

GROUP ASSIGNMENT

This is a group assignment which accounts for **30%** of the continuous assessments. It is divided into three parts: **Part 1, Part 2(a), and Part 2(b)**. You are required to form a group of **five (5)** members.

The objective of the assignments is to allow you reinforce learning in analysing the issues of the requirements, design, and implementation of the chosen system listed in Table 1. Furthermore, high-level and low-level designs of the chosen system are to be created.

SCENARIO

You work as a software engineer in a software company, iDEC and recently involve in a development project pertaining to reservation/booking system. There are many business companies in different sectors such as entertainment, healthcare, transportation and so on, show a great interest in such system to help streamline and manage their business processes. The reservation/booking system must allow the users to perform the following:

- Request/Create bookings
- Update/Maintain bookings
- View bookings
- Cancel bookings
- Search for bookings
- Create user profile

The reservation/booking system is using the object-oriented approach. The system users are the administrator of the business company and the company's client user. Table 1 shows ten (10) types of reservation/booking systems.

Table 1: Reservation/Booking System

1.	Bank Card Renewal/Replacement System
2.	Passport Renewal System
3.	Food Ordering System
4.	Coupon Purchasing System
5.	Bus Ticketing Reservation System
6.	Traveling Booking System
7.	Airbnb Booking System
8.	Salon Booking System
9.	Part Time Maid Booking System
10.	Health Screening Centre Appointment Booking System

IMPORTANT NOTES

1. Each management system in Table 1 will be limited to a maximum of **three (3)** groups only. Please register your choice using the link below, **latest by Week 4 Monday**.
<https://docs.google.com/spreadsheets/d/17bNpKuzM0WE7qf9w1css-L8bC9--u0RuM4ef9B1pr5k/edit?usp=sharing>
2. Refer to the Submission Details section for all 3 parts of the assignments and its marking rubrics.
3. Submission of the Part 1 by **Week 7 Friday 11th March 2022** to obtain lecturer/tutor's feedback.
4. Final submission for all three (3) parts by **Week 12 Friday, 15th April 2022**.
5. All submission must attach with a cover page (as shown on page 4).
6. All submission contents are arranged neatly and orderly, with headings/sub-headings. Page numbering and simple formatting are required.

SUBMISSION DETAILS: -

Deliverable		Description	Due Date	Remarks
Part 1	Analysis Class Diagram	<ul style="list-style-type: none">• To create an analysis class diagram, which is the domain model showing classes, their attributes and relationships with multiplicities.• Need not show any operations.• Need to state any assumptions if any information is not mentioned above.• Need to use the standard UML notations.	Week 7, 11 th March 2022	<ul style="list-style-type: none">• Submit Part 1 in <i>docx</i> format (i.e. memberName_stuID.docx)• Ensure the diagrams are clear and readable• Upload Part 1 to the link provided at WBLE• Feedback will be provided by the lecturers/tutors in 1-2 weeks' time
	Use Case Diagram	<ul style="list-style-type: none">• To create a use case diagram for the chosen system.• To ensure that the diagram is consistent with the class diagram and its assumptions.• Need to use the standard UML notations.		
	Use Case Descriptions	<ul style="list-style-type: none">• To create a use case description for each use case.• To use a use case description template for documenting each use case correctly.• To ensure that the descriptions are consistent with the use case diagram, class diagram and its assumptions.		

Part 2(a)	Sequence Diagram	<ul style="list-style-type: none"> To create a sequence diagram for each use case. To ensure that the diagrams are consistent with the relevant information in Part 1. Need to use the standard UML notations. 	Week 12, 15th April 2022	<p>Compile all 3 parts for final submission</p> <ul style="list-style-type: none"> Part 1 and 2(a): in <i>docx</i> format (i.e. leaderName_Part1n2.docx) Part 2(b): save in a subfolder (i.e. leaderName_Part2(b)) <ul style="list-style-type: none"> Source code listing for all classes (softcopy – Project Folder) Sample of input data (softcopy – text file) Sample output (Screen shot) of your program (softcopy-test cases) <p>Compress all 3 parts into a zip file and upload it to the link provided at WBLE</p> <ul style="list-style-type: none"> Ensure the diagrams are clear and readable
	Design Class Diagram	<ul style="list-style-type: none"> To show all classes, their attributes, operations (or methods), and the relationships among objects along with navigability and multiplicity. To produce two (2) versions of the design class diagram to show improvement or differences from the Analysis Class Diagram in Part 1. To ensure the design class diagrams are consistent with the analysis class diagram, and other information in Part 1. Need to use the standard UML notations. 		
	Package Diagram	<ul style="list-style-type: none"> To show packages (with classes/interfaces) and the dependencies between the packages. Need to use the standard UML notations. 		

Part 2(b)	Implementation (Java codes)	<ul style="list-style-type: none">• To develop a console-based application by implementing the final version of the design class diagram and sequence diagram in Part 2(a) using Java Programming Language.• To ensure the source codes are consistent with the final version of the design class diagram and sequence diagram in Part 2(a).		
	Naming rules	<ul style="list-style-type: none">• To show the Java naming convention to name your identifiers such as class, interface, variable, methods, etc.• To ensure the names given are meaningful and consistent.		

UNIVERSITI TUNKU ABDUL RAHMAN

LEE KONG CHIAN FACULTY OF ENGINEERING AND SCIENCE

UECS2344 SOFTWARE DESIGN

ASSIGNMENTS (Part 1, Part 2(a) and Part 2(b))

January 2022 Trimester

NO.	STUDENT NAME	STUDENT ID	Practical Group
1.	(Group Leader)		
2.			
3.			
4.			
5.			