ESOF 322 Homework #4 (35 pts)

- Hand in a <u>print out</u> of your work during class on **10/10**. Upload a copy on D2L.
- Clearly label every page with all names.
- **Staple the pages together**.

<u>Question 1 (**25 pts**)</u>

In this question you will exercise your reverse engineering skills.

a) Download the source code for any Open Source system. You can typically search sites like SourceForge to find an Open Source system. Make sure the system is written in Java. (**10 pts**)

1. What system did you download? (4 pts)
2. What does it do? (2 pts)
3. How many Lines of Code (LOC) does it have? How did you calculate this? (4 pts)

b) Use the Design Pattern Finder tool (http://designpatternfinder.codeplex.com/) to scan the code for potential realizations of many design patterns. **Note** that this tool <u>only works in a Windows system</u>, so you will need a Windows machine or virtual machine. The executable is in the *releases/0* directory and you will need to extract it to run it, since these are zipped files.

If you or your partner(s) do not have a Windows machine, you will have to use a machine in one of our labs or install virtual machine software (i.e. VMware or VBox). Then create a virtual Windows system.

The tool should give you a hint of potential existence of design patterns in the code. Print out the output of the Design Pattern tool for the Open Source system you chose. (**15 pts**)

1. Capture the output of the tool (without checking the "Search in file content" box) and print it. (2 pts)
2. How does this tool look for instances of design patterns? (4 pts)
3. Do you think the process used by the tool is correct? How would you do it? Be specific. (9 pts)

<u>Question 2 (**10 pts**)</u>

If you do not already have a GitHub account, create one. Now add all the assignments we have done in this class into your GitHub account. You should create a repository for the ESOF 322 class.

a) How did you upload the ESOF 322 files into your GitHub account? (5 pts)
b) Add a file (any dummy file) in your local machine, stage it, commit it, then push it to your GitHub account. What commands did you use? Show the output of each command, then a screenshot of your GitHub with the new files. (5 pts)