For your waiver exam, there is one programming task, which is explained below.

**Rules of the exam**

Deadline for submission – Friday 11:59am (1159 hrs) EDT.

While the deadline for submission is 11:59am, that deadline is there simply to account for timezone differences. We’d like you to still take this exam the way you would do a normal exam. **Time yourself and note down how long it took** you to do the exam in your README file. We’re not timing you. You can take breaks. Restart the timer when you come back.

You can use internet resources but no Googling for this exact question please.

*We are not using any proctoring mechanism. In a low stakes exam like this, I hope we can all abide by the honour system. That being said, if we find compelling evidence of cheating (copying code from someone else who did the exam for example), some kind of disciplinary action will be taken.*

**Social Networking**

You will implement some of the features found in social networking websites like Instagram and Facebook.

You want you to write code that will read a file having the following format. Each line of the file will start with a person's name, followed by a semicolon, and then a comma-separated list of his/her friends' names, ending with a period, like this:

Charlie: Snoopy, Linus, Lucy

We are giving you a sample file called "friends.txt" (this is just a sample). Your program can assume that the file is correctly formatted, and that names will not contain spaces. Further, friendships can be “unidirectional” – Charlie can have Linus as one of his friends, but this does not mean that Linus should have Charlie as one of his.

You need to implement the following two methods.

* mostFriends This method returns the name of the person who has the most friends. It has no arguments. It returns a string.
* friendsInCommon This method takes two Strings as parameters (representing the names of two people) and returns an int representing how many friends they have in common.

Please make sure to include a class SocialNetworkRunner that has a **main method** and can be used for running your program. You can create as many additional classes/methods as you feel appropriate.

Aside from the coding, we also need you to submit a README file. This is just a plain text file that answers some questions related to your thought process. More on this file below.

## ****Design****

Your program should follow good software design principles. Please explain (in 2-3 sentences) what design decisions you made and why in the README file

## ****Testing****

You needed to perform some unit testing using Junit for your program. Write at least 5 unit tests and include it with your code. Please explain (in 2-3 sentences) why you wrote these specific tests in the README file.

## ****GitHub****

Finally, imagine that you had a repository on GitHub that you wanted to push this code to. In the README file, write the Git commands that you would need to execute in order to place this code into the repository. Please note that we are requesting a written answer to this question in the README file and we do not need you to actually place your code in a GitHub repository.

**One more thing to add to the README**

This is a reminder to add your time taken to the README file.

## ****What to submit****

## **Email me a zip file with all your files – all the .java files, the unittests, and README.**