



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

Malaysia-Japan
International
Institute of Technology
(MJIT)

Bachelor of Software Engineering
SECJ2203 – SOFTWARE ENGINEERING
Instructor: DR ROZANA ISMAIL

“Network Design for Faculty of Computing” - Final Group Report

A4 - Testing

Members:

GROUP MEMBERS	MATRIC NO
TAHIYA NUZHATH KHAN (LEADER)	A23MJ4025
PASHMIA BINTE WALID (TESTER)	A23MJ4023
SAUMIK HASAN ARPON (DESIGNER)	A23MJ3009
ZABIR MUHAMMAD SALEH (DEVELOPER)	A22MJ9161

Requirements Matrix

The sequence diagrams for each use case vs. corresponding classes (entities) are listed as in Table 7.1.

Table 7.1: Description of Entities in the Database

ID	User Management	Carbon Footprint Tracking	Learning Hub	Notification Board	Content Creation
P001, UC01, SD001	X				
P001, UC02, SD002	X				
P002, UC03, SD003	X				
P002, UC04, SD004		X			
P003, UC05, SD005		X			
P003, UC06, SD006		X			
P004, UC07, SD007			X		
P004, UC08, SD008			X		
P004, UC09, SD009			X		
P005, UC10, SD010			X		
P005, UC11, SD011				X	
P005, UC12, SD012				X	
P005, UC13, SD013				X	
P005, UC14, SD014				X	
P003, UC15, SD015					X
P003, UC16, SD016					X
P004, UC17, SD017					X
P004, UC18, SD018					X

Test Cases

Below is a proposed scenarios from Package, Sequence Diagram and Use Case Components:

Package ID:

Package_ID	PACKAGE_COMPONENT
P001	User Management
P002	Activity Tracking
P003	Incentive Management
P004	Learning & Engagement
P005	Communication & Reporting

Sequence Diagram ID:

Sequence_ID	P001 SD
SD001	Sequence Diagram for User Registration
SD002	Sequence Diagram for User Login
SD003	Sequence Diagram for Profile Display and Edit
SD004	Sequence Diagram for User Registration - Flow
SD005	Sequence Diagram for Profile Edit – Flow
S_ID	P002 SD
SD006	Sequence diagram for Log Activity
SD007	Sequence diagram for Show Impact Metrics
SD008	Sequence diagram for Log Activity – Flow
SD009	Sequence diagram for Calculate Metrics – Flow
S_ID	P003 SD
SD010	Sequence diagram for Display Points
SD011	Sequence diagram for Display Rewards
SD012	Sequence diagram for Redeem Points
S_ID	P004 SD
SD013	Sequence diagram for Start Quiz
SD014	Sequence diagram for Submit Answers
SD015	Sequence diagram for Search FAQ
SD016	Sequence diagram for View FAQ
S_ID	P005 SD
SD017	Sequence diagram for Display RSS Feeds
SD018	Sequence diagram for Subscribe to Newsletter
SD019	Sequence diagram for Generate Report

Use Case ID:

UC_ID	P001 UC
UC001	Registration
UC002	Login
UC003	Profile Management
UC_ID	P002 UC
UC004	Input Activity
UC005	View Impact Metric
UC006	Feedback
UC_ID	P003 UC
UC007	Submit Proof of Activity
UC008	System Validation
UC009	Point Calculation
UC010	Redemption
UC_ID	P004 UC
UC011	Learn about Environment
UC012	Participate in Quizzes
UC013	FAQ
UC014	Certification
UC_ID	P005 UC
UC015	RSS Feed
UC016	Newsletters
UC017	Achievement Content Creation
UC018	Linkup with Social-Media

From These components as per relational class, we can form a test cases for different scenarios.

2.4 TC001: Test <User Management> Subsystem: <Registration (UC001)>

List all test cases before providing the details for each under each package/subsystem and use case.

This test contains the following test cases:

- (a) TC001_01: Test <Sequence Diagram for User Registration (SD001)>
- (b) TC001_02: Test < Sequence Diagram for User Login (SD002)>
- (c) TC001_03: Test < Sequence Diagram for Profile Display and Edit (SD003)>
- (d) TC001_04: Test < Sequence Diagram for User Registration - Flow (SD004)>
- (e) TC001_04: Test < Sequence Diagram for Profile Edit – Flow (SD005)>

2.4.2 TC001_01: Test < Sequence Diagram for User Registration (SD001)>

Provide the details for each test case in the test case template (Excel). For the scope of this course, leave blanks for the columns on actual results and pass/fail status. See the example below for better understanding. If there are **alternate and exception scenarios**, include respective test cases under this sub-section also.

This test contains the following alternate and exception scenarios (if any):

- (a) TC001_01_01: Test <User Already Existed (SD001)>
- (b) TC001_01_02: Test <Invalid Credential Has been Inserted (SD001)>

Test Case ID	TC001_01	Test Case Description	User Registration		
Created BY	Zabir	Reviewed By	Tahiya	Version	1.7
QA Tester's Log	Tested on Flutter APP Image				
Tester's Name	Zabir	Data Tested	17-Jan-25	Test Case (Pass/Fail/Not)	
S#	Prerequisites:		S#	Test Data	
1	Access to APP		1	Staff Email = saleh.z@graduate.utm.my	
2			2	Password = 123123	
3			3	Name	
4			4	Staff_ID	
Test Scenario	Registration can be successfully completed				
Step #	Step Details	Expeted Results	Actual Results	Pass/Fail/Not executed/Suspended	
1	Open the App & press sign-up	app is working	As Expected		
2	Enter All Required Info	Info are taken	As Expected		
3	Click Register	Registran Successful Messa	As Expected		

2.4.3 TC001_02: Test < Sequence Diagram for User Login (SD002)>

This test contains the following alternate and exception scenarios (if any):

- (a) TC001_01_01: Test <User does not Exist (SD002)>
- (b) TC001_01_02: Test <Invalid Credential Has been Inserted (SD002)>

Test Case ID	TC001_02	Test Case Description	User Login
Created BY	Zabir	Reviewed By	Tahiya
		Version	1.7
QA Tester's Log	Tested on Flutter APP Image		
Tester's Name	Zabir	Data Tested	17-Jan-25
		Test Case (Pass/Fail/Not)	
S#	Prerequisites:	S#	Test Data
1	Access to APP	1	Staff Email = saleh.z@graduate.utm.my
2		2	Password = 123123
3		3	
4		4	
Test Scenario	Registration can be successfully completed		
Step #	Step Details	Expeted Results	Actual Results
1	Open the App & press Log-In	app is working	As Expected
2	Enter User Cred	Info are taken	As Expected
3	Click Login	Login Successful Message	As Expected

2.5 TC002: Test < Activity Tracking> Subsystem: <Input Activity (UC004)>

List all test cases before providing the details for the second use case in module1. Include the sub-sections accordingly.

This test contains the following test cases:

- (a) TC002_01: Test < Sequence diagram for Log Activity (SD006)>
- (b) TC002_02: Test < Sequence diagram for Show Impact Metrics (SD007)>
- (c) TC002_02: Test < Sequence diagram for Log Activity – Flow (SD008)>
- (d) TC002_02: Test < Sequence diagram for Calculate Metrics – Flow (SD009)>

2.6 TC003: Test < Incentive Management> Subsystem: < Point Calculation (UC010)>

List all test cases before providing the details for the first use case in module2. Include the sub-sections accordingly.

This test contains the following test cases:

- (a) TC003_01: Test < Sequence diagram for Display Points (SD010)>
- (b) TC003_02: Test < Sequence diagram for Display Rewards (SD011)>
- (c) TC003_03: Test < Sequence diagram for Redeem Points (SD012)>

2.7 TC004: Test < Learning & Engagement> Subsystem: < Participate in Quizzes (UC012)>

List all test cases before providing the details for the first use case in module2. Include the sub-sections accordingly.

This test contains the following test cases:

- (a) TC004_01: Test < Sequence diagram for Start Quiz (SD013)>
- (b) TC004_02: Test < Sequence diagram for Submit Answers (SD014)>

2.8 TC005: Test < Communication & Reporting> Subsystem: < RSS Feed (UC015)>

List all test cases before providing the details for the first use case in module2. Include the sub-sections accordingly.

This test contains the following test cases:

- (a) TC005_01: Test < Sequence diagram for Display RSS Feeds (SD017)>

Appendix A: Traceability Matrix

Test Case ID	Use Case ID/ Sequence Diagram ID	Package ID
TC001 for < User Management> Subsystem <ul style="list-style-type: none"> TC001_01 TC001_02 	UC001: Registration, UC002: Login <ul style="list-style-type: none"> SD001: User Registration SD002: User Login 	P001
TC002 for < Activity Tracking> Subsystem <ul style="list-style-type: none"> TC002_01 TC002_02 	UC004: Input Activity, UC005: View Impact Metric <ul style="list-style-type: none"> SD006: Log Activity SD007: Show Impact Metrics 	P002
TC003 for < Incentive Management> Subsystem <ul style="list-style-type: none"> TC003_01 TC003_02 	UC007: Submit Proof of Activity, UC010: Redemption <ul style="list-style-type: none"> SD010: Display Points SD012: Redeem Points 	P003
TC004 for < Learning & Engagement> Subsystem <ul style="list-style-type: none"> TC004_01 TC004_02 	UC012: Quizzes, UC013: FAQ <ul style="list-style-type: none"> SD013: Start Quiz SD016: View FAQ 	P004
TC005 for < Communication & Reporting> Subsystem <ul style="list-style-type: none"> TC005_01 TC005_02 	UC015: RSS Feed, UC018: Social-Media <ul style="list-style-type: none"> SD017: RSS Feeds SD012: Generate Report 	P005

