W200 Project 1 Proposal

Project Name: Yelist (an activity list using Yelp API and database)

Project Description: This program will allow a user to create and manage a prioritized activity list (from a group of 10 activity categories, see Appendix), and then look up a catered list of stores based on search criteria (see Appendix). The search type will dictate which stores the search algorithm will return (see Appendix). The search will return one store for each activity based on the search criteria, ordered by priority.

Project Complexity: Given the number of classes, use of API calls to a database, and use of search algorithms, my project meets the requisite complexity needed to achieve project goals.

Objects:

Class Name	Class Description	User Interactions	Data Attributes	Methods
Activity	Contains a user inputted activity and its attributes	Activity created based on user input (i.e, name, priority, category)	▪ Activity name (given by user input string) ▪ Priority of the activity ▪ Activity category (= Store category & Store list category) ▪ Associated YelpStore object	▪ Initialize Activity instance ▪ Return a dictionary containing the data attributes
ActivityList	Contains and manages the activity list (max of 5 activities)	List will be modified based on user input (i.e., add to list, remove from list, update priority)	▪ List of Activity objects	▪ Initialize ActivityList instance ▪ Return current activity list ▪ Create and add an Activity object to the list ▪ Remove an Activity object from the list ▪ Change the priority of an Activity object and update the list ▪ Compute the average (mean) rating of the activity list ▪ Compute the average (mean) number of reviews of the activity list ▪ Compute the total distance of stores in the activity list
YelpStore	Contains a store associated to an activity category using Yelp data	None	▪ Store name ▪ Store category (= Activity category & Store list category) ▪ Rating ▪ Number of reviews ▪ Address	▪ Initialize YelpStore instance ▪ Return a dictionary containing the data attributes

YelpStoreList	Contains a list of all stores pulled from Yelp that match the user search criteria and a given activity category	Create and update the list based on user search criteria	▪ List of YelpStore objects in an activity category ▪ Store list category (= Activity category & Store category)	▪ Initialize YelpStoreList instance ▪ Return the current yelp store list ▪ Use Yelp API calls to pull in all applicable stores from the database and add each one to the YelpStoreList ▪ Return and remove the appropriate yelp store from the list based on the search criteria
Map	Contains the addresses of a searched activity list	None	▪ List of addresses	▪ Initialize Map instance ▪ Return the addresses in the Map object ▪ Return a link to the google maps directions of the activity list in priority order*

May not be implemented depending on complexity and time

Appendix:
Definitions:
- Search criteria[1]
    - Search address – The address from which to start the search from
    - Search radius – The search radius from the search address
        - 5-mile radius
        - 10-mile radius (default)
        - 20-mile radius
    - Search type
        - Highest rated stores
        - Most reviewed stores
        - Closest distance between two stores descending down the list

Activity categories:
- Grocery, Dry Cleaning, Gyms, Parks, Restaurants, Bars, Banks & Credit Unions, Supernatural Readings, Axe Throwing, Bingo Halls[2]

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[1] https://www.yelp.com/developers/documentation/v3/get_started
[2] https://blog.yelp.com/2018/01/yelp_category_list