

Software Engineering with Objects and Components 1

Group Tutorial Project: Deliverable 2

Marking Scheme

The number of marks available for this part of the practical is 50. 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 6th December

Part 1 - Team Information

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

Part 2 - Deliverable Marking Scheme

Deliverable Marking Scheme		
Deliverable Part	Questions	Marks
Collaboration Diagrams Marks Limit: [8/50]	Q1. Are your collaboration 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]
	Q2. Do your collaboration diagrams capture/realize your chosen Use Cases? Provide a brief assessment of the strengths and weaknesses of your collaboration diagrams as a means of formalising the activity in your Use Cases.	[/ 4]
Refined Class Model Marks Limit: [8/50]	Q3. 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.	[/ 4]
	Q4. Assess the extent to which your class model is consistent with the collaboration diagram you have generated. Award four marks if you find there are no major inconsistencies.	[/ 4]
Unit Testing Marks Limit: [12/50]	Q5. 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.	[/ 4]
	Q6. 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.	[/ 4]
	Q7. 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.	[/ 4]
Java Code and Testing Marks Limit: [12/50]	Q8. Award up to six marks if your Java classes compile and appear to function correctly.	[/ 6]
	Q9. Award up to six marks if your classes pass all the tests and 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.	[/ 6]
Integration Testing Marks Limit: [10/50]	Q10. Award up to four marks if you can justify that you have addressed all the issues of integrating your classes in your system.	[/ 4]
	Q11. Award up to six marks if you can justify that you have addressed all the most critical aspects of the integration of the work of the three teams and addressed integration testing for the different parts of the system.	[/ 6]
Deliverable Mark		[/ 50]

Part 3 - Individual Marking Scheme

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

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 - 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. Your deliverable 2 should comprise:

1. A copy of the *use cases* you have chosen to concentrate on in this part of the practical.
2. *Collaboration diagrams* for the selected use cases. [8 marks]
3. A *class diagram* for your system with appropriate attributes and methods. [8 marks]
4. *Unit tests* for the implemented classes. [12 marks]
5. *Java code* for the classes you have selected to implement and the results of applying your tests to your Java implementations. [12 marks]
6. An integration plan and *integration tests* for your implemented classes and for the integration with those of the other teams in your tutorial group. [10 marks]

The Deliverable Marking Scheme in Part 2 shows the maximum mark 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.

Part 3 - Individual Marking Scheme. The third part records your team's distribution of the mark among individual team members. Assume that the expected typical contribution is 100% from each team member, and rank team members accordingly. Note that this part of the form is designed to highlight those members who have contributed only 50% or less. The final mark for an individual is the sum of the basic mark and the bonuses (if any). Bonus marks have to be fully justified. 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 corresponding percentage of the **Deliverable Mark** according to their **estimated contribution**. For example, if your team's deliverable mark is 40%, the basic mark for an individual who contributed 0% is 0; for an individual who contributed 25% is 10 (25% of 40); for an individual who contributed **either** 50% is 20 (50% of 40) and for an individual who contributed 100% is 40 (100% of 40).

Bonus Mark: The Bonus Mark should be attributed democratically to team members who gave an exceptional contribution to the deliverable. Let X be the number of individuals (not all team members) in your team who are eligible for the Bonus Mark. The maximum available Bonus mark is 10%*X of the Deliverable Mark. For example, if 2 team members are eligible for the bonus mark and the deliverable mark is 40%, then the total bonus mark is 8 (= 20% of 40). This bonus mark should be democratically distributed to those eligible team members. You can provide an additional 10% as Bonus Mark, but you have to decrease the additional 10% from the team member who are not eligible for the individual bonus mark.

Team Bonus Mark: The Team Bonus Mark is available to those teams that believe have given an exceptional contribution as a whole. This intends to take into account team effort in resolving practical and organisational issues (e.g., communication problems, team effort and commitment, team collaboration, etc.). The maximum available Bonus mark is 10% of the Deliverable Mark. For example, if your team's deliverable mark is 40%, the maximum available Team Bonus Mark is 4. This bonus mark should be equally distributed to team members.

Note. Individual and Team Bonus Marks have to be fully justified. You have to provide a written case for any attributed Bonus. No mark greater than 100% of the available marks (i.e., 50 out of 50) will be accepted as final individual mark.