Homework 5: Project Design

**This homework is done as a team. Team members receive the same grade.**

1. (1 pt) Create your project repository and initial README.md file.

<https://github.com/cycnc35/AMZ-Cellphone-Review.git>

1. (3 pt) Create a first draft of your project functional specification. See the [project pages](http://uwseds.github.io/projects.html) for details of the contents of the functional specification. You should have details for at least one use case.

Users: Potential cell phone buyers

What they want to get:

1. Reputation(measured by (average) ratings) for certain manufacturer and for certain type of cell phone, and how they vary over time.
2. Useful reviews for certain type of cell phone.
3. (new idea) Side-by-side comparisons for multiple cell phones, with prices, specifications, ratings, helpful reviews listed.

Use cases: We aim to build an interactive dashboard, where users can select what they want to see, and interact with some plots.

1. User selects a certain brand, say Samsung, many statistics are shown on the dashboard (average rating, prices of different cell phones under this brand and their average rating). In addition, interactive plots are shown on the dashboard (average rating over time, with different time scales)
2. User selects a certain type of cell phone, then price, specifications, ratings, reviews are displayed.
3. (3 pt) Create a first draft of your project component specification. See the [project pages](http://uwseds.github.io/projects.html) for details of the contents of the component specification. You should describe at least 3 components.

The system use pandas to do data preprocessing, clean up dataset. The input will be a csv file. The output will be a clean up dataset which we filter out the unused features and clean up the data that we need for further use.

We also use matplotlib and plotly to do data visualization. The input will be the pandas object. The output will be a 2D or 3D dimension plot which is the result from our dataset

Lastly, we use dash to perform a user friendly interface. The framework will be a scroll down for a certain brand or a certain type of cell phone. After user selects the cell phone, the output will be the data visualization from plotly.

Preliminary plan. A list of tasks in priority order.

We have a 3 step plan.

1. Data processing;
2. Data visualization;
3. Dashboard performing;