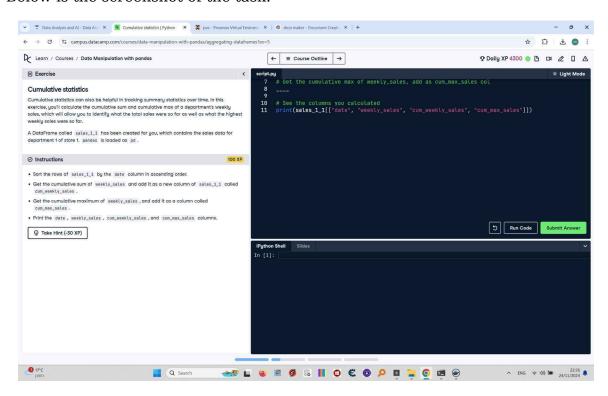
# **Cumulative Statistics (Solution)**

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:



### **Question**

- 1. Sort the rows of `sales 1 1` by the `date` column in ascending order.
- 2. Get the cumulative sum of `weekly\_sales` and add it as a new column of `sales 1 1` called `cum weekly sales`.
- 3. Get the cumulative maximum of `weekly\_sales` and add it as a column called `cum\_max\_sales`.
- 4. Print the `date`, `weekly\_sales`, `cum\_weekly\_sales`, and `cum\_max\_sales` columns.

### **Answer**

```
# Sort rows by date
sales_1_1 = sales_1_1.sort_values('date')

# Get the cumulative sum of weekly_sales
sales 1 1['cum weekly sales'] = sales 1 1['weekly sales'].cumsum()
```

```
# Get the cumulative maximum of weekly_sales
sales_1_1['cum_max_sales'] = sales_1_1['weekly_sales'].cummax()
# Print the specified columns
print(sales_1_1[['date', 'weekly_sales', 'cum_weekly_sales',
'cum max sales']])
```

## **Code Explanation**

# Explanation of the code:

- 1. `sales\_1\_1.sort\_values('date')`: Sorts the `sales\_1\_1` DataFrame by the `date` column in ascending order.
- 2. `sales\_1\_1['cum\_weekly\_sales'] = sales\_1\_1['weekly\_sales'].cumsum()`: Calculates the cumulative sum of the `weekly\_sales` column and adds it as a new column called `cum weekly sales`.
- 3. `sales\_1\_1['cum\_max\_sales'] = sales\_1\_1['weekly\_sales'].cummax()`: Calculates the cumulative maximum of the `weekly\_sales` column and adds it as a new column called `cum max sales`.
- 4. `print(sales\_1\_1[['date', 'weekly\_sales', 'cum\_weekly\_sales', 'cum\_max\_sales']])`: Prints the `date`, `weekly\_sales`, `cum\_weekly\_sales`, and `cum\_max\_sales` columns from the `sales\_1\_1` DataFrame.