**Executive summary**

Searching cars on craigslist has never been fun for most of us. The functionality of the search function on craigslist is sufficient, however, we cannot search through all the result easily. Also, it is impossible to keep different model’s search result together. This is project is aimed to solve this problem. It provides a clean and efficient user interface to search through craigslist Provo to find the perfect car for you. It transfers all the searching criteria you specify in the system and collect all the matching records from craigslist. Then it displays in a very organized view. Moreover, you can keep searching different types of cars and the system will save them into one spreadsheet. This way, you can compare the price, location, different model and make very easily through excel sort function.

**Implementation documentation**

The system consists of three parts: user interface, web-query and data processing and display.

In The user interface part, I created several user forms in order to collect user search criteria: car’s make and model, upper and lower price range, year range and different owners such as dealers only, private owners only or both. In car’s make and model, I had a dropdown list populated from pre-made hidden columns. After you choose the make, the model will populate depend on your choice of make. In range selection, I set a macro to change the lower limit property of the upper limit scroll bar so that it would make sense. Because if you choose the lower price range to be 3000 then the lowest point of upper price range scroll bar should be 3000 as well. Lastly, I set up condition selection so that the system know which web query to go.

In the WebQuery part, I simply grab everything from the search result by switching search criteria in the URL.

Lastly, in the data processing and display part, I first display the car’s make and model because it’s from the searching criteria. Then I search for the last “(” to determine the location since in craigslist the location is always in the last pair of “()”. After location, I break the string with space splitter and look for each node of the array for a node start with “$”, which will be the price. Also, the second and third node combined will be the posting date. Then I look for node that has numeric number with a value between 1960 to 2014 or integers between 0 to 14 or 60 to 99. This will find the year information and I simply try to complete the year information. Last thing I did in the data process part is to combine all the rest of the information in the description column so user can find any interesting information they might need there.

**Learning and conceptual difficulties encountered**

The thing that I learned the most is how to extract different types of info from a single string. Sometimes the position of the info in the string is static but most of the time they are not. So I have to change the way I look for it in order to extract the right info in general. There are too many exceptions in the process and I need to figure out how to deal with each kind of exceptions. The feature that I wished to include is to include the web url so that if the user really like one car he/she doesn’t have to go back to craigslist to search for it. However the web query in excel is very limited that I cannot find the info anywhere. I will try it with C# in the future and hope it will work better.

**Assistance**

I did receive some help from stackoverflow on the logic of getting the year from the string, but very limited. Most of the coding I did on my own.