Project Group 3 – Sprint 0

Trello URL

User Stories

1. As a user, I want to be able to plan employee schedules while taking into account the current climate of pandemic.
2. As a user, I want to be able to use this software when we return to “normal.”
3. As a user, I want to be able to have enough staff, so people don’t wait in line for long during a lunch or dinner rush.
4. As a user, I want to be able to know when to stock ahead if there will be more customers coming due to a holiday, so staff does not have to stock during operation hours.
5. As a user, I want to be able to schedule for more employees in response to the weather.

Initial Design

* Programming language: Python
  + External libraries: random, statistics, csv, math, scipy, numpy, pandas
* Inputs
  + A date (datetime)
    - Can be changed to complete user input for month, day, year (string)
  + Whether or not the weather is nice (bool)
* Outputs
  + CSV file for specific day containing one line per customer with:
    - The time a customer entered the store (float)
    - The amount of the customer spent in the store (float)
    - Whether or not this customer was rushing (lunch, dinner)
    - Whether or not this customer was a senior
    - Whether or not it is a nice day outside
  + Statistics for csv file
    - Total customers per day
    - Customers in store per hour
    - New customers per hour
    - Number of customers for lunch rush
    - Number of customers for dinner rush
    - Number of seniors
    - Number of customers at closing time
    - Average and standard deviation of time spent for customer in a particular category
* Major abstractions and relationships
  + The holidays used in this software will be pulled from USA holidays from holidays package in python
  + Certain percentages will be guessed and used. These will be provided if wanted and can be changed easily