Criterion A: Planning

Defining the problem

My client, William Li, is a grade eleven high school student in Edmonton, Alberta, Canada. He is preparing to apply to universities for next year. Through his preparation he realized it was a complicated task to search for a high ranking university that was placed in a city that he would like to live in. William likes cities with similar temperatures to his home town and dislikes cities with high populations. Finding a city that balances these variables is important to William's productivity and happiness.

I am volunteering to create a web app that will allow William to create a criteria for a city, and use a database to filter out ineligible cities and rank eligible ones. The database will contain information on the high and low yearly temperatures, population, and the rank of the city's top university.

Stating success criteria

i> An input form which allows the user to add filters/ranking criteria on the list of cities

ii> An input which allows the user to remove a filter/ranking criteria on the list of cities

iii> An input which allows the user to be sent to an information page for a specific city

iv> A function that retrieves information from a university ranking database and adds it to a master city database

v> A function that retrieves information from a global city weather database and adds it to a master city database

vi> A function that retrieves information from a population and coordinates database and adds it to a master city database

vii> The cities are properly ranked using the ranking criteria

viii> Ineligible cities are filtered out using the user imputed filters

ix> A function that returns a paragraph about a specific city

Rationale for proposed solution

I chose to solve the client's problem with a web app because it would prevent him from having to redownload large files to update the city data. Instead the user will not have to be involved at all during any addition, update, or fix of the data. Additionally it meant the program could draw from and link to the internet which would increase user experience and also make the process of learning about a city more fluid. From the website you can easily open a selected city in google maps and wikipedia, and then return to the website for further searching or filtering.

I have chosen the python with the library Flask to run the website logic as python has well integrated file reading and writing abilities and which are needed for drawing the information about these cities from databases.

Word Count: 438