

Clayton School of Information Technology
CSE4213 Assignment 3
Enrolment System: Design and Learning Outcomes
 Due Date: 12noon, 23 May 2007

1 Objectives

The objectives of this exercise are:

1. To refine basic specifications towards implementable data models; and
2. To reflect upon the learning processes undertaken in the assignment work for this unit.

2 Specific Tasks

1. Using the resources of your first two assignment solutions, the lecture notes, the B Toolkit manuals (anything that you find in the \$BKIT/BHELP directory, also available at the *CSE4213 Resources* web page) and the text book, *refine* your specifications from assignment 1 and assignment 2 towards a data model that will allow implementation of the enrolment relation as an array type. You should use at least one of the library machines defined in the Help system, see *CSE4213 Web Page/resources/BHelp/index.html#L*. You can introduce any new machines that you require, but you must preserve the basic interfaces defined by assignments 1 and 2:

```

newEnrolment(student, unit)
units ← StudentEnrolment(student)
NewCourse(name)
comp ← NewComponent(nn, units)
AddComponent(name, comp)
```

Marks will be allocated according to the nature and complexity of your design, the level of achievement, and the process you followed.

(10 marks)

2. You are asked to reflect upon what you know and understand about the B Method. Write a short synopsis (no more than 500 words) of the ideas, concepts and issues you have acquired in this unit. You may find the list of learning objectives in the *About CSE4213* web page useful to your answer. Marks will be allocated for the structure of your answer, together with the insights and explanations that you offer. Pay attention also to the role of the B Method in the wider software engineering context.

You should include a paragraph on the learning outcomes you found from question 1 above. Crucial to this part of your submission is a discussion of the new learning (i.e., that obtained outside the lectures) that you gained from this part of the assignment.

(10 marks)

3 Submit

Your answer to question 2 must be submitted either as pdf, postscript, or dvi. Word files will **NOT** be acceptable! (But pdfs from Word files are OK)

Either a tar file with name *your student id.tar* containing all relevant files, or a single pdf file with name *your student id.pdf*. Preference is for a single pdf file.