Creating and Accessing Pandas DataFrames	
Course Code: CPE 031	Program: Computer Engineering
Course Title: Visualization and Data Analysis	Date Performed: October 15, 2024
Section: CPE21S4	Date Submitted: October 15, 2024
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Intended Learning Outcomes (ILO):

By the end of this laboratory session, learners will be able to

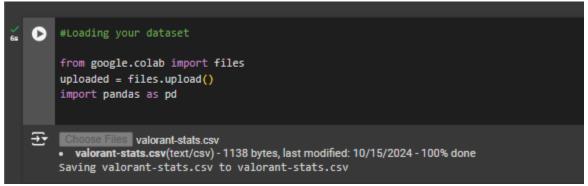
 Construct and manipulate Pandas DataFrames from various data structures (such as lists, dictionaries, and NumPy arrays) while demonstrating an understanding of DataFrame attributes and methods. This includes loading the dataset, creating DataFrames with appropriate column labels and accessing data from rows and columns.

Instructions:

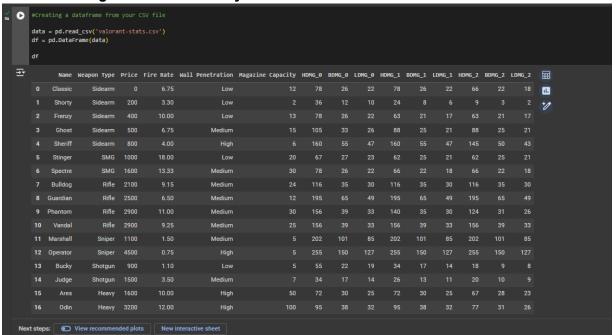
- Loading your dataset: Refer back to your chosen dataset from the PRELIM period.
 Whether you downloaded it or stored it in your Google Drive, you are required to load
 it into the <u>Google Colab</u>. Watch this <u>video</u> to learn more about how to read CSV files in
 Google Colab.(Take a screenshot to document successful execution.)
- 2. Creating a dataframe from your CSV file: Once you have successfully loaded your dataset, you need to create a dataframe from your uploaded CSV file.(Take a screenshot to document successful execution.)
- 3. Creating a dataframe from a dictionary of lists: Manually create a dictionary where each value is composed of a list from your original dataset, then load it into a dataframe, before printing it. You are required to provide at least five (5) observations in your list. (Take a screenshot to document successful execution.)
- 4. Creating a dataframe from a list of dictionaries: Manually create a list of dictionaries from your original dataset, then pass it into a dataframe, before printing it. You are required to provide at least five (5) observations in your list. (Take a screenshot to document successful execution.)
- 5. Selecting dataframe columns: Execute a method that would allow you to select a single and multiple dataframe columns. (Take a screenshot to document successful execution.)
- **6. Selecting dataframe rows:**Execute a method that would allow you to select a single and multiple dataframe rows using panda indexing and python indexing.

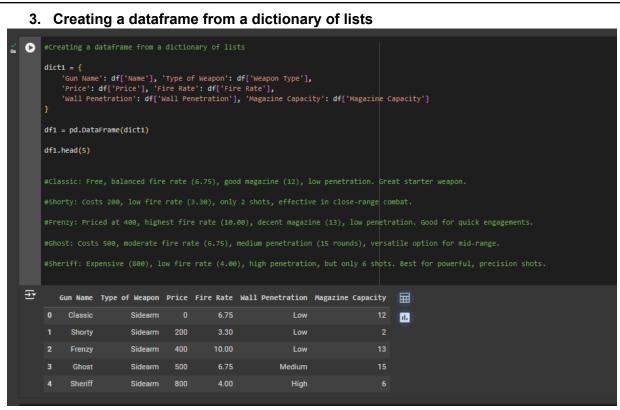


1. Loading your dataset

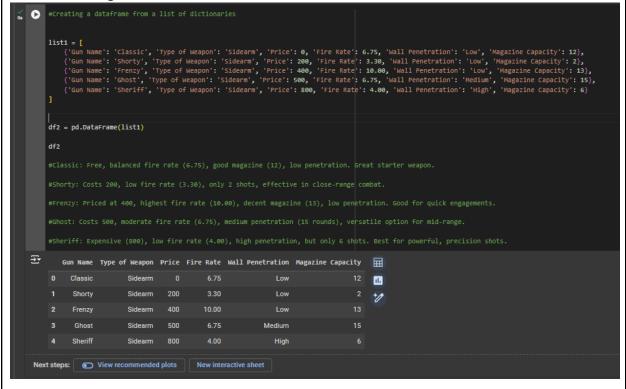


2. Creating a dataframe from your CSV file





4. Creating a dataframe from a list of dictionaries



5. Selecting dataframe columns

```
#Selecting dataframe columns

# Selecting a single column

single_column = df2['Gun Name']

print(single_column)

# 0 Classic
1 Shorty
2 Frenzy
3 Ghost
4 Sheriff
Name: Gun Name, dtype: object
```

```
# Selecting multiple columns
multiple_columns = df2[['Gun Name', 'Price']]
print(multiple_columns)

Gun Name Price
0 Classic 0
1 Shorty 200
2 Frenzy 400
3 Ghost 500
4 Sheriff 800
```

