**OOP Hand-in Project Assignment, Semester 1, 2018**.

**30% of overall module mark**

**Due date** :

Project must be demonstrated to the lecturers/class week 19th - 23st November. You should have all of your documentation available at your presentation.

**Project Specification** (minimum requirements unless agreed with Lecturer):

* At least three classes required (at least 2 of which are instantiable)
* At least one of the classes is a GUI class, having a menu system plus other ‘J’ components
* Each instantiable class should model a different aspect of a system (for

example a Book, a Game component, GUI, etc).

* The application should contain a ‘substantial’ processing element (an algorithm for doing something!). At a minimum, your system should allow the user to process at least one transaction involving an object(s).
* Demonstrate superclass/subclass inheritance, an Interface and/or composition/aggregation
* System should make use of (eg. allow you to add, display and hold in/load from memory) an appropriate data structure (yet to be covered) containing instances of an instantiable class,
* Save the data structure to file (yet to be covered) and load it up again.
* At least one class should be fully commented with Javadoc comments
* The evolution of the project must be clearly demonstrated. Using git/github as a version control system is mandatory.

**Note:**

Classes used as examples in class or featuring on lab sheets are not acceptable but can be used to form the basis of your classes. Each student should choose a different topic unless otherwise agreed with the lecturer. All choices subject to lecturer approval.

**Documentation to be submitted:**

* Requirement Specification (word), max. one page)
* Class diagrams for all classes (word), done up in Visio or appropriate tool
* VOPC diagram for the application (word)
* Program code (.java) Github link
* Javadoc output for the javadoc commented class
* Github logs/Commit history
* Declaration of Originality

You will also be asked to give a quick demonstration of your working project on the week beginning 27th November, **No demo = no marks. As part of your demonstration you will be asked about your code.**

**Indicative marking scheme: Projects will be graded using the following criteria**:

* Scope/Complexity/Functionality/Design (40%), - safe, narrow, broad. Exception (90%+), First Class (70-100%), 2:1 (60-70%), 2:2 (50-60%), Pass(40-50%)
* Code features (classes, methods, structure choices, inheritance/composition, validation, going beyond what we have covered) (20%)
* Quality of code (e.g. naming conventions, comments, indentation, methods, efficiency, etc) (10%)
* Presentation (Communication skills: technical and non-technical, Usability) (20 %)
* Documentation (10%)