



Analysis II & III

Detailed Assessment Info

Last Update: 29/03/2020

Ver: 3.2

Learning Outcomes

1. Describe the breadth and nature of the software engineering process and distinguish various phases of the process;
2. Create and develop the required artifacts during each phase of the software engineering process;
3. Differentiate and evaluate the software engineering techniques used to produce the artifacts;
4. Employ group working skills in solving software development problems;

Assessment Task

Assessment topic:

Initial class diagram, sequence diagram and state chart

Assessment type: Group assignment

Assessment tasks:

You and your team will need to work on CMS software's initial class diagram, sequence diagram and state chart. All the diagrams should be created using Lucidchart.

Activity: Dictionary of Abstraction (not assessed)

This task is not assessed, however, you should perform it in order to start drawing the initial class diagram for the next task.

You should look at the informal client requirements as well as detailed client requirements. To gather the detailed client requirements, you were asked to gather all the client requirements in one document.

1. Identify **nouns** in the artefacts available to you.
2. For each noun in your list, consider whether it:
 - a. Lies **outside** the problem boundary and may, therefore, be ignored
 - b. Is an **abstract noun**
(i.e. identifies something with no physical existence or belongs to a small part of an object for example, if we are talking about cars, the colour of the car has no physical existence so it is abstract), and if so might it be an attribute of an entity class
 - c. Is a **candidate entity class**

- (NB: if two nouns are really synonyms, only use one single candidate entity class).
3. Look at the candidate entity classes. Can you identify any "**is-a**" relationships between them?
 4. Consider the abstract nouns. Are any of them suitable as attributes for your entity classes? You must produce the following information:
 - a. Identify all possible nouns
 - b. Identify candidates for entity classes
 - c. Identify candidates for abstract nouns
 - d. Identify nouns outside the problem boundary

Task 1: Initial Class Diagram

Draw the initial class diagram on the whole CMS project. Your initial class diagram should:

- Include the **classes** identified from previous activity (Dictionary of Abstraction)
- Include appropriate **attributes** for the classes
- Describe the **relationship** between classes using generalisation, association and aggregation
- Represent the **multiplicity** of the relationships properly
- Represent the **direction** of all the multiplicities

Task 2: Sequence diagram

Create a sequence diagram(s) based on the instructions below. You might find it beneficial to write the use case scenario(s), before you jump onto drawing this diagram.

- During week 5 contact your mentor who will assign you **one** user story (or a functionality) for the **teams of two and three**
- During week 5 contact your mentor who will assign **two** user stories (or functionalities) for the **teams of four**

You can follow the examples from Week 5 lecture as a guideline.

As this is **analysis**, you do not have to use method names. You only need to provide descriptive messages being passed around.

Note that you should also **include** a **boundary** class and a **control** class.

Task 3: Statechart

Create a statechart based on the instructions below. You can refer to the sequence diagram of the assigned user story when drawing the statechart, however, you would still be required to identify any additional states.

- **Teams of two & three**, draw the statechart on the user story (or a functionality) assigned for task 2.
- **Teams of four**, your mentor will allocate you one from the user stories (or functionalities) assigned for task 2.

You can follow the examples from Week 5 lecture as a guideline.

Note that you should also **include** a proper **transition** for all the states **and** also **guard** where applicable.

Assessment submission & feedback Details:

Submission requirements

File 1: Completed group cover sheet (available on Moodle > Assessments)

File 2: You will submit a PDF document for task 1, 2 and 3.

Please follow the following naming convention to name your files:

FIT5136_Team_X_Task_Y, where **X** is the **team number** and **Y** is the **task number**.

Example:

File 1: FIT5136_Team_404_group_coversheet.pdf

File 2: FIT5136_Team_404_Task_1_2_3.pdf

You can use Adobe Acrobat Word Plugin to improve the image quality while converting if you find your images have been compressed too much.

One member of the team will submit the assignment on Moodle.

Feedback mechanism

When your mentor has marked the assessment, marks and feedback will be made available on Moodle. However, you are strongly encouraged to clarify any feedback related queries with your mentor in the following week's tutorial or during the consultation. You do not need to resubmit your diagrams or other artefacts, but you should update them or at least take notes.

Individual assessment in the group assignment

CATME Peer assessment will be performed to gauge the individual contributions to the group assignments. CATME will be made available after the due date of the assignment. You must complete it only after your team has made the submission on Moodle.

Total marks:

11%

Due date:

Submit by Wednesday, 21 April 2021, 11:55 PM

Where to find the marking Guide

You can find the marking guide under the title of this assessment.

Where to find help

The University provides many different kinds of services to help you gain the most from your studies. Further information is available at <http://www.monash.edu/students>.

You can also email role account for any issues related to the team, technical or material:
fit5136.clayton-x@monash.edu

However, for any **assessment-related** issues, please contact your TA or go to their consultation sessions that are made available on Moodle.

Extensions

Please email us at fit5136.clayton-x@monash.edu providing the reason and number of days you are requesting for an extension. After the review of your request, the teaching team will get in touch with you.

Special Consideration:

For information on applying for special consideration, please visit:
<https://www.monash.edu/exams/changes/special-consideration>

Late Penalty Statement:

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit lecturer via the in-semester special consideration process: <http://www.monash.edu.au/exams/special-consideration.html>

Late submissions are allowed with a penalty of 10% per day including weekends and public holidays.
Special consideration for group assignments must negotiate with your Lecturer or TA prior to submission of the form.

Plagiarism and collusion statement

Monash University is committed to upholding standards and academic integrity and honesty. Please take the time to view these links.

Academic Integrity Tutorials:

<https://lms.monash.edu/mod/page/view.php?id=5666695>

Student Academic Integrity Policy

<https://lms.monash.edu/mod/page/view.php?id=5666699>

Test your knowledge, collusion (FIT No Collusion Module)

<https://lms.monash.edu/mod/page/view.php?id=5667198>

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