

B07: Assignment 3

Due date: 3rd December @ 11:59pm

1 What is expected?

In assignment three, you will revisit your assignment 0, and rewrite your assignment 0 using:

- Single responsibility principle
- Liskov substitution principle
- Interfaces/Abstract classes
- Design patterns that we learnt in this term
- Unit testing
- Exceptions and Generics

I do not expect you to make use of every single design pattern; however, some of the design patterns may be applicable, and you must use them. You will, however, are expected to make use of the **single responsibility principle** and use of **interfaces** and perform extensive unit testing (mock objects including). You may want to explore the possibility of incorporating the **iterator** design pattern, such that it allows the traversal of the **user user** matrix.

You are free to create as many new classes as you see fit, however, make sure that these classes reside under their appropriate package names, and that the test code resides under the **test** folder. If you create any inner classes, you are not responsible for testing these inner classes.

You are also expected to submit a report **A3.pdf**, that must reside in the assignment three folder, and this report must document what are the design patterns that you made use of, and wherein the code would we find them?

Keep in mind that you can completely change your assignment 0 code for assignment three, however, when we execute your assignment three, just like your assignment 0, we will pass it an input text file containing the **user movie** matrix, and you must provide the same output as you did for assignment 0. Again, I like to emphasize, that the input into your assignment three and the output generated from your assignment three is identical to your assignment 0. The biggest change in assignment three is that you are completely remodelling assignment three by using the design principles that we learnt in this term and performing extensive unit testing.

2 Few more items to keep in mind

1. I have pushed the assignment 0 starter code to your personal SVN repository at `http://markus.utoronto.ca/svn/cscb07f18/YOUR_UTORID/Assignment3/`
2. The starter code is identical to your assignment 0.
3. You can change the package names to anything that you see fit, however, we ask you that the `main` function must always reside inside the class `CfilteringDriver.java` and that this class must at all times here: `src/driver/CfilteringDriver.java`
4. Your `test` folder must always reside here: `src/test`
5. You can replace the entire starter code for assignment 3, with your actual assignment 0 code as the initial commit. And then start to refactor this code of yours, such that it starts to incorporate the items mentioned in section 1 of this handout.