Software Engineering with Objects and Components
Group Tutorial Project: Deliverable 2
Marking Scheme

The number of marks available for this part of the practical is 100 worth 50 marks. The first half of the practical was also worth 50 marks. Overall the practical is worth 25% of the total mark for the course. This marking scheme provides the outline of a grading scheme for the practical. You should submit a completed marking scheme with your work. To complete the proforma just fill in this document and include it in the bundle of documents you submit to the ITO.

Submit to the ITO by 4pm on Monday 5th December 2005

Part 1 - Team Information

Tutorial Group (T01-T07)		**Tutor's Name**	
Tutorial Group's Name		**Team: S, P or A**	
Team Members			

Part 2 - Individual Marking Scheme

Individual Marking Scheme								
	Estimated Contribution [tick one box only]				**Individual Mark** [Basic + Bonus + Team Bonus]			
Team Member	**0%**	**25%**	**50%**	**100%**	**Basic**	**Bonus**	**Team Bonus**	**Total**

Part 3 - Deliverable Marking Scheme

Deliverable Marking Scheme		
Deliverable Part	**Questions**	**Marks**
Prioritized Use Cases	**Q1.** Do your use cases capture functional system requirements? Do your use cases make good use of the features of UML intended to support requirements gathering? For example, use case relationships that are necessary.	[/ 2]
Refined Class Model	**Q2.** Does your class model make good use of the features of UML intended to support more detailed design? For example, attributes and methods and any constraints that are necessary.	[/ 2]
Change History	**Q3.** Does your change history record change rationale? Do change histories enable traceability practice?	[/ 6]
Marks Limit: [10/100]		[/ 10]
Collaboration or Sequence Diagrams	**Q4.** Are your collaboration (sequence) diagrams well-formed? Provide a brief assessment of how well your diagrams match the specification in the UML book. Identify any instance of your diagrams deviating from the standard approach.	[/ 4]
	Q5. Do your collaboration (sequence) diagrams capture/realize your chosen Use Cases? Provide a brief assessment of the strengths and weaknesses of your collaboration (sequence) diagrams as a means of formalising the activity in your Use Cases.	[/ 8]
	Q6. Assess the extent to which your collaboration (sequence) diagrams you have generated are consistent with the class model.	[/ 8]
Marks Limit: [20/100]		[/ 20]
Activity or Statechart Diagrams	**Q7.** Are your activity (statechart) diagrams well-formed? Provide a brief assessment of how well your diagrams match the specification in the UML book. Identify any instance of your diagrams deviating from the standard approach.	[/ 4]
	Q8. Do your activity (statechart) diagrams capture dynamic behaviours of your chosen/implemented classes? Provide a brief assessment of the strengths and weaknesses of your activity (statechart) diagrams as a means of formalising the dynamic aspects in your Use Cases/Classes.	[/ 8]
	Q9. Assess the extent to which your activity (statechart) diagrams you have generated are consistent with the class model.	[/ 8]
Marks Limit: [20/100]		[/ 20]
Java Code	**Q10.** Do your Java classes compile and appear to function correctly?	[/ 4]
	Q11. Do your classes pass all the tests? Do you believe your test code tests the system adequately? If Java classes fail to pass some testes, you should explain the problem and whether or not you have fixed it.	[/ 8]
Unit Testing	**Q12.** Does the code built to implement your tests compile and test the system in the manner you intended in your test plan. Provide a justification for all the tests you want to apply to your chosen classes.	[/ 6]
	Q13. Assess how effective your tests are in detecting coding errors in your chosen classes. Provide a justification in term of the coverage you are achieving in the tests.	[/ 8]
	Q14. How extensible is your test code? If you decided to increase the number of tests how much extra effort would it take to incorporate those tests. Award higher marks for greater extensibility. Justify your award of mark by making a case for the extensibility of the test set.	[/ 8]
Integration Testing	**Q15.** Can you justify that you have addressed all the issues of integrating your classes in your system?	[/ 8]
	Q16. Can you justify that you have addressed all the most critical aspects of the integration of the work of the three teams? Have you addressed integration testing for the different parts of the system?	[/ 8]
Marks Limit: [50/100]		[/ 50]
Deliverable Mark		[/100]

Deliverable 2 Marking Scheme - Instructions

This form is to be used by your team to assess your deliverable 2 and to distribute the mark among your team's individual members. Please complete and return the form together with your deliverable 2. This form is in three parts.

Part 1 - Team Information. The first part records your team's details. Please fill in the table in the Part 1 with the relevant information.

Part 2 - Individual Marking Scheme. This part records your team's distribution of the mark among individual team members. The final mark for an individual is the sum three parts: [Basic + Bonus + Team Bonus]. Bonus marks are only available to individuals and teams who provided a (100% and) distinguishable contribution. Basic marks are calculated by a fixed calculation. Bonus marks are to be determined **democratically** by the team.

Basic Mark: The basic mark for each individual is equal to the **estimated contribution** percentage proportion of the **Deliverable Mark** (see Part 3). For example, if your team's deliverable mark is 68%, the basic mark for an individual who contributed 0% is 0; for an individual who contributed 25% is 17 (25% of 68); for an individual who contributed 50% is 34 (50% of 68); for an individual who contributed 100% is 68.

Bonus Mark: The **Bonus Mark** available for distribution is 10% of **Deliverable Mark** divided by the number n of individuals in your team.

$$\textbf{Bonus Mark} = \frac{\textbf{Deliverable Mark} * 10\%}{n}$$

For example, if your team's deliverable mark is 68% end there are 4 of you in your team, the total bonus mark available is 1.7. Your team should decide, democratically and - preferably - amicably, how this total mark should be given to the individual who provided a (100% and) distinguishable contribution towards your deliverable.

Team Bonus Mark: Let n be the number of individuals in your team. The **Team Bonus Mark** available for distribution is 10% of **Deliverable Mark** divided by the number n of individuals in your team.

$$\textbf{Team Bonus Mark} = \frac{\textbf{Deliverable Mark} * 10\%}{n}$$

For example, if your team's deliverable mark is 68% end there are 4 of you in your team, the total bonus mark available is 1.7. end there are 4 of you in your team, the total bonus mark available is 1.7. Your team should decide whether to give the team bonus mark to each individual by assessing the overall team work (e.g., performance, collaboration, tack and effort distribution, communication, etc.).

Note that (i) no final mark of greater than 100 will be accepted; and (ii) the individual marks will be checked and adjusted if necessary. Individual and Team Bonus Marks have to be fully justified. You have to provide a written case for any attributed Bonus. No mark greater that 100% of the avaiable marks (i.e., 100 out of 100) will be accepted as final individual mark.

Part 3 - Deliverable Marking Scheme. The second part provides you a marking scheme for your deliverable 2. At this deadline you are required to submit this marking scheme completed appropriately together with the specified deliverables. The Deliverable Marking Scheme shows the maximum marks allocated to each part. You have to assess each part of your deliverable 2. The table provides relevant questions that structure your assessment process. You are asked to rate your performance and award marks in proportion to how you rate your work. You should assign

(part of) the allocated marks for each question. The marks depend on the quality of your work. You should always attempt fully to justify any marks awarded. For each of these questions you should attach some justification for the award of marks. You should justify your mark assignment by answering the question in a separate sheet. The **Deliverable Mark** is the sum of the marks of each part.