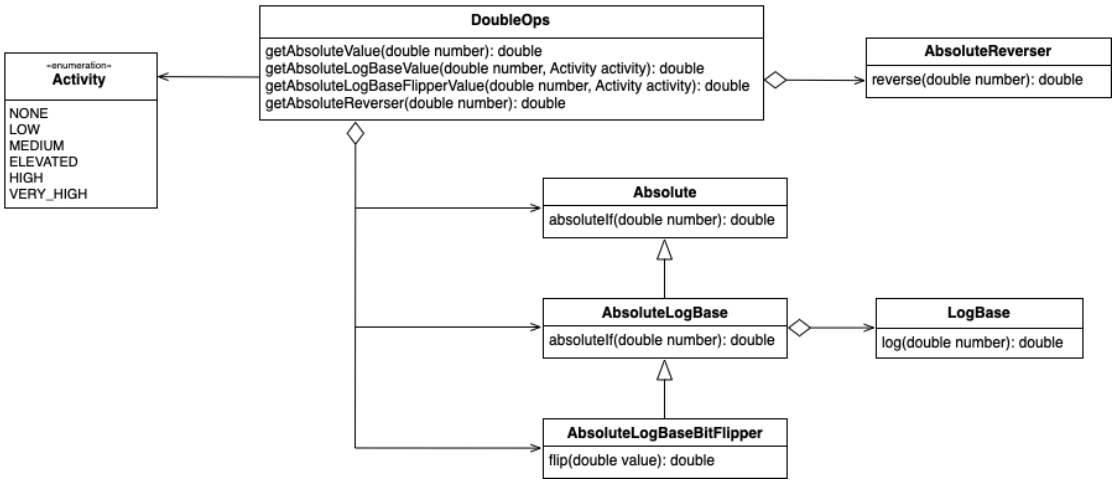
Department of Computer Science & Applied Physics

AVAILABLE TO STUDENTS AS A SAMPLE

The following UML diagram shows a suite of classes in a poorly designed application:



You are required to provide a ***redesign and refactoring*** of the classes above that provides maximum reusability, extensibility and eliminates as many dependencies as possible in the design. ***You are free to change any of the classes in any way you wish***, including renaming, changing method signatures and deriving new types. You must implement your design as a set of Java classes and ***document your rationale in*** in a README file and in the source code where appropriate.

Note that there is no single "correct" answer to this assessment – there are many possible solutions, all with their advantages and drawbacks. Any design patterns that may apply should already exist in the problem. State any **assumptions or known issues** relating to your design in comments at the top of your classes or in the README file.

INSTRUCTIONS FOR SUBMITTING YOUR WORK

Please **read the following carefully** and pay particular attention to the files that you are required to submit and those that you should not include with your work:

- A **set of stubs** for the classes in the UML diagram is available on Moodle.
- Use the module name **atu.software** and the package name **ie.atu.sw**.
- Instrument all methods with some minimal functionality or with *System.out.println()* statements. Note that the **focus of this assignment is on design, not on robustness**. Do not waste your time implementing features and functionality that are not needed.
- When you have finished the assessment, upload a ***Zip*** archive of the ***src*** directory and **README** to Moodle. The name of the Zip archive should be ***<id>.zip*** where *<id>* is your ATU student number.