Steps:

Two parts to the stock assessment tool:

1. Part 1: Statistical Analysis
2. Part 2: Affordability
3. Part 3: Calculating Yield and Recommending top 3 tickers based on historical performance

Assumptions:

* Duration of analysis: 10 years
* Factors being analyzed:
  + Close Prices-Done
  + Price/Equity Ratios, Mohamed Akl-done
  + Yield %- Ezii

1. Clean The data. Mohamed
   1. Merging the data
   2. Check for NA
   3. Filtering the data for just the last 10 years (2002-2022)
2. Create Summary tables.: for **Close Price (Mo)**, **EPS (Salvador)**, **Yield% (Ezzi & Mohamed)** as well as. 3 Data frames then merged to one data frame for summary.
   1. Mean
   2. Median
   3. Std. Dev.
   4. Variance
   5. Min, Max
   6. SEM
   7. Moving Average for last 200-days
   8. Cut functions to create labels (labels=[“NYSE,S&P500,”NASDAQ”]).

The statistical analysis is going to be based on a yearly basis (e.g., median for close price for 2012 per ticker etc.)

Get this done by the weekend.

1. Plotting
   1. Plot Mean Close Price for all 10 tickers over the past 10 years.
   2. Box Plot
   3. Scatter plots with regression prices (correlation)
   4. Bar charts (e.g. volume or avg stock close price, comparing between)
   5. Show over time the trend (line pattern over time)
2. Final product:
   1. Calculating Yield and Recommending top 3 tickers based on historical performance
   2. Recommendation and affordability