# COMP 1516 Assignment #2

* In this assignment, you will work with regex expressions and files.
* Ensure that every function is named as a verb, has Doc-String comments, good indentation and follows all other style guidelines
* Use file listings.py that is provided to you in the assignment folder
* Create two python files named assingment2.py and main.py.
* Your assignment must generate report.txt file

The functionality of each file is described below:

# listing.txt:

This file has CSV formatted property listings organized in the following order:

MLS, address, price, number of bedrooms, number of bathrooms, property type, and number of active listing days

You will use that file as the input file for assignment2.py

# assignment2.py:

This file will include functions to search the listings and generate results. The results will be saved to a file with the name report.txt. Nothing will be displayed on the terminal

**All functions will be implemented using regex expression and file operations**.

**Method split() can be used only in function reduce\_price().**

**All functions except reduce price must not parse the lines with the comma “,” as a delimiter.**

**Any function that does not comply with the provided specifications will receive 0 marks**

A sample of report.txt is provided in the assignment folder, your application output should resemble the given sample output

* Function search\_by\_city\_and\_bedroom\_number(), this function accepts the parameters city\_name and number\_of\_bedrooms. This function will search all the listings in file listings.txt, find all the listings that match the given city name and that has the given number of bedrooms or more.

* Function search\_by\_price\_range(). This function will not take any parameters. The function will search the listings in file listings.txt, find all the properties that fall within the price range (550000 – 1000000) inclusive. Every property that matches the given criteria will be added to the file report.txt

* Function search\_by\_city\_and\_property\_type(), this function accepts the parameters city\_name and property\_type such as (“House”,”Condo”,,etc.). This function will search the listings file for all properties that match the given criteria. Every property that matches the given criteria will be added to the file report.txt

* Function reduce\_price(), this function takes no parameters. This function will reduce the price of every listing that has been active for 30 days or more by 10000. A new string with the property description and the reduced price will be created and added to the file report.txt. **Method split() can be used in this function**

* Function search\_by\_postal\_code\_range(), this function takes the parameters starting\_character and ending\_number. The function will search the listings file for all properties that have postal code that falls between the starting character and the ending number or more, for example:

If the starting\_character = V and ending number = 5 then the postal codes that will fall within the given range should start with V. V1…, V3…, the postal code should end with a number from 5 to 9.

V1B 632 (Invalid)

V4X 3S5 (Valid)

V3B 6E6 (valid)

* Function get\_listing(), this function accepts the parameter MLS which is the multiple service number of a property. The function will search the listings.txt file, finds the listing with the given MLS Creates a dictionary from that listing and adds the result to file report.txt.

You may use the following tuple to create the dictionary of the listing.

listing\_tuple=("MLS","address","price","bedrooms","bathrooms","property\_type","active\_listing\_days")

# main.py

This file imports assignment2.py file and has the main function. This file will be the main script of your assignment. In the main function call functions from assignemt2. Use the following code to test your work:

assignment02.serch\_city(**"Vancouver"**, 3)

 assignment02.serch\_city(**"Burnaby"**, 3)

 assignment02.search\_price(550000, 1000000)

 assignment02.search\_type\_and\_city(**"Burnaby"**, **"Condo"**)

 assignment02.search\_type\_and\_city(**"Vancouver"**,**"House"**)

 assignment02.reduce\_price()

 assignment02.search\_postal\_code(**"V"**, 5)

 assignment02.get\_listing(**"R2510818"**)

# report.txt

This txt file should include the output generated from running main.py

Sample output:

\*\*\*Listings of properties in Vancouver and has 3 bedrooms

 R2507956,2242 Grant Street Vancouver BC V5L 2Z7,1699000,5,2,House,13

 R2511923,2146 W 14th Avenue Vancouver BC V6K 2V7,2248000,3,3,House,31

 R2511301,2638 Charles Street Vancouver BC V5K 3A5,1890000,8,8,House,18

 \*\*\*Listings of properties in Burnaby and has 4 bedrooms

 R2510818,5190 Fulwell Street Burnaby BC V5G 1P2,1390000,7,4,House,15

 R2512071,8154 Gilley Avenue Burnaby BC V5J 4Y5,2488000,9,9,House,1

 R2510573,5059 Norfolk Street Burnaby BC V5G 1E9,1299000,4,4,House,7

 \*\*\*Listings of properties with price between 550000 and 1000000

 R2500627,305-1006 Beach Avenue Vancouver BC V6E 1T7,981000,2,2,Condo,34

 R2512107,680 W 6th Avenue Vancouver BC V5Z 1A3,989000,2,2,Townhouse,1

 R2512000,208-607 E 8th Avenue Vancouver BC V5T 1T2,574900,1,1,Condo,1

 R2511747,1408-1775 Quebec Street Vancouver BC V5T 0E3,679900,1,1,Condo,5

 R2511262,1106-9222 University Crescent Burnaby BC V5A 0A6,629800,2,2,Condo,4

 R2512173,11226 236 Street Maple Ridge BC V2W 0C8 ,900000,4,4,House,35

 R2512052,21560 Ashbury Court Maple Ridge BC V2X 8Z7,775000,3,2,House,43

 R2512451,102 Croteau Court Coquitlam BC V3K 6E2,948000,4,2,House,20

 \*\*\*Listings of Condo in Burnaby

 R2511972,306-7180 Linden Avenue Burnaby BC V5E 3G6,448800,1,1,Condo,30

 R2511262,1106-9222 University Crescent Burnaby BC V5A 0A6,629800,2,2,Condo,4

 \*\*\*Listings of House in Vancouver

 R2507956,2242 Grant Street Vancouver BC V5L 2Z7,1699000,5,2,House,13

 R2511923,2146 W 14th Avenue Vancouver BC V6K 2V7,2248000,3,3,House,31

 R2511301,2638 Charles Street Vancouver BC V5K 3A5,1890000,8,8,House,18

 \*\*\*Listings of properties with reduced prices

 R2500627,305-1006 Beach Avenue Vancouver BC V6E 1T7,971000,2,2,Condo,34

 R2511923,2146 W 14th Avenue Vancouver BC V6K 2V7,2238000,3,3,House,31

 R2511972,306-7180 Linden Avenue Burnaby BC V5E 3G6,438800,1,1,Condo,30

 R2512173,11226 236 Street Maple Ridge BC V2W 0C8 ,890000,4,4,House,35

 R2512052,21560 Ashbury Court Maple Ridge BC V2X 8Z7,765000,3,2,House,43

 \*\*\*Listings that have a postal code that starts with V and ends with 5 or more :

 R2507956,2242 Grant Street Vancouver BC V5L 2Z7,1699000,5,2,House,13

 R2500627,305-1006 Beach Avenue Vancouver BC V6E 1T7,981000,2,2,Condo,34

 R2511923,2146 W 14th Avenue Vancouver BC V6K 2V7,2248000,3,3,House,31

 R2511301,2638 Charles Street Vancouver BC V5K 3A5,1890000,8,8,House,18

 R2512071,8154 Gilley Avenue Burnaby BC V5J 4Y5,2488000,9,9,House,1

 R2510573,5059 Norfolk Street Burnaby BC V5G 1E9,1299000,4,4,House,7

 R2512052,21560 Ashbury Court Maple Ridge BC V2X 8Z7,775000,3,2,House,43

 R2508895,227-12258 224 Street Maple Ridge BC V2X 8Y7,474900,2,2,Condo,12

 \*\*\*Details of the MLS R2510818 are:

 {'MLS': 'R2510818', 'address': '5190 Fulwell Street Burnaby BC V5G 1P2', 'price': '1390000', 'bedrooms': '7', 'bathrooms': '4', 'property\_type': 'House', 'active\_listing\_days': '15'}

# Submission

You will submit a zipped folder that has the following files:

* assignment2.py
* main.py
* report.txt

Your instructor may use different data to check your work. Create your code accordingly

Marks will be given for functionality and style

Assignments that do not compile or throw an error will receive 0 marks

Upload your zipped folder to the dropbox before the deadline posted on the dropbox