

## Software Engineering 2 Assignment

You are to extend the Library specification example to include reservations or other features, or you can build a detailed USE model for Accounts Receivable example in Design by Contract notes. Alternatively you can model a system of your own choice to be agreed by your lecturer in advance.

Whatever you decide to model, it must include:

- USE model with preconditions, postconditions and invariants. The USE code must be copied to your report as well as being submitted separately.
- Constraints must be tested with objects. Better to use SOIL implementations to make the testing easier. However, use !openter !opexit to test at least one method, note that methods with SOIL implementations can't be tested with !openter and !opexit.
- Use Windows snipping tool or something similar to copy and paste all your diagrams into your report.
- Use screen captures of testing on the command prompt window and paste them into the report.
- Also create at least two sequence diagrams in USE.
- When you can get the basics to work, build a **State Machine** for at least one class, such as the Reservation class for the library. Test drive this state machine and copy and paste it in while in various states into your report.

All the above must be put in a report along with a discussion and analysis, i.e. copy diagrams and screen captures to your Word document. **Convert the Word document to a PDF** before submitting.

Report is expected to have all the diagrams/screen captures from USE.

Note: The adding a reservation use case to the Library system greatly complicates it and is not at all straightforward. You have to think carefully about what a reservation means, which of course is the purpose of analysis modelling.

### Submission

Report and USE files (.use .clt .olt and .soil) to be submitted thru Webcourses. Use compressed zip file if necessary.