Faculty of Science, Engineering and Technology

Object Oriented Programming

Credit Task 6.2: Custom Program Design

Overview

At this stage you should have enough understanding of programming to start thinking about creating your own custom program.

Purpose:	Plan out the overall structure for your custom program — this forms the start of your Custom Program for Distinction
Task:	Create a plan with high level overview to discuss with your tutor
Time:	This task should be completed before you start your custom program.
Resources:	▪ Programming Arcana ▪ Swinburne CodeCasts (YouTube Channel, iTunesU) • Making the most of the concept of abstraction

Note: If you are not currently up to date you should skip this task and return to it once you are up to date with the Pass Tasks. Do not allow Distinction Tasks to delay you in keeping up with the unit's Pass Tasks.

Submission Details

You must submit the following files to Doubtfire:

- A basic overview of your program (see template)
- A picture of your class diagram (photo or scan)
- A picture of one or more sequence diagrams

Instructions

In this task you will provide a plan and overview of the structure of a custom program (something you would be interested in creating). Specifically it should:

1. Demonstrate the use of abstraction — create your own classes that model the domain.
2. Demonstrate the use of inheritance and polymorphism
3. Demonstrate the use of UML class diagrams to explain how your solution works.

Here are some steps to get you started:

1. Download the Design Report template from Doubtfire.
2. Provide a summary of your program — What does it do? What are some of the key features etc.
3. Describe the main roles: enumerations, classes & interfaces.
4. Describe the main responsibilities for the classes and interfaces. Get some detail down now for your tutor to check, but there is no need to spend ages on this task. Have enough that you can start to see how the program will continue to develop as you proceed.
5. Show your plans to your tutor, lecturer, help desk staffers, and/or friends to get some feedback.

Note: Your program should be different from the Pass and Credit task programs and from the lecture demonstration programs. You want to demonstrate that you have learnt from these tasks and can apply what you have learnt to some other program design.

If you are aiming for a High Distinction, review the related High Distinction Project document for details on how you can ensure this program meets the HD requirements.