**HW 4 PANDAS SUMMARY**

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**Dependencies and Setup**

*Import Libraries and Dataset.*

* import pandas as pd.
* import numpy as np
* import data set - Resources/purchase\_data.csv file

**Create Tables**

*Player Count*

* display number of players data frame.   
  *Purchasing Analysis (Total)*
* wrote code to calculate average price, number of purchases, and total revenue, and displayed data frame

## *Gender Demographics*

* Wrote code to calculate percentage and count of male and female players and to display table.

*Purchasing Analysis (Gender)*

* Wrote code to calculate purchase count, purchase average, purchase price average for gender and displayed in a table. .

*Age Demographics*

* Establish bins for ages
* Categorize the existing players using the age bins. Hint: use pd.cut()
* Calculate the numbers and percentages by age group
* Create a summary data frame to hold the results
* Optional: round the percentage column to two decimal points
* Display Age Demographics Table

*Purchasing Analysis (Age)*

* Bin the purchase data frame by age
* Run basic calculations
* Calculate Normalized Purchasing
* Convert to Data Frame
* Minor Data Munging
* Display the Age Table
* Create a summary data frame to hold the results
* Optional: give the displayed data cleaner formatting
* Display the summary data frame

*Top Spenders*

* Run basic calculations to obtain the results in the table below
* Create a summary data frame to hold the results
* Sort the total purchase value column in descending order
* Optional: give the displayed data cleaner formatting
* Display a preview of the summary data frame  
  *Most Popular Items*
* Retrieve the Item ID, Item Name, and Item Price columns
* Grouped by Item ID and Item Name. Performed calculations to obtain purchase count, item price, and total purchase value
* Created a summary data frame to hold the results
* Sorted the purchase count column in descending order
* Displayed a preview of the summary data frame