**Python Problems**

The dataset to be used for these exercises is attached (‘SalesKaggle3.csv’). This dataset was obtained from [Kaggle](https://www.kaggle.com/flenderson/sales-analysis) and shows historical sales and inventory data for a 6-month period. Answer for each of the questions below must be a result of Python code – you are free to use any platform, but Jupyter notebook is recommended. There are multiple ways to get to the same answer.

Good luck!

Before you begin, read the data as a pandas dataframe (Hint: you need to import pandas package).

1. How many rows and columns exist in the dataset?
2. What data type is each column?
3. How many unique values are there in each column?
4. Perform summary statistics for the entire dataset
5. Display the first 17 rows in the dataset. In a separate line of code display the last 9 rows of data
6. Are there any missing values in the data? What value is representing the missing value
7. What is the % of records that are active sales records vs. historical sales records? (Hint: FileType column shows whether records are active or historical)
8. Create a new dataframe for Active sales only. Do the same for historical sales
9. Rerun summary statistics for the new dataframes created above. Is there a huge difference between the two?
10. Among active sales, which SKU highest strength factor? Check the same for Historical sales.
11. Which release year saw the lowest average user price?
12. Reshape/ Pivot the data to create a dataframe that has SKUs in one column, all continuous numeric variables (StrengthFactor, PriceReg,ItemCount, LowUserPrice, LowNetPrice) as values in one column and all their respective numerical values in a 3rd column (Hint: this dataframe should have only 3 columns in total- SKU, Variable, Value)
13. Create a chart/plot to show average lownetprice trend by release year for last 10 years
14. List the top 10 and bottom 10 SKUs by number of orders for both active and historical sales
15. Analyze the relationship between StrengthFactor and PriceReg (Hint: a chart/plot might help). Create 3 charts in total – one for the entire data, and one each for historical and active sales