

**Mount Royal University**  
**Department of Mathematics and Computing**

**COMP 3533 Network Infrastructure**

**Lab 5: Socket Programming**

**February 10, 2020**

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**Due: February 24, 2020 (Demo in lab)**

In this lab, you are asked to implement a server code and a client code in Java. The server maintains a codebook in its directory. The codebook.txt file can be downloaded from the blackboard. In this codebook, each line contains a code word and a decoded string separated by a TAB (i.e., /t). While your server is running, you can start a client program from a second machine to communicate with the server. At the prompt, user can type a confusing message like this:

GM, RU COMING B4 NOON? PLZ WB ASAP. TYVM. GTG, TTYL.

Then, the message will be sent over the network to the server. The server will go through the message word by word, and check them with its codebook. Upon a match, the coded word will be replaced by its decoded string in the original message. After all the possible coded words are replaced, the whole decoded message will be sent back to the client, and be displayed on the user's screen like this:

GOOD MORNING, ARE YOU COMING BEFORE NOON? PLEASE WRITE BACK AS SOON AS POSSIBLE. THANK YOU VERY MUCH. GOT TO GO, TALK TO YOU LATER.

User can request the decoding procedure over and over until a special character or ^C stops the client program, depending on your design (just state it clearly in your documentation). At the mean time, the server will keep running forever.