

# Lab #5

## Instructions

With lab #5, your group will write a python program that allows you to manipulate a dataframe and produce a number of csv outputs as reports. Pay special attention to the format that need to be delivered in the output files.

## Submission Requirements

- Python .py file with no markdown language. Only Python Code and comments.
- Group Assignment: Only 1 assignment needs to be submitted for each group.
- You should seek to reduce redundancy in your code.
- Your outputs should match the supplied examples for column order.

## Task

- File: [http://drd.ba.ttu.edu/isqs3358/Labs/Lab5/security\\_sales\\_data.csv](http://drd.ba.ttu.edu/isqs3358/Labs/Lab5/security_sales_data.csv)
- Modify the dataframe using the following specification:
- Create a column “buyer\_state” extracting the middle characters from Buyer\_Code column.
- Create a column “seller\_state” extracting the middle characters from Seller\_Code column.
- Create a column “cost\_of\_goods” as defined by:
  - $\text{cost\_of\_goods} = \text{Price\_per\_unit} * \text{Quantity}$
- Create a column “profit\_markup” as defined by:
  - $\text{profit\_markup} = \text{cost\_of\_goods} * \text{profit\_markup\_percent}$
- Create a column “total\_sale” as defined by:
  - $\text{total\_sale} = \text{cost\_of\_goods} + \text{profit\_markup}$
- Create a column called “sales\_rank” encoded as:
  - $\text{total\_sale} > 4800$  as “High”
  - else “Low”
- Create the following CSV files (see lab\_5\_example.zip for definitions)
  - buyer\_line\_item\_report.csv – Contains a line item list of buyer data by buyer\_state
  - describe\_report.csv – contains the results of a describe command run on entire dataframe.
  - high\_sellers.csv – contains the results of all sellers marked as “High”.
  - high\_seller\_same\_state.csv – contains all rows where the seller is marked as high and the buyer and seller are in the same state

## Notes and Hints

- Inspect the lab\_5\_example.zip for DELIMITER and COLUMN orders for each file.
- All outputs should have pipe delimiters and no index
  - EXCEPT the describe\_report.csv which requires the index be included.

## Example

- Can be found in lab\_5\_example.zip found in this lab on blackboard.