

TEMASEK POLYTECHNIC
SCHOOL OF INFORMATICS & IT

AY 2017/2018
Assignment 2

Level/Semester : Level 2 / Apr Semester
Subject : Object Oriented Analysis & Design
Subject Code : CGE2C11

Assignment 2 Specifications

(AY2017/18 Apr)

Robustness Analysis Design

Assessment Weightage

This assignment 2 is 40% of the total assessment of the subject.

Tasks

You are to perform the tasks of assignment 2 individually.

You are required to submit a report that includes the output of the robustness analysis and design tasks.

With reference to the use cases and domain models done in Assignment 1, you are to perform the following tasks:

a. Use Case and Domain models selection

Select THREE use cases and THREE domain models which you had done in assignment 1. You are to confirm your choice with your OOAD tutor. The selection is subject to your OOAD tutor's approval.

b. Robustness Analysis Tasks (54 marks)

Based on the approved use case texts and domain model, you are to perform robustness analysis.

I.e. for each of the approved use cases, you are to produce:

- One UML sequence diagram
- One view of participating classes (VOPC) UML class diagram for the use case.

In your sequence diagrams, you are expected to derive, where appropriate, the parameters of the operations of the Entity classes.

In your VOPC class diagrams, you are to include attributes where appropriate.

For each of the operations of the Entity classes, you are to write in your report the rationale for having the operations the way you have them in terms of what the operation does and what the parameters (if any) mean.

c. Design Tasks (21 marks)

Based on the robustness analysis that you have done, you are to map the domain model and robustness analysis output to design as follows:

Database Schema

You are to design a relational database schema that will support the persistence requirements of the 3 approved use cases. You are to use the informal notation that you have learned from your Database Information Systems (DBIS) subject.

Some key features of the relational database schema that we are looking out for are:

- Clear indication in your database design the "Referential Integrity Constraint," using the arrow notation.
- You should also underline the primary key of each database table.
- Example of the required database schema notation

EMP(Eno, Name, Salary, Dno)

DEPT(Dno, Name, Location)



d. Video Presentation (25 marks)

The video should:

- explain clearly the key points of your assignment.
- show clearly the face of the presenter.
- be 5 - 10mins long. i.e. at least 5mins and should not exceed 10mins

Formative Milestones

Your lab tutor will set formative (learning feedback) milestones for your assignment. Adhere to them, so that your tutor may give you timely feedback for your learning and improving your assignment work quality.

Submission

You must hand in a report that includes all the output and documentation required of your robustness analysis and design tasks.

Adhere to the following instructions for your report:

- All UML diagrams should be modelled using a UML tool, e.g. UMLet or Visio.
- There should be only one report per student.
- Your report should be submitted via SafeAssign in OLIVE.

The submission of the **report (75%)** and the **video presentation (25%)** are in **week 15 (04 Aug, Friday)**.

Video Submission

Each class should nominate one class rep. The class rep should consolidate all the video submissions for the class on one thumb drive and submit to your tutor by **04 Aug, Friday**.

Guidelines on late submissions of assignment

- late and < 1 day: 10% deduction from absolute mark given for the assignment. E.g. 75 marks (100 marks max) becomes 65 marks (10% of 100 marks being deducted).
- late ≥ 1 and < 2 days: 20% deduction from absolute mark
- late ≥ 2 days: No marks awarded

Note: The “day” definition includes **non-working days** (ie. Sat, Sun and public holidays).
General MC/LOA is NOT considered as valid reason for not submitting your assignment.

Warning

You must ensure that Assignment 2 submitted by you is your **original** work. Any **suspected copy cases** will be handed over to School Disciplinary Committee. You may **fail the subject** for this term as a result of plagiarism.

- END OF ASSIGNMENT 2-