



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SCSJ2203: Software Engineering

System Documentation

Staff Attendance System

Version 3.0

[PR 4 - Chap 8 and 9]

Date: 20/6/2021

School of Computing, Faculty of Engineering

Prepared by: Group 9

Revision Page

a. Overview

In this system documentation version 3.0, there are two parts involved: The test cases and test approach analysis. In the test case part, we listed out all the required test cases for this system and ran a test scenario for each test case. While for the test approach analysis, we implemented the black-box where it will determine whether or not the system does as per the requirements.

b. Target Audience

The system documentation version 3.0 is dispensing for the stakeholders and the person involved throughout the system's implementation.

c. Project Team Members

Name	Role	Task	Status
Nursyahidatul Asyiqin binti Yusof	Senior software engineer	SD004 and SD006	Completed
Nurul Syamira binti Amat Jifri	Software engineer	SD007 and SD008	Completed
PG Khairil Qayyiz bin PG Putra	Software Manager	SD002 and SD003	Completed
Qudri Ameer bin Mohd Safiee	Senior programmer	SD001 and SD005	Completed

d. **Version Control History**

Version	Primary Author(s)	Description of Version	Date Completed
Version 3.0	Pg Khairil Qayyiz (Leader PR4)	Completed Chapter 8 and 9	20/06/2021

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8. Test Cases

In this Staff Attendance system, there are three package diagrams which consist of Access Portal subsystem, Attendance Management subsystem and Service and Maintenance subsystem. **The Access Portal** subsystem has a View Attendance Status use case that functions specifically to be accessed by staff. Another three use case diagrams will be under View Attendance Status since all these three use cases are continuous from the View Attendance Status use case. The use cases are Request Attendance Summary, Upload Excuse Letter and View Report (principal). While the **Attendance Management subsystem** has a Modify Staff Details use case that functions specifically to be used by the clerk. Another three use case diagrams under the Attendance Management subsystem are Notify Staff, Generate Report and Filter Search. Lastly, **Service and Maintenance subsystems** have a Maintain System use case that functions specifically to be accessed by technicians.

8.1 TC001: Test **Access Portal Subsystem: View Attendance Status** (UC002)

This test contains the following test cases:

- (a) TC001_01: Test Scenario of **Principal View Report** (SD001)
- (b) TC001_02: Test Scenario of **Staff View Status** (SD002)
- (c) TC001_03: Test Scenario of **Staff View Summary** (SD003)
- (d) TC001_04: Test Scenario of **Staff Upload Letter** (SD004)

8.1.1 TC001_01: Test Scenario for Principal View Report (SD001)

Test Case ID	TC001_01	Test Case Description	Principal View Report				
Created By	Nurul Syamira	Reviewed By	PG. Khairil Qayyiz	Version	1.0		
QA Tester's Log	N/A						
Tester's Name	Nurul Syamira	Date Tested	10th Jun 2021	Test Case (Pass/Fail/Not Executed)	Pass		
S #	Prerequisites:		S #	Test Data			
1	Access management system.		1	month			
2			2				
3			3				
4			4				
Test Scenario	Principal wants to view monthly staff attendance report.						
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended		
1	Principal access page system.	Site should open	As Expected		Pass		
2	Princiapal log in.	The page is accessible	As Expected		Pass		
3	Choose report page option in the menu	Report page should open	As Expected		Pass		
4	Choose a particular month	The report of the chosen is displayed	As Expected		Pass		

8.1.2 TC001_02: Test Scenario for Staff View Status (SD002)

Test Case ID	TC001_02	Test Case Description	Staff View Status		
Created By	Nurul Syamira	Reviewed By	Qudri Ameer	Version	1.0
QA Tester's Log		N / A			
Tester's Name	Nurul Syamira	Date Tested	10th Jun 2021	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:		S #	Test Data	
1	Access to Staff portal system		1	date	
2			2		
3			3		
4			4		
Test Scenario		Verify on entering valid userid and password, the customer can login			
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended
1	Staff access portal system	Site should open	As Expected		Pass
2	Staff login	The system is accessible	As Expected		Pass
3	Staff choose view attendance status option page	Redirect to the selected page	As Expected		Pass
4	Staff choose date	The attendance status is displayed	As Expected		Pass

8.1.3 TC001_03: Test Scenario for Staff View Summary (SD003)

Test Case ID	TC001_02	Test Case Description	Staff View Status		
Created By	Nursyahidatul Asyiqin	Reviewed By	Qudri Ameer	Version	1.0

QA Tester's Log N / A

Tester's Name	Nursyahidatul Asyiqin	Date Tested	10th Jun 2021	Test Case (Pass/Fail/Not Executed)	Pass
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S #	Prerequisites:
1	Access to Staff portal system
2	
3	
4	

S #	Test Data
1	month
2	
3	
4	

Test Scenario Verify on entering valid userid and password, the customer can login

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Staff access portal system	Site should open	As Expected	Pass
2	Staff login	The system is accessible	As Expected	Pass
3	Staff choose view summary option page	Redirect to the selected page	As Expected	Pass
4	Staff choose month	The summary of selected month is displayed	As Expected	Pass

8.1.4 TC001_04: Test Scenario for Staff Upload Letter (SD004)

Test Case ID	TC001_04	Test Case Description	Test the upload letter functionality			
Created By	Ameer	Reviewed By	Asyiqin	Version	1.0	
QA Tester's Log						
Tester's Name	Ameer	Date Tested	June 19, 2021	Test Case (Pass/Fail/Not		
S #	Prerequisites:		S #	Test Data Requirement		
1	Access to Staff Attendance System		1	Title = Surat tidak hadir bersebab		
2	Staff logged in		2	Description = Mempunyai temujanji vaksin pada tarikh dinyatakan		
3			3			
4			4			
Test Conditions	Testing on import files from selected file picker					
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Navigate to upload letter site	Site should open				
2	Staff select add submission	Navigate to drag and drop section				
3	Staff select the file picker	Open location of file				
4	Staff Import/upload the file	File is successful upload				
5	Staff Click on submit	File saved				

This test contains the following alternate:

- (a) TC001_04_01: Test exception Scenario of Staff Upload Letter of sequence diagram upload letter (SD004)

Test Case ID	TC001_04	Test Case Description	Test the upload letter functionality			
Created By	Ameer	Reviewed By	Asyiqin	Version	1.0	
QA Tester's Log						
Tester's Name	Ameer	Date Tested	June 19, 2021	Test Case (Pass/Fail/Not)		
S #	Prerequisites:		S #	Test Data Requirement		
1	Access to Staff Attendance System		1	Title = Surat tidak hadir bersebab		
2	Staff logged in		2	Description = Mempunyai temujanji vaksin pada tarikh dinyatakan		
3			3			
4			4			
Test Conditions	Testing on import files from selected file picker					
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended		
1	Navigate to upload letter site	Site should open				
2	Staff select add submission	Navigate to drag and drop section				
3	Staff select the file picker	Open location of file				
4	Staff Import/upload the file	Display error message, file unsuccessful upload				
5	Navigate to upload letter site	No file saved				

8.2 TC002: Test Attendance Management Subsystem: Modify Staff Details (UC009)

This test contains the following test cases:

- (a) TC002_01: Test Scenario of Clerk Modify Staff Details (SD006)
- (b) TC002_02: Test Scenario of Clerk Notify Staff (SD005)
- (c) TC002_03: Test Scenario of Clerk Filter Search (SD007)
- (d) TC002_04: Test Scenario of Clerk Generate Report (SD008)

8.2.1 TC002_01: Test Scenario for Clerk Modify Staff Details (SD006)

Test Case ID	TC002_01	Test Case Description	Test manage staff details functionality			
Created By	PG.Khairil Quayiz	Reviewed By	Nursyahidatul Asyiqin	Version	1.0	
QA Tester's Log						
Tester's Name	PG.Khairil Quayiz	Date Tested	June 20, 2021	Test Case (Pass/Fail/Not		
S #	Prerequisites:		S #	Test Data		
1	Access to Staff Attendance System		1	Staff ID = 12345		
2	Clerk Logged in		2	Name = Nurul Aqilah		
3			3	Department = Teacher		
4			4			
Test Scenario	Clerk wants to edit the staff information details					
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Navigate to manage staff site	Site should open				
2	Select edit staff details	Naviagate to edit staff section				
3	Enter staff name or ID	Cridentials can be enter				
4	View account staff details	Showing the staff details				
5	Edit staff account details	Details succesful edited				
6	Click save	Details succesful saved				

8.2.2 TC002_02: Test Scenario for Clerk Notify Staff (SD005)

Test Case ID	TC002_02	Test Case Description	Clerk Notify Staff			
Created By	Qudri Ameer	Reviewed By	PG. Khairil Qayyiz	Version	1.0	
QA Tester's Log	N/A					
Tester's Name	Qudri Ameer	Date Tested	10th Jun 2021	Test Case (Pass/Fail/Not Executed)	Pass	
S #	Prerequisites:		S #	Test Data		
1	Access management system.		1	notify reason		
2			2			
3			3			
4			4			
Test Scenario	Clerk wants to notify the staff of any updates regarding their attendance					
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Clerk enters account page.	Site should open	As Expected		Pass	
2	Choose notify staff option in the menu	Page with the list of staff should open	As Expected		Pass	
3	Choose staff	Staff is chosen	As Expected		Pass	
4	Choose reason to notify the staff	Display confirmation and reasons provided	As Expected		Pass	
5	Click submit	The notification sent to the staff	As Expected		Pass	

8.2.3 TC002_03: Test Scenario for Clerk Filter Search (SD007)

Test Case ID	TC002_03	Test Case Description	Test Filter Search functionality			
Created By	Nursyahidatul Asyiqin	Reviewed By	Nurul Syamira	Version	1.0	
QA Tester's Log						
Tester's Name	Nursyahidatul Asyiqin	Date Tested	June 20, 2021	Test Case (Pass/Fail/Not		
S #	Prerequisites:		S #	Test Data Requirement		
1	Access to Attendance Management system		1	Clerk ID = 05020		
2	Clerk logged in		2	Clerk Name = Irma Zafirah		
3			3	Category = Department		
4			4			
Test Conditions						
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Navigate to search page	Page accessed				
2	Clerk enter clerk ID and name	Credentials can be entered				
3	Clerk choose category	Display search results				
4	Clerk view search	Display successful message				

This test contains the following alternate:

- (a) TC002_03_01: Test alternate Scenario of **Clerk Filter Search** of sequence diagram **filter Search** (SD007)

Test Case ID	TC002_03	Test Case Description	Test Filter Search functionality			
Created By	Nursyahidatul Asyiqin	Reviewed By	Nurul Syamira	Version	1.0	
QA Tester's Log						
Tester's Name	Nursyahidatul Asyiqin	Date Tested	June 20, 2021	Test Case (Pass/Fail/Not		
S #	Prerequisites:		S #	Test Data Requirement		
1	Access to Attendance Management system		1	Clerk ID = 05020		
2	Clerk logged in		2	Clerk Name = Irma Zafirah		
3			3	Category = Department		
4			4			
Test Conditions						
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Navigate to search page	Page accessed				
2	Clerk enter clerk ID and name	Credentials can be entered				
3	Clerk chooses category	Display error message				

8.2.4 TC002_04: Test Scenario for **Clerk Generate Report** (SD008)

Test Case ID	TC002_04	Test Case Description	Test Generate Report			
Created By	PG. Khairil Quayyiz	Reviewed By	Nurul Syamira	Version	1.0	
QA Tester's Log						
Tester's Name	PG. Khairil Quayyiz	Date Tested	June 20, 2021	Test Case (Pass/Fail/Not		
S #	Prerequisites:		S #	Test Data Requirement		
1	Access to Attendance Management system		1	Clerk ID = 05020		
2	Clerk logged in		2	Clerk Name = Irma Zafirah		
3	Report		3	Month = November		
4			4			
Test Conditions						
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Navigate to generate page	Page accessed				
2	Clerk enter ID and name	Credentials can be entered				
3	Clerk chooses month	Display report				
4	Clerk requests generate	Report is being generated				
5	Clerk view report	Display completed message				

8.3 TC003: Test **Service and Maintenance Subsystem: Maintain System** (UC010)

This test contains the following test cases:

(a) TC003_01: Test Scenario of **Technician troubleshooting** (SD009)

8.3.1 TC003_01: Test Scenario of **Technician troubleshooting** (SD009)

Test Case ID	TC001_02	Test Case Description	Staff View Status		
Created By	PG.Khairil Qayyiz	Reviewed By	Qudri Ameer	Version	1.0

QA Tester's Log N / A

Tester's Name	PG.Khairil Qayyiz	Date Tested	10th Jun 2021	Test Case (Pass/Fail/Not Executed)	Pass
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S #	Prerequisites:
1	Access maintenance system
2	
3	
4	

S #	Test Data
1	
2	Name, ID, Password
3	
4	

Test Scenario Verify on entering valid userid and password, the customer can login

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Technician access maintenance system	Site should open	As Expected	Pass
2	Technician login	The system is accessible	As Expected	Pass
3	Technician identify problem	Problem should be identified	As Expected	Pass
4	Technician apply the troubleshooting	Troubleshoot done	As Expected	Pass

9. Test Approach Analysis

The test approach includes the use of the black-box where it will determine whether or not the program does what it is supposed to do. To test the program, the test requirement is used to derive a set of test cases. There are 2 strategies to implement the test case which are equivalence partitioning (EP) and Boundary Value Analysis (BVA). EP is a technique dividing the input domain into classes. all the same, classes will be treated the same by the module program. If an input is in range, it will then have one valid and two invalid conditions, meanwhile if the input condition is a boolean, it will have one valid and one invalid. BVA is a technique to select those at the edge of the class or input values that sit at the border as a measure.

9.1 TC001: Test **Access Portal Subsystem: View Attendance Status** (UC002)

Test Case ID	Step#	Input data	Valid	Invalid
TC001_01	4	Month	Valid view report	Invalid month, Null
TC001_02	4	Date	Valid view status	Invalid date, Null
TC001_03	4	Month	Valid view summary	Invalid month, Null
TC001_04	2	Title	Valid title	Invalid title, Null
		Description	Valid Description	Invalid Description, Null
		File	Upload successful	Upload unsuccessful, Null

9.2 TC002: Test Attendance Management Subsystem: Modify Staff Details (UC009)

Test Case ID	Step#	Input data	Valid	Invalid
TC002_01	5	Change department	Valid name of department	Invalid name of department, Null
TC002_02	4	Notification Description	Valid description of notification	Null description
TC002_03	4	Keyword for category	Valid keyword of keyword	Invalid keyword of category, Null
TC002_04	5	Month	Valid generated report	Null fields

9.3 TC003: Test **Service and Maintenance Subsystem: Maintain System** (UC010)

Test Case ID	Step#	Input data	Valid	Invalid
TC003_01	4	Name, password	valid name and password	Invalid name and password, NULL

Appendices

Appendix A: Traceability Matrix

Test Case ID	Use Case ID/ Sequence Diagram ID	Package ID
TC001 for Access Portal Subsystem • TC001_01 • TC001_02 • TC001_03 • TC001_04	UC002 • SD001 • SD002 • SD003 • SD004	P001
TC002 for Attendance Management Subsystem • TC002_01 • TC002_02 • TC002_03 • TC002_04	UC002 • SD006 • SD005 • SD007 • SD08	P002
TC003 for Service and Maintenance Subsystem • TC003_01	UC003 • SD009	P003