

Assignment 3 (Team-based)

Assignment 3: Team-based

Assignment name: Assignment 3 (Team-based)

Course code: ISYS3413/ISYS3475/ISYS1118

Weighting: 25%

Due date: Week 10 (5 October 2025, 11:59 pm)

1. Course Learning Outcomes Assessed

This assessment supports the following learning outcomes:

- CLO 2: evaluate requirements for a software system
- CLO 3: apply the process of analysis and design using the object-oriented approach.
- CLO 4: work effectively in a team to analyse the requirements of a complex software system, and solve problems by creating appropriate designs that satisfies these requirements
- CLO 5: communicate effectively with others, especially regarding the progress of the system development and the content of the design by means of reports and presentations. Use appropriate design, version control and collaboration tools to work effectively as a team.
- CLO 6: recognise and describe current trends in the area of software engineering.

2. Overview of Assessment

This assignment evaluates object-oriented structural and behavioural design in terms of activity diagrams and sequence diagrams. Based on the activities conducted for the **WorldWanderer** website in Assessment 1 and Assessment 2, you need to develop activity diagrams and sequence diagrams for the **WorldWanderer** website. You also need to convert sequence diagrams into Java code.

3. Assessment Activities

General Description

Based on your activities for the **WorldWanderer** website in Assessment 1 and Assignment 2, you need to do the following activities for the **WorldWanderer** website.

Activities in Assessment 3

Activity 1: Activity Diagrams (9 points): Each team member is expected to create **one activity diagram** based on the use case descriptions they produced in Activity 2 of Assignment 2 (**3 Activity Diagrams in total for a group of 3**).

Activity 2: Sequence Diagrams (9 points): Each team member is expected to create **one sequence diagram** based on the use case descriptions they produced in Activity 2 of Assignment 2 (**3 Sequence Diagrams in total for a group of 3**).

Activity 3: Covert Sequence Diagrams into Java Code (6 points): Each team member is expected to convert their sequence diagram created in Activity 2 into Java skeleton code (**2 for each converted sequence diagram**).

Team Work: Each team member will be assessed on how well they collaborate and communicate - evidence of team communication and collaboration should be included as part of the statement of contributions form.

Updated Class Diagram: You should include a copy of your class diagram. Note that as you work through the sequence diagram you may identify errors or updates that are necessary to support the required functionality. You should incorporate these changes in your submitted class diagram. Your sequence diagram must be consistent with your class diagram.

4. Submission Instructions & Feedback

As this assignment is team-based, each team must submit a report that includes all activities described above. The team needs to upload the contribution form, along with other documents. The grade of each team member is determined based on their level of contribution. It is expected each team member equally contributes to this team-based assignment. [Click here to download the Statement of Contributions form.](#)

Submission Type: A Zip file includes the following items:

1. A Word/PDF document includes the diagrams for Activity 1 and Activity 2
 - **Note:** Once you create **diagrams** for Activity 1 and Activity 2 using UML tools, you need to copy and paste the **high-resolution images of the diagrams** into a

Word/PDF document.

2. Three Java projects. Each includes the code skeleton of the chosen sequence diagrams.
3. Completed contribution form
 - **Note:** It is acceptable to put your names in the signature part of the contribution statement form. There is **NO** need to do a physical or digital signature.

Report Length: The criteria are in the correctness and completeness of the artefacts in the report.

Late submission: Unless special consideration has been granted, the late penalty is 10% of the total mark ($25 \times 10/100 = 2.5$ marks) for the assessment per day late for up to 5 days (so the maximum late penalty is 50%). Submissions more than 5 days late are not accepted.

5. Required Software Tools

- For Activity 1 and Activity 2, you can use any **UML editors** such as Lucichart and Visual Paradigm. You **are not allowed** to use MS Word and MS PowerPoint to create UML diagrams.
- For Activity 3, you can use any JAVA IDE such as Eclipse, IntelliJ, etc, (<https://www.eclipse.org/downloads/packages/>). however, please make sure that your work can be opened in Eclipse.

6. Important Notes

- Please note that you can and should get ideas from the examples in lectures/tutorials/lectorials while you are working on your assignments. However, please note that you are not allowed to use (copy and paste) the same examples provided in lectures/tutorials/tutorials in the assignments, even if they can be applied to the **WorldWanderer** website. So, I strongly suggest you develop your own solutions for the assignments. Otherwise, you will lose some marks.
- You need to work on Assignment 3 as part of a group. You are not allowed to submit Assignment 3 individually. The individual submission in Assignment 3 will **NOT be marked (Zero Mark)**.
- Extension requests should be made **one working day** before the deadline.
- **Extensions are for individuals, not per group.** In other words, if a member of a group gets an extension, the group should submit the assignment by the deadline and that member should submit the updated version of the assignment to me via email. I will check the differences between the original version and the updated version.

7. Assessment Criteria

Your report will be assessed on the following criteria:

Activity 1: Activity Diagrams (9 points): Each team member is expected to create **one activity diagram** based on the use case descriptions they produced in Activity 2 of Assignment 2 (**3 Activity Diagrams in total for a group of 3**).

Rubric for each Activity Diagram	Mark
The created activity diagram is meaningful, well-described, and in the scope of the project and uses a good number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), without any mistakes. The activity diagram should include at least 6 action nodes.	3 points
The created activity diagram is to a large extent meaningful, well-described, and in the scope of the project and uses a reasonable number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with 1-3 minor mistakes. The activity diagram should include at least 5 action nodes.	2.25 to <3 points
The created activity diagram is to some extent meaningful, well-described, and in the scope of the project and uses a reasonable number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with 1-3 mistakes. The activity diagram should include at least 3 action nodes.	1.5 to <2.25 points
The created activity diagram is to some extent meaningful, well-described, and in the scope of the project and uses only a few numbers each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with more than 3 mistakes.	>0 to <1.5 points
The student team does not submit any activity diagram or a student submits the assignment individually (not as part of a group).	0 point
The maximum mark for activity diagram	3 points
Total mark for Activity 1 (3 activity diagrams)	3 * 3 = 9 points

Activity 2: Sequence Diagrams (9 points): Each team member is expected to create **one sequence diagram** based on the use case descriptions they produced in Activity 2 of Assignment 2 (**3 Sequence Diagrams in total for a group of 3**).

Rubric for each Sequence Diagram	Mark
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The created sequence diagram is meaningful, well-described, and in the scope of the project and uses a good number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), without any mistakes. The sequence diagram should include at least 5 participating lifelines/actors.	3 points
The created sequence diagram is to a large extent meaningful, well-described, and in the scope of the project and uses a reasonable number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), with 1-3 minor mistakes. The sequence diagram should include at least 4 participating lifelines/actors.	2.25 to <3 points
The created sequence diagram is to some extent meaningful, well-described, and in the scope of the project and uses a reasonable number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc) with 1-3 mistakes. The sequence diagram should include at least 2 participating lifelines/actors.	1.5 to <2.25 points
The created sequence diagram is to some extent meaningful, well-described, and in the scope of the project and only uses a few numbers of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), with more than 3 mistakes.	>0 to <1.5 points
The student team does not submit any sequence diagram or a student submits the assignment individually (not as part of a group).	0 point
The maximum mark for each sequence diagram and its specification	3 points
Total Mark for Activity 2 (3 sequence diagrams)	3 * 3 = 9 points

Activity 3: Covert Sequence Diagrams into Java Code (6 points): Each team member is expected to convert their sequence diagram created in Activity 2 into Java skeleton code (**2 for each converted sequence diagram**).

Rubric for each converted Sequence Diagram	Mark
The code developed for the given sequence diagram is correct, without any mistakes. The written code is high quality (comments added, easy to understand/follow, and clean). The code correctly represents the behaviour of the sequence diagram.	2 points
The code developed for the given sequence diagram is, to a large extent, correct, with 1-3 minor mistakes. The code is of good quality (comments were added, it is	1.5 to <2 points

easy to understand/follow, and it is clean). The code, to a large extent, represents the behaviour of the sequence diagram.	
The code developed for the given sequence diagram is, to some extent, correct, with 1-3 mistakes. The code is relatively good quality (comments were added, it is easy to understand/follow, and it is clean). The code, to some extent, represents the behaviour of the sequence diagram.	0.5 to <1.5 points
The code developed for the given sequence diagram is, to some extent, correct, with more than 3 mistakes. The code is low quality (comments were added, it is easy to understand/follow, and it is clean). The code, to some extent, represents the behaviour of the sequence diagram.	>0 to <0.5 points
The student team does not submit any code for the sequence diagram or a student submits the assignment individually (not as part of a group).	0 point
The maximum mark for each converted sequence diagram	2 points
Total Mark for Activity 3 (2 converted sequence diagrams)	3 * 2 = 6 points

Your group will also be assessed on how well you communicate and collaborate on the assessment.

Rubric for TeamWork	Mark
Team members effectively communicated and collaborated to produce a cohesive solution	1 points
Team members had minor communication and/or collaboration issues which had some impact on their solution	0.5 to <1 points
Team members had significant communication and/or collaboration issues which had a major impact on their solution	>0 to <0.5 points

Team members had no communication and/or collaboration with each other which prevented them working together to produce a solution.	0 point
Total Mark for <u>Teamwork</u>	1 point

Criteria	Ratings					Pts
Activity Diagram 1	3 pts Full Marks The created activity diagram is meaningful, well-described, and in the scope of the project and uses a good number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), without any mistakes. The activity diagram should include at least 6 action nodes.	3 to >2.25 pts Partial Mark The created activity diagram is to a large extent meaningful, well-described, and in the scope of the project and uses a reasonable number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with 1-3 minor mistakes. The activity diagram should include at least 5 action nodes.	2.25 to >1.5 pts Partial Mark The created activity diagram is to some extent meaningful, well-described, and in the scope of the project and uses a reasonable number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with 1-3 mistakes. The activity diagram should include at least 3 action nodes.	1.5 to >0.0 pts Partial Mark The created activity diagram is to some extent meaningful, well-described, and in the scope of the project and uses only a few numbers each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with more than 3 mistakes.	0 pts No Marks The student team does not submit any activity diagram or a student submits the assignment individually (not as part of a group).	3 pts
Activity Diagram 2	3 pts Full Marks The created activity diagram is meaningful, well-described, and in the scope of the project and uses a good number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), without any mistakes. The activity diagram should include at least 6 action nodes.	3 to >2.25 pts Partial Mark The created activity diagram is to a large extent meaningful, well-described, and in the scope of the project and uses a reasonable number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with 1-3 minor mistakes. The activity diagram should include at least 5 action nodes.	2.25 to >1.5 pts Partial Mark The created activity diagram is to some extent meaningful, well-described, and in the scope of the project and uses a reasonable number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with 1-3 mistakes. The activity diagram should include at least 3 action nodes.	1.5 to >0.0 pts Partial Mark The created activity diagram is to some extent meaningful, well-described, and in the scope of the project and uses only a few numbers each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with more than 3 mistakes.	0 pts No Marks The student team does not submit any activity diagram or a student submits the assignment individually (not as part of a group).	3 pts
Activity Diagram	3 pts Full Marks	3 to >2.25 pts Partial Mark	2.25 to >1.5 pts Partial Mark	1.5 to >0.0 pts Partial Mark	0 pts No Marks	3 pts

Criteria	Ratings					Pts
3	The created activity diagram is meaningful, well-described, and in the scope of the project and uses a good number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), without any mistakes. The activity diagram should include at least 6 action nodes.	The created activity diagram is to a large extent meaningful, well-described, and in the scope of the project and uses a reasonable number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with 1-3 minor mistakes. The activity diagram should include at least 5 action nodes.	The created activity diagram is to some extent meaningful, well-described, and in the scope of the project and uses a reasonable number of each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with 1-3 mistakes. The activity diagram should include at least 3 action nodes.	The created activity diagram is to some extent meaningful, well-described, and in the scope of the project and uses only a few numbers each standard activity diagram notation (e.g., decision, merge, fork, join nodes), with more than 3 mistakes.	The student team does not submit any activity diagram or a student submits the assignment individually (not as part of a group).	
Sequence Diagram 1	3 pts Full Marks The created sequence diagram is meaningful, well-described, and in the scope of the project and uses a good number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), without any mistakes. The sequence diagram should include at least 5 participating lifelines/actors.	3 to >2.25 pts Partial Mark The created sequence diagram is to a large extent meaningful, well-described, and in the scope of the project and uses a reasonable number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), with 1-3 minor mistakes. The sequence diagram should include at least 4 participating lifelines/actors.	2.25 to >1.5 pts Partial Mark The created sequence diagram is to some extent meaningful, well-described, and in the scope of the project and uses a reasonable number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc) with 1-3 mistakes. The sequence diagram should include at least 2 participating lifelines/actors.	1.5 to >0.0 pts Partial Mark The created sequence diagram is to some extent meaningful, well-described, and in the scope of the project and only uses a few numbers of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), with more than 3 mistakes.	0 pts No Marks The student team does not submit any sequence diagram or a student submits the assignment individually (not as part of a group).	3 pts
Sequence Diagram	3 pts Full Marks	3 to >2.25 pts Partial Mark	2.25 to >1.5 pts Partial Mark	1.5 to >0.0 pts Partial Mark	0 pts No Marks	3 pts

Criteria	Ratings					Pts
2	The created sequence diagram is meaningful, well-described, and in the scope of the project and uses a good number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), without any mistakes. The sequence diagram should include at least 5 participating lifelines/actors.	The created sequence diagram is to a large extent meaningful, well-described, and in the scope of the project and uses a reasonable number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), with 1-3 minor mistakes. The sequence diagram should include at least 4 participating lifelines/actors.	The created sequence diagram is to some extent meaningful, well-described, and in the scope of the project and uses a reasonable number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc) with 1-3 mistakes. The sequence diagram should include at least 2 participating lifelines/actors.	The created sequence diagram is to some extent meaningful, well-described, and in the scope of the project and only uses a few numbers of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), with more than 3 mistakes.	The student team does not submit any sequence diagram or a student submits the assignment individually (not as part of a group).	
Sequence Diagram 3	3 pts Full Marks The created sequence diagram is meaningful, well-described, and in the scope of the project and uses a good number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), without any mistakes. The sequence diagram should include at least 5 participating lifelines/actors.	3 to >2.25 pts Partial Mark The created sequence diagram is to a large extent meaningful, well-described, and in the scope of the project and uses a reasonable number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), with 1-3 minor mistakes. The sequence diagram should include at least 4	2.25 to >1.5 pts Partial Mark The created sequence diagram is to some extent meaningful, well-described, and in the scope of the project and uses a reasonable number of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc) with 1-3 mistakes. The sequence diagram should include at least 2	1.5 to >0.0 pts Partial Mark The created sequence diagram is to some extent meaningful, well-described, and in the scope of the project and only uses a few numbers of standard sequence diagram notations (e.g., actor, object, message, loop, break, alt, etc), with more than 3 mistakes.	0 pts No Marks The student team does not submit any sequence diagram or a student submits the assignment individually (not as part of a group).	3 pts

Criteria		Ratings				Pts
		participating	participating			
Code for Sequence Diagram 1	2 pts Full Marks The code developed for the given sequence diagram is correct, without any mistakes. The written code is high quality (comments added, easy to understand/follow, and clean). The code correctly represents the behavior of the chosen sequence diagram.	lifelines/actors. 2 to >1.5 pts Partial Mark The code developed for the given sequence diagram is, to a large extent, correct, with 1-3 minor mistakes. The code is of good quality (comments were added, it is easy to understand/follow, and it is clean). The code, to a large extent, represents the behavior of the chosen sequence diagram.	lifelines/actors. 1.5 to >1.0 pts Partial Mark The code developed for the given sequence diagram is, to some extent, correct, with 1-3 mistakes. The code is relatively good quality (comments were added, it is easy to understand/follow, and it is clean). The code, to some extent, represents the behavior of the chosen sequence diagram.	1 to >0.5 pts Partial Mark The code developed for the given sequence diagram is, to some extent, correct, with more than 3 mistakes. The code is low quality (comments were added, it is easy to understand/follow, and it is clean). The code, to some extent, represents the behavior of the chosen sequence diagram.	0.5 to >0 pts No Marks The student team does not submit any code for the sequence diagram or a student submits the assignment individually (not as part of a group).	2 pts
Code for Sequence Diagram 2	2 pts Full Marks The code developed for the given sequence diagram is correct, without any mistakes. The written code is high quality (comments added, easy to understand/follow, and clean). The code correctly represents the behavior of the chosen sequence diagram.	2 to >1.43 pts Partial Mark The code developed for the given sequence diagram is, to a large extent, correct, with 1-3 minor mistakes. The code is of good quality (comments were added, it is easy to understand/follow, and it is clean). The code, to a large extent, represents the behavior of the chosen sequence diagram.	1.43 to >1.0 pts Partial Mark The code developed for the given sequence diagram is, to some extent, correct, with 1-3 mistakes. The code is relatively good quality (comments were added, it is easy to understand/follow, and it is clean). The code, to some extent, represents the behavior of the chosen sequence diagram.	1 to >0.0 pts Partial Mark The code developed for the given sequence diagram is, to some extent, correct, with more than 3 mistakes. The code is low quality (comments were added, it is easy to understand/follow, and it is clean). The code, to some extent, represents the behavior of the chosen sequence diagram.	0 pts No Marks The student team does not submit any code for the sequence diagram or a student submits the assignment individually (not as part of a group).	2 pts
Code for Sequence Diagram	2 pts Full Marks The code developed for the	2 to >1.43 pts Partial Mark The code developed for the	1.43 to >1.0 pts Partial Mark The code developed for the	1 to >0.0 pts Partial Mark The code developed for the	0 pts No Marks The student team does	2 pts

Criteria	Ratings					Pts
3	given sequence diagram is correct, without any mistakes. The written code is high quality (comments added, easy to understand/follow, and clean). The code correctly represents the behavior of the chosen sequence diagram.	given sequence diagram is, to a large extent, correct, with 1-3 minor mistakes. The code is of good quality (comments were added, it is easy to understand/follow, and it is clean). The code, to a large extent, represents the behavior of the chosen sequence diagram.	given sequence diagram is, to some extent, correct, with 1-3 mistakes. The code is relatively good quality (comments were added, it is easy to understand/follow, and it is clean). The code, to some extent, represents the behavior of the chosen sequence diagram.	given sequence diagram is, to some extent, correct, with more than 3 mistakes. The code is low quality (comments were added, it is easy to understand/follow, and it is clean). The code, to some extent, represents the behavior of the chosen sequence diagram.	not submit any code for the sequence diagram or a student submits the assignment individually (not as part of a group).	
Team Work	1 pts Full Marks Team members effectively communicated and collaborated to produce a cohesive solution.	1 to >0.5 pts Partial Mark Team members had minor communication and/or collaboration issues which had some impact on their solution.	0.5 to >0.0 pts Partial Mark Team members had significant communication and/or collaboration issues which had a major impact on their solution.	0 pts No Marks Team members had no communication and/or collaboration with each other which prevented them working together to produce a solution.		1 pts
Late Deduction	0 pts Deduction		0 pts No Marks			0 pts
Total Points: 25						