CO225: Software Construction
Polymorphism and inheritance

Objective: Introduce you to the idea of polymorphism and inheritance in Java. You should also note function overloading and how the *javac* compiler deals with dependencies.

Description:

In this laboratory class you are expected to develop a simple Shell application which is capable of executing few basic commands and can be extended later. The given skeleton code consists of three Java classes:

GenericCommand.java: This represents a generic command. A new command should extend this class and overwrite *handleCommand*() method.

Shell.java: This represents the basic shell class. To add a new command to the shell, you should implement the corresponding class and add the command in this class.

Quit.java :This is an implementation of **quit** command.

You are required to get familiar with the given code and extend the application to satisfy below functionalities (they will be marked) :

1. Extend the functionality of *Quit.java* class to print the number of commands executed before exiting. For example before quitting the shell should print "Executed 10 commands since starting"

2. Implement a new command **less** using a class called *Less.java* which prints the content of a text file on the screen. Command should take the file name to be read as an argument and should check if arguments are passed correctly.

3. Implement a new command **copy** using *Copy.java* which copy a *file* from *source* to *destination.* The command takes two arguments; the source file name followed by the destination file name.

Assessment:

Submit all the files you modified as a zip to moodle before the deadline. We will be testing for correct use of Java keywords and good programming practices. Make sure to perform required tests etc. before executing a command. You will be given marks for that.