UML ASSIGNMENT – BISM 7255 – SEMESTER 1-2023

A Digital Solution for Karen Music

ASSESSMENT WEIGHTING:	*40%*
DUE DATE:	*18 April 2023 at 10:00am*
VERSION:	*21 Feb 2023*

INTRODUCTION

Summary Task:
The assignment asks you to create a collection of UML diagrams (eight diagrams) that visually represent a business application for the music school *Karen Music*.

Introduction of Case Scenario:
The *Karen Music* is a studio in West End to teach instruments and singing. In a term, different workshops are offered every week for different instruments, including piano, violin, flute, and guitar as well as voice. A workshop is a two-and-half-day or three-day course focused on a particular instrument or singing (i.e., voice).

Over time, more and more people want to attend the workshops. The studio's director, Karen Black, manages all matters related to the studio with the Excel spreadsheet and pen and pencil. Doing it this way is very time-consuming, bears the potential for mistakes and errors, and limits the possibility for others to get involved.

Hence, Karen would like to have a digital solution to help with the management of the music studio. After consulting with *Queensland Associated Music Studios Inc*. that represents all Queensland-based music schools, Karen decided to hire the IT consulting company Zwinger to create a digital solution.
Jake Tree, the owner of Zwinger, is tasked with the design of the system. You must work with Jack to design the system.

Assignment requirements for students:
1) You must use the software Enterprise Architect from the company Sparx Systems to create the UML diagrams.
2) You must in total create eight UML diagrams – five diagrams that follow the case description and three diagrams that present a feature, or innovation that is not described in the *Karen Music* case description (we refer to them as "innovation diagrams"). For more details, see section 'Task Description'.
3) Assignments with watermarks are not allowed because when there is a watermark in the diagram the marker cannot read your solutions –for further details inquire with a tutor.
4) You must use UML 2.5 – This means the assignment must comply with the tutorial materials and by extension the OMG UML specification version 2.5 or Sparx Systems' UML recommendations.
5) Your final submission is a Word document where the UML diagrams are copied in.
6) You must also submit a **SINGLE** Enterprise Architect file that includes the eight UML 2.5 diagrams which the marker uses if the copied UML diagrams are not readable, or the marker wants to verify something. Do not submit diagrams another student created because this is considered 'student misconduct' and will be dealt with according to UQ policies.

Students per Assignment:

The assignment can be submitted as an individual assignment **OR** done by two students as a group assignment. When doing it as a group assignment it is a UQ requirement to do a peer evaluation. For more details refer to the course's Blackboard site.

How do I submit the assignment?

The assignment submission must be done via the Blackboard site following the steps below:

1) Go to "Assessment" → "Assessment: Project analysis and design assessment portfolio"
2) Find two links → one is a Turnitin submission link, the other is a Blackboard submission link.
3) Through the first Turnitin submission link, submit a project report (.doc or .docx).
4) Through the second Blackboard submission link, submit an Enterprise Architect file (.eapx). If the assignment is done in a group, a Peer Assessment Form (.pdf) must be submitted via this link as well.

IMPORTANT: If the assignment is done in a group, only **ONE** student in the group needs to submit the project report (.doc or .docx) through the Turnitin submission link. The name and student ID of both students in a group must be clearly stated on the cover page of the project report. However, **both** students must submit the Enterprise Architect file (.eapx) and Peer Assessment Form (.pdf) through the Blackboard submission link.

How do I know that my assignment submission was successful?

When the assignment is submitted, the student must download **one digital receipt** from the Turnitin Assignment Inbox (for the Turnitin submission) AND should receive **one confirmation email** in their student email (for the Blackboard assignment submission). Both the Turnitin receipt and the confirmation email contain a unique submission ID.

Important submission information:
1) To avoid any potential technical problems with computers or the internet, students are advised to commence assignment submission at least 3 hours before they are due.
2) Students must click on the *Submit* button to submit their assignments. Do not save the assignment as a draft, you must submit the assignment by clicking the *Submit* button. When the assignment is only saved then the submission has not been finalised.
3) For the Turnitin submission:
   - Once the student submits the Turnitin assignment, they should see *Submission Complete!* screen. If not, the student should regard the submission as unsuccessful.
   - After the submission, the student must download a copy of the digital receipt from the *Assignment inbox* page (via Turnitin) to confirm successful submission. More information on the digital receipt can be found via this link: **Turnitin Assignment Submission Guide**.
4) For the Blackboard submission:
   - Once the student submits the EA project file and Peer Assessment Form through the Blackboard submission link, they should receive a confirmation email in their UQ student email with the submission ID.
   - If the student does not receive the confirmation email, then they must assume that the Blackboard submission of the EA file and Peer Assessment Form was unsuccessful.
   - If the student does not receive the confirmation email within 60 minutes, they are advised to resubmit the EA file and Peer Assessment Form. More information on the confirmation email can be found via this link: **BB Assignment Submission Guide**.

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5) The Turnitin digital receipt and the Blackboard submission confirmation email with the submission IDs are the only proof that the entire UML assignment has been successfully submitted. Do not delete these proofs.
6) It is the student's responsibility to ensure that any UQ assignment is submitted successfully. Any unsuccessful submission may result in late penalty.

Misconduct

It is understandable that students talk with each other regularly and discuss problems and potential solutions. However, it is expected that the submitted assignment is a unique work – all parts of the assignment are to be completed solely by the student(s) indicated on the first page of the assignment. The best practice to avoid misconduct is not to look at another student's file(s) and not to show your solution to other students. In case where an assignment is perceived to not be a unique work, a loss of marks and other implications can result.

For further information about academic integrity, plagiarism and consequences, please visit http://ppl.app.uq.edu.au/content/3.60.04- student-integrity-and-misconduct\

DETAILED INFORMATION ABOUT KAREN MUSIC

In the following, you find details that allow you to create a truthful representation of the business case. You must capture the operation of the music studio as it is described here. You cannot fill in unnecessary gaps or leave information out. If you do so, marks will be deducted.

Registration Process for a Music Workshop:
Currently, a client (an adult interested in taking a music workshop) either calls Karen or sends an email inquiring about attending a workshop, which is inefficient and makes it difficult for Karen to keep a record of the persons' information as well as restricting the number of students for each workshop.

Hence, she wants to have an automated process registration to eliminate any manual work, support registration for the workshops in an easy way, and provide her with the ability to better manage capacities for each workshop.

The registration process will be overseen by Thomas the headteacher, a music educator, audio engineer, and composer with more than 15 years of experience. While the director takes charge of the studio enrolment and term payments, the headteacher is responsible for maintaining workshop registration, records attendance, weekly workshop schedules, and other activities necessary to keep the music studio running smoothly.

The Scope of the Project – Systems Behaviors and Possible Use Cases

The following text provides the details to create the use case diagram. The use case shall present the music workshop registration subsystem.

The goal of the digital solution is to automate the process of booking of the music workshops. With the digital solution, the headteacher can open new workshops, along with editing information relevant to the workshops. The headteacher can also restrict the capacity of students for each workshop. If a workshop does not have at least seven students registered one day before the start date of the workshop, the headteacher has the option to cancel the workshop.

For the online booking, there is also a set capacity of 18 students per workshop. However, the headteacher or Karen can change the number up to 20 places, which equals to the studio's capacity. It would be good if the system sends a notification to the headteacher and Karen once 18 students have booked to allow for manually increasing the number for the 'in-demand' workshops. This means the headteacher and Karen both need access to the system to change the workshop capacity.

Thomas cannot believe it when Karen tells him that some adults do not show up to the workshop despite having booked and paid in advance. Hence, Karen is confident that she normally can accommodate all students wanting to learn music and express themselves.

Karen also wants to set up a registration portal on the music studio's webpage through which students can register for the workshops beforehand. Through the registration portal, students can log in, view all available workshops, and sign up for their preferred workshops. If they want to keep information about the booked workshop, they have the option to download an iCalendar file, which can be added to their Outlook/Google calendar. At times, students would like to cancel certain bookings due to unexpected events, such as sickness (e.g., bronchitis). Then they can use the 'Cancel' option.

Students are required to sign up in advance through the 'Register Now' feature, but sometimes students do not register and simply 'walk-in' on the day of the workshop. Hence, in most weeks there are less than 18 students booked in. This means that the walk-ins are allowed to attend the workshop. In fact, Karen or the headteacher always try to make room for a few more students if their studio capacity of 20 is not reached.

When the students come into the studio, there is a sign-up sheet (paper) on the table asking them to sign in. They need to provide their name, the membership number, their contact details, and emergency contact details. Karen would like to remove the paper sheet and put a tablet at the entrance table. When students enter the workshop studio, they can then enter their details directly into the digital solution.

After each workshop, the headteacher generates a report to get the list of attendees. Karen needs to get the report because she needs to compare the workshop attendees with the term enrolments. She can also get a printout version if needed.

The workshop fee is AUD 380. At the moment, many students pay by bank transfer. Karen would like the students to pay via the registration website at the time of the booking. However, Karen does not want to force payment at the time of the online booking because she is afraid it may negatively impact the numbers. Hence, the system should give the option of online payment or via bank transfer.

When attending a workshop, the students need to make sure they are enrolled in *Karen Music* to have insurance when attending. The yearly fee is either AUD 28 or AUD 82 depending on membership status.

Registration Process for a Music Workshop

The following text provides the details to create the activity diagram and the sequence diagram. Both diagrams present the booking process for a music workshop, however, the activity diagram needs to capture the process, whereas the sequence diagram captures the interactions between the actors [students & headteacher] and the system (each).

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The process of booking a workshop at *Karen Music* starts when the students go to the studio's website and there click on "Register Now".

First, the system requires verification of the users' identity by asking them to sign into a valid account. If the student is not a registered user, s/he will need to sign up for a new account. To do so, the student enters personal information, including age, emergency contact, email address, and his/her contact number. After submitting the sign-up form, the student receives a validation email to complete the sign-up process for the new account. The link contained in the email will expire three days from the date sent. When the student has an account, s/he simply logs into the system by entering his/her login details, i.e., email address and password.

Once the student is logged in, s/he can book any upcoming workshops. Initially, Karen sets the capacity for each workshop to 18 students. Once 18 bookings are made, any new bookings will be rejected, but the person is added to a waiting list. The headteacher and Karen will receive a notification (via email and text message) and can increase the number of sign-ups for the workshop manually, either immediately or at a later stage. The increase is only possible to a maximum of 20 places to comply with the studios' health and safety regulations. Subsequently, more places open up for booking and the students on the waitlist will be notified. Once they have confirmed their interest in a particular workshop, they are automatically signed up for it.

The payment for the online workshop works as follows: There are two options for students to pay for the workshop – immediately online or later via bank transfer. If sign-up is online, the students have an option to make the payment via credit card at the end of the booking process or later as a bank transfer but not later than two days before the workshop.

Once the payment is made via the online system, the system sends a receipt and, meanwhile, records the details of attendees. If the student does not pay online, s/he will only receive a confirmation email with the studio's bank account details and a unique transaction reference code. For these students who choose to pay the workshop fee via bank transfer, they instruct their bank to transfer the fee to the studio's bank account. The payment is confirmed and recorded in the system at the time of the fee is received.

Once a student has booked a workshop, s/he is free to check out the detailed workshop plan and instrument information on the webpage. In most cases, students would like to get a reminder of the workshop. They can simply do so by clicking on the 'Save to Calendar' button on their booking page. In case a student wants to sign up for more than one music workshop, s/he can repeat the same process to book available workshops.

Data Requirements of the Digital Solution

The following text provides you with the details you need to create the <u>domain class diagram</u>. The diagram shall present the data structure of the entire music studio management system (beyond the workshop booking subsystem).

In the meetings with Karen, Jack learns about various types of information that the system needs to keep track of, and that are important to different users of the system. Karen provides him with a list of the essential information the system needs to capture. You find the information in the Excel spreadsheet (see in Blackboard).

To help Jack better understand the information in the spreadsheet, Karen also provides him with some additional information as below:

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Karen needs to maintain information about each member that is an account holder. In fact, the person who attends each of the workshops is not always the account holder but can be the student's partner or employer. For each student, *Karen Music* only allows for a single sign-up for an account.

Karen Music offers two types of memberships, namely, Gold Star Membership and Standard Membership. The Gold Star membership also provides access to various online music workshops offered by the studio, and the monthly music magazine. For people that hold the Gold Star Membership, Karen wants to keep a record of who they are and what benefits (type of the benefit, description of the benefit) are available to them. For those who hold the Standard Membership, she occasionally provides them with special discounts for workshops. In such cases, it requires the system to generate discount codes.

Karen needs to hire a venue for the music workshops. Usually, she contacts the owner of the studio venue in November to renew the lease for the following year. Now and then, their workshop studios are not available on specific dates of the year, for example during competition times. If this occurs, she will need to look for other venues for temporary use on those days and weeks.

Karen would like to offer multiple advanced exercises in each workshop, but also to have basic warm-ups and standard instrument play. She believes that slow play and long tones are a great way for students to learn. Indeed, creating an expressive music piece requires fewer skills than a classical piece and every student can do it. Hence, Karen never arranges a workshop without offering either a modern or classic music piece.

Karen usually opens the registration for the workshops for an entire year in January. This allows the booking for more than one workshop. Therefore, Karen relies on the system to keep track of information about bookings, especially details that otherwise cannot be captured in the records of the members and scheduled workshops.

Karen also wants to restrict the number of registrations for each workshop. If a workshop reaches its predetermined maximum attendance numbers, a waiting list will be open for this specific workshop. Otherwise, the system only generates a list of registrations. Karen worries that if someone accidentally deletes the registration list, the registration will no longer exist. Therefore, she wishes to set up two-factor authentication on the access of the list.

Workshop attendees can make payments online when they book one or more workshops with vacancies. Alternatively, they are welcome to pay the workshop fees via bank transfer. For online payments, Karen would like to capture the type of credit card and the billing address of the payee. For fees that are paid via bank transfer, she wants to capture the account details (daily cash account or again via credit card) and the transaction reference code.

The registration process is handled by the headteacher Thomas.

Karen needs to maintain records of all music teachers' personal information (ID, title, first name, and last name) and their administrative services. Additional information is also important for Karen to know. Therefore, she wants to record the details of the teachers' contracts, such as contract ID, the start date and end date of their appointment. Since these are additional information, they are not captured as part of their personal information nor the administrative services they are assigned to.

For the headteacher, Karen is interested in knowing more in-depth information, including the educational background, experiences in composing, and actual working hours per month.

The Lifecycle of a Music Workshop

The following text provides the details for creating the <u>state machine diagram</u>. The diagram shall represent the different states of a music workshop and the transitions between the states.

At *Karen Music*, each workshop goes through a multiple-phase process to ensure the students enjoy the activities but also improve their skills in a certain instrument/ voice. The lifecycle of a workshop includes several major phases – a planning phase, an online booking phase, a preparation phase for the exercise, a workshop running phase, and a performance and presentation phase. A headteacher oversees the entire process.

The process starts when Karen shares via email the evaluative feedback from the previous workshop with the headteacher. The headteacher then reaches out to two other music teachers to work with him on the next workshop. These three people form a creative tribe for the week.

In the Planning phase, the headteacher first carefully reviews the feedback while researching about different music pieces, such as classic, jazz, rock, and folk. Then, the headteacher drafts a workshop plan laying out the following details: what time to dedicate to each exercise, what resources are required, what is important feedback from the last workshop, and which could be used in the week under planning. It is also important that students get time for improvising. Students can use a scale (tune) as raw material, and then create their own music.

Once the workshop plan is drafted, it is shared among the team. They review and discuss the proposal, and eventually decide on whether to approve it or not. If the workshop is not approved, it is marked as *Rejected* and the initial planning process starts again. If the workshop is approved, it is marked as *Approved* and the headteacher is notified through email.

Once a workshop is approved, the headteacher goes ahead and opens the online booking for the workshop. The workshop is then flagged as open in the system and spots are available to be filled. Every time the system recognizes that 18 students have signed up for a workshop, it notifies the headteacher and Karen who then may release more spots for waitlisted students. From time to time, some students may decide to cancel a workshop. As a result, those spots open and become available for the students on the waitlist. Note that bookings close one day prior to each workshop. At that point, if there are less than seven students registered, the workshop will be cancelled and removed from the list.

The headteacher and the other teachers start preparing for the workshops three days before, such as selecting the music pieces, ensuring fresh air can get in while the air-con is working, and enough chairs are available.

On the day of the workshop, the headteacher and the other teachers run the workshop together. They open the studio for the students to come in, set up the healthy corner with tea, water and fruits. They also explain the studio's housekeeping rules.

A smooth-running workshop is only possible through the efforts of the headteacher and the other teachers. Each workshop is generally a combination of scales and arpeggios, practicing long tones, and sight reading, which provide opportunities to create a unique music piece, and improve the skills of playing an instrument or singing a song.

Karen has made it a habit to collect feedback about each workshop from the students by emailing them a short questionnaire. It generally takes her two days to receive feedback back from the students. The feedback is later entered into the system. After 24 hours of entering the feedback, Karen carefully reads through the feedback and adds some personal notes that mark the end of one music workshop.

Task Description

After familiarising himself with the business requirements for the software application for *Karen Music*, Jack and you are now required to do **THREE** tasks:

1) **Task 1**: Find a name for the digital solution. You must also give the solution a name. Put the name on the cover page of the word file.
2) **Task 2**: Create **five** UML models (one for each type) based on the description of business requirements for *Karen Music*. Document any assumptions you made (if any) underneath each diagram.
3) **Task 3**: Create **three** additional UML models (we refer to them as "innovation diagrams) that have not been detailed in the description of the *Karen Music*. Here we ask you to be creative and use your own imagination to come up with something new. You can consider this task as a suggestion of an additional feature, an innovation, the studio owner did not think of. The three UML models you are asked to create must be **an activity diagram, a sequence diagram and a state machine diagram**.

To propose something truly new – you must keep the following in mind:
1. Activity diagram cannot be the 'Registration Process'. We recommend going back to the use case diagram and thinking about a different business process.
2. Activity diagram and sequence diagram must depict the **same** business process.
3. State machine diagram cannot be again the object '*Music Workshop*'.

UML 2.5 Portfolio

All UML models **MUST** be created with Enterprise Architect (EA) and each diagram must be exported as an image and pasted into a Word document that **MUST** be submitted as well.

The word document needs to include an overview page that must contain a table of contents with meaningful headings. For example, "Activity Diagram" followed by the name of the system. In addition, each diagram may have assumptions underneath only if needed. It is recommendable approximately 200 words (for the whole document) but can be less or more. Also, it is desirable the use of bullet points. Furthermore, the word document must have the pages numbered and the diagrams must have a readable font size.

All models MUST be done in UML 2.5. This means it must comply with the tutorial material, and by extension the OMG UML specification version 2.5 or Sparx Systems' UML recommendations.

Please make sure that you comply with the modelling guidelines as follows:

1) The models must be created with Enterprise Architect from the company Sparx.
2) The first five models must be a truthful representation of the business case. This means you need to create the five diagrams using the information provided in the assignment.

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3) You must only model the automated part of the digital solutions. This means any manual activities that are not carried out by the system are going to be represented in the UML models.
4) You must follow appropriate modelling conventions (the rules) that are specified in the weekly tutorial files.
5) You must clearly capture the relationships between different types of UML models. This means:
   - The activity diagram must model the business process that is captured in **one or more** use cases of the use case diagram.
   - Activity diagram and sequence diagram must depict the **same** business process.
   - The information contained in the sequence diagram should match the information captured in the class diagram.
   - State machine diagram must depict the states of **a single** object (over its lifespan); this object is captured as a class in the class diagram.

For Task 2 – the first five UML diagrams (see p. 8), you must have the following details in each diagram:

N	Diagram Type	Detailed Requirements
1	**Use Case Diagram**	**3** different actors **8 or more** top level use cases **3 or more** include relationships **4 or more** extend relationships
2	**Activity Diagram**	**3** partitions **25 – 30** activities **4** forks **4** joins **4** decision activities
3	**Sequence Diagram**	**1** domain object that interacts with **2** actors in a complex sequence of interactions, including **12** input messages, **13** return values, and **5** self-messages and **5** self-message returns. Parameters/input data must be included along with each input message. You should also include combined fragments, specifically, **1** loop fragment, **2** opt fragments, and **2** alt fragments.
4	**Class Diagram**	**21** domain classes with multiplicities, attributes, and operations. **3** cases of generalization/specialization relationships **3** cases of whole-part relationships (i.e., aggregation **AND** composition) **2** association classes Please make sure that all information captured in the Class Diagram come from the excel spreadsheet and the case description.
5	**State Machine Diagram**	**1** object, **9 or more** major states, **1** composite states, **1** choice pseudo-state, and various transitions with triggers and guard conditions (if required). You should also include initial state(s) and final state(s).

For Task 3 – the innovation diagrams (see p. 8), you must have the following details in each diagram:

N	Diagram Type	Detailed Requirements
1	**Activity Diagram**	**3** partitions No less than **20** activities No less than **2** forks No less than **2** joins No less than **3** decision activities
2	**Sequence Diagram**	**1** domain object that interacts with **2** actors in a complex sequence of interactions, including… 1) no less than **10** input messages, 2) no less than **10** return values, 3) no less than **2** self-messages, 4) parameters/input data must be included along with each input message. 5) combined fragments must be included, specifically, **1** loop fragment, **2** opt fragments, and **2** alt fragments.
3	**State Machine Diagram**	**1** object, **9 or more** major states, **1** composite states, **1** choice pseudo-state, and various transitions with triggers and guard conditions (if required). You should also include initial state(s) and final state(s).

Submission Process

The assignment must be submitted electronically through Blackboard. Please make sure that your submission includes **ALL of the following** files:

1) Analysis and design assessment portfolio. This is a word file (not a PDF file) submitted via Turnitin submission link.
2) An Enterprise Architect file that corresponds with your word file diagrams. This must be submitted via Blackboard submission link.
3) Peer Assessment Form (only applies to students working in a group).

Export each diagram as an image and paste it in a **WORD DOCUMENT** and submit the **EA FILE** used to produce the portfolio. Files submitted as email attachments to teaching staff will not be accepted. Late submission will result in the deduction of marks.

Before the closing time of the submission, you can submit multiple times. Blackboard displays all submissions, and we can see what the latest submission is and will only mark your latest submission. No submissions via email will be accepted.

Submission Date

Submission date: _**18 April 2023 at 10:00am**_

For each day (including Saturday and Sunday) after the **18 April 2023**, the late submission penalties apply based on UQ examination policies until the assignment is submitted.

When the assignment is submitted, the student must download **one digital receipt** from the Turnitin Assignment Inbox (for the Turnitin submission) AND should receive **one confirmation email** in their student email (for the Blackboard assignment submission). Both the Turnitin receipt and the confirmation email contain a unique submission ID.

Important submission information:

1) To avoid any potential technical problems with computers or the internet, students are advised to commence assignment submission at least 3 hours before they are due.

2) Students must click on the *Submit* button to submit their assignments. Do not save the assignment as a draft, you must submit the assignment by clicking the *Submit* button. When the assignment is only saved then the submission has not been finalised.

3) For the Turnitin submission:
   - Once the student submits the Turnitin assignment, they should see *Submission Complete!* screen. If not, the student should regard the submission as unsuccessful.
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   - Once the student submits the EA project file and Peer Assessment Form through the Blackboard submission link, they should receive a confirmation email in their UQ student email with the submission ID.
   - If the student does not receive the confirmation email, then they must assume that the Blackboard submission of the EA file and Peer Assessment Form was unsuccessful.
   - If the student does not receive the confirmation email <u>within 60 minutes,</u> they are advised to resubmit the EA file and Peer Assessment Form. More information on the confirmation email can be found via this link: **BB Assignment Submission Guide**.

5) The Turnitin digital receipt and the Blackboard submission confirmation email with the submission IDs are the only proof that the entire UML assignment has been successfully submitted. Do not delete these proofs.

6) It is the student's responsibility to ensure that any UQ assignment is submitted successfully. Any unsuccessful submission may result in late penalty.

Consultation

There are two types of UML consultation – open consultation (i.e., drop-in session) and group consultation (i.e., 10-student group). In open consultation, students can spontaneously zoom in and ask questions during the consultation times without making an appointment in advance. For group consultation, however, students must make an appointment online with the tutor running that specific session, and only 10 slots are available for each session. There is no one-on-one consultation.

To ensure fair treatment to all students, tutors will not be allowed to look at your assignment files/works. Questions regarding your assignment will only be answered if they are general in nature, for example on the use of Enterprise Architect or general question on the different model notations.

Extension Application Procedure

A request for extension of the assignment due date will need to be done via the submission of an online application at this link: https://my.uq.edu.au/node/218/0#0
Neither course coordinators nor lecturers can grant assessment extensions to students.

Peer Evaluation

A group of students will get the mark after calculation of the peer evaluation results, also referred to as 'Group Peer Assessment'. More details can be found at the course' Blackboard site. The student group needs to list the names and student numbers of both students at the first page of the assignment.

Each student must undertake the peer evaluation when working in a group.

Marking Rubric

The project will be graded on its scope, usability, maintainability, consistency, credibility, and suitability in the target organization and style of the project report. You will also be graded as to how well you have followed the analysis and design procedures demonstrated during the course and the quality of the final presentation. For details, please refer to the marking rubric attached to the assignment.

Each assignment will be marked considering the two following main sections:

1) Correct use of diagrams notation: Each diagram **MUST** comply with the notation learned in tutorials, in particular **UML 2.5**. This means it must comply with the tutorial materials, and either the OMG UML specification version 2.5 or Sparx Systems' UML recommendations. Although other notation conventions exist, only the one taught in the tutorials is considered correct for marking purposes.

2) Correct logic and consistency with the business case: Logic means that each diagram correctly represents the case description. The first five diagrams **CANNOT** include other information not given to you. There is no need to make assumptions. If you feel you need to make assumptions, you most likely have not understood the case description correctly. It is recommended to see a tutor during consultation times. The three innovation diagrams are expected to include additional details and information.

Zero marks for the assignment will be given if the student does not use Enterprise Architect for the creation of the diagrams.

Marking Rubric   Total Marks: 40 marks Penalty per day late will be applied

Criteria	Developing Competency 0% - 50%	Adequate Competency 50% - 80%	High Level Competency 80% - 100%
UML Models – Notation Correctness 16 marks	Demonstrates a poor understanding of UML modelling notations and conventions. Most labeling of UML model elements are not in line with tutorial knowledge. Many errors exist in solution.	Demonstrates an adequate understanding of UML modelling notations and conventions in line with tutorial knowledge. Some errors exist in labeling UML model elements.	Demonstrates a good understanding of UML modelling notations and conventions in line with tutorial knowledge. Few or no errors exist in labeling UML model elements.
UML Models – Logical Correctness 16 marks	Most UML models do not precisely or comprehensively represent the business case. Many semantic errors exist in the solution. Relationships among different types of models are poorly captured or ambiguously expressed.	Some UML models do not precisely or comprehensively represent the business case. Some semantic errors exist in the solution. Relationships among different types of models are captured but only partially correct.	All UML models precisely, consistently, and comprehensively represent the business case. Few or no semantic errors exist in the solution. Relationships among different types of models are accurately and sufficiently captured.
Layout Report 8 marks	Numerous issues exist with respect to quality of EA diagrams and report formatting.	A few issues exist with respect to quality of EA diagrams and report formatting.	High quality EA diagrams with professionally and consistently formatted report.
	Marks are deducted based on the number of issues listed: 1) A cover page is not included, and Pages are not numbered. 2) Overview page is not included and there is no table of contents. 3) Solution is not split into logical sections and headings are not meaningful. 4) The word limit does not comply with the requirements. 5) Words and/or elements are not readable in the diagrams / font size is too small.		

Good luck with the assignment!