Test Proposal

Prepared for: SE 323 Software Construction, Testing and Maintenance
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1. Introduction

1.1 Purpose
This test plan has been created to communicate the test approach to team members. It include the objectives, scope, schedule, test case and test case script. This document will clearly identify the testing approach and overall framework.

1.2 Project Overview
This project is a register system for Chiang Mai University (CMU). Students can use this website to enroll or withdraw course and get course information. Lecturer can use it to grading and get course information. User only need to have an internet enabled pc to use this website app.

1.2 Objectives
Test team are responsible for test the system and ensuring it meet functional requirement. Make sure the system satisfies the use case scenarios. At the end of project development cycle, the user should find that the project has met all of our expectation as detailed in the requirements.

1.3 Team members

Name	Role
Thanawat Lukuan	Tester
Thapakorn Tuwaemasa	Developer
Hathaichanok Dumrongsiri	Developer
De Wang	Tester

2. Scope

This test will include all use case in use case description. All the normal flow, alternative and exception should be test.

UC 01: Login as user
UC 02: Login as Admin
UC 03: Log out
UC 04: Create Course
UC 05: Enroll Course
UC 06: Search Course
UC 07: Withdraw course
UC 08: See grade summary
UC 09: See Tuition fees
UC 10: Grading
UC 11: See course history

3. Resourse

3.1 Hardware

Operating system	Model
macOS X : high sierra 10.13.3	Macbook pro (2017 - 15inch) 2.8GHz Intel core i7 16GB of RAM DDR3 Intel HD graphics 630

3.1 Web Browser

Operating system	Browser
macOS X	Google Chrome

3.2 Tool

Process	Tool
Test case creation	Google document
Automated testing	Katalon Studio
Version control	Git via Github.com
Project management	KANBAN via Trello

3.3 Database

Because database is not finished yet. We use mock data to test.

User Data

students name	password
student	student
lecturer_name	**password**
lecturer	lecturer
admin_name	**password**
admin	admin

Course Data

Course ID	Course Name	Lecturer	Credit	Date	Time	Seat	Enrolled
953231	Object-Oriented Programming	Lect.Jayakit Hirisajja	3	Tuesday, Friday	9.30 - 11.00	30	30
953232	Object-Oriented Analysis and Design	Dr.Prompong Sugansil	3	Monday, Thursday	8.00 - 9.30	45	42
953202	Algorithm Design and Analysis	Dr.Pattama Longani	3	Monday, Thursday	8.00 - 9.30	50	45
953102	ADT and Problem solving	Dr.Noppon Choosri	3	Tuesday, Friday	9.30 - 11.00	35	35
953323	Software CONST, TEST and MAINTAIN	Dr.Chartchai Doungsa-ard	3	Tuesday, Friday	12.30 - 14.00	45	45
953213	Operating System Principle and LANG	Dr.Passakorn Pannachitta	3	TBA	TBA	35	35
208255	Math for SE	Lect.Mo	3	Tuesday	9.30 -	50	45

		rakot Intanon		, Friday	11.00		
953201	Algorithm Design and Analysis	Dr.Pattama Longani	3	Thursday	14.00 - 17.00	45	42
001202	English in Science context	Pierre Yanofsky	3	Monday, Thursday	8.00 - 9.30	40	40
207110	Physics:Science that change the world	Lect.Krit Sriphomsett, Lect.Prakarn Unachak	3	Monday, Thursday	9.30 - 11.00	150	23
751100	Economics in Everyday life	Lect.Rossasin Tangpolponsawasdi	3	Tuesday, Friday	12.30 - 14.00	75	38
057128	Tennis for Life and Exercise	Lect.Pakorn Tuisri	1	Wednesday	17.00 - 18.00	20	12

4. Entry and Exit Criteria

4.1 Entry Criteria
1. All test hardware must been installed.
2. All the necessary documentation, design and requirement information should be available that will allow testers to operate the system and judge the correct behavior.
3. All the standard software tools must have been successfully installed.
4. proper test data is available
5. The test environment should be ready.
6. All member have understood the requirements.
7. Reviewed test scenarios, test case.

4.2 Exit Criteria
1. A certain level of requirements coverage has been achieved.
2. No high priority bugs are left outstanding.

5. Test Case

TC-01 Test the student login feature

Purpose: Test the student login feature	

Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OSX 10.3.13
	Required Configuration: [browser setup, security or user ID roles]

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to student login page	Able to navigate to login page		
2	Enter username (student)	Able to enter text		
3	Enter password that is correct (student)	Able to enter text		
4	Select student in "position"	Two option provide, "student" and "lecturer"		
5	Click sign in	System go to student home page		
Alternative Flow 1: name is incorrect				
6	Navigate to student login page	Able to navigate to login page		

7	Enter wrong students name(e.g. studentt)	Able to enter text		
8	Enter password that is correct (e.g. student)	Able to enter text		
9	Select student in "position"	Select "student"		
10	Click sign in	System pop up message "You put wrong account, password or left it blank, please try again".		
Alternative Flow 2: user password is incorrect				
11	Navigate to login page	Navigate to login page		
12	Enter correct username(e.g. student)	Able to enter text		
13	Enter password that is incorrect (e.g. 1234)	Able to enter text		
14	Select student in "position"	Select "student"		
15	Click sign in	System pop up message "You put wrong account, password or left it blank, please try again".		
Alternative Flow 3: input blank				
16	Navigate to login page	Navigate to login page		
17	Enter nothing	Able to enter text		
18	Enter nothing	Able to enter text		
19	Select student in "position"	Select "student"		
20	Click sign in	System pop up message "You put wrong account,		

		password or left it blank, please try again".		

TC-02 Test the lecturer login feature

Purpose: Test the lecturer login feature	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OSX 10.3.13
	Required Configuration: [browser setup, security or user ID roles]

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to lecturer login page	Navigate to login page		
2	Enter lecturer username (lecturer)	Able to enter text		
3	Enter password (lecturer)	Able to enter text		
4	Select lecturer in "position"	Select "lecturer"		
5	Click sign in	System go to lecturer home page		
Alternative Flow 1: input wrong name				
6	Navigate to login page	Navigate to login page		

7	Enter wrong lecturer username(e.g. lecture)	Able to enter text		
8	Enter password that is correct (e.g. lecturer)	Able to enter text		
9	Select lecturer in "position"	Select "lecturer"		
10	Click sign in	System pop up message "You put wrong account, password or left it blank, please try again".		
Alternative Flow 2:input wrong password				
11	Navigate to login page	Navigate to login page		
12	Enter correct lecturer name(e.g. lecturer)	Able to enter text		
13	Enter password that is incorrect (e.g. lecture)	Able to enter text		
14	Select lecturer in "position"	Select "lecturer"		
15	Click sign in	System pop up message "You put wrong account, password or left it blank, please try again".		
Alternative Flow 3:input nothing				
16	Navigate to login page	Able to navigate to login page		
17	Enter nothing	Able to enter text		
18	Enter nothing	Able to enter text		
19	Select lecturer in "position"	Select "lecturer"		
20	Click sign in	System pop up message "You put wrong account, password or left it blank, please try again".		

TC-03 Test the admin login feature

Purpose: Test the admin login feature	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OSX 10.3.13
	Required Configuration: [browser setup, security or user ID roles] **going to …/admin page**

	TEST SCRIPT STEPS/RESULTS			
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to admin login page	Able to navigate to admin login page		
2	Enter admin username (admin)	Able to enter text		
3	Enter password (admin)	Able to enter text		
4	Click sign in	System go to admin home page		
Alternative Flow 1: input wrong admin name				
5	Navigate to admin login page	Able to navigate to admin login page		
6	Enter admin username that is not exist in database(e.g. adm)	Able to enter text		
7	Enter password that is correct in database	Able to enter text		

8	Click sign in	System pop up message "You put wrong account, password or left it blank, please try again".		
Alternative Flow 2: input wrong admin password				
9	Navigate to admin login page	Able to navigate to admin login page		
10	Enter correct admin username(e.g. admin)	Able to enter text		
11	Enter password that is incorrect (e.g. 1234)	Able to enter text		
12	Click sign in	System pop up message "You put wrong account, password or left it blank, please try again".		
Alternative Flow 3:input nothing				
13	Navigate to admin login page	Able to navigate to admin login page		
14	Enter nothing	Able to enter text		
15	Enter nothing	Able to enter text		
16	Click sign in	System pop up message "You put wrong account, password or left it blank, please try again".		

TC-04 Test Log out feature

Purpose: Test Log out feature	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OSX 10.3.13
	Required Configuration: [browser setup, security or user ID roles] **already login as student or lecturer or admin**

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Click the logout button	System pop up confirmation message "Are you sure you want to log out?" with "OK" and "Cancel" button.		
2	click "OK"	User logout and System go back to login page		
Alternative Flow 1: click cancel in step2				
3	Click the logout button	System pop up confirmation message "Are you sure you want to log out?" with "OK" and "Cancel" button.		
4	click "Cancel"	System do nothing and stay at current page		

TC-05 Test the create course feature

Purpose: Test the create course feature	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OS10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a admin**

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to admin add course page	Able to navigate to admin add course page		
2	Input course id in correct form(e.g.953234)	Able to enter text		
3	Input course name(e.g. computer programming)	Able to enter text		
4	Input lecture name(e.g. thapakorn tuwaemuesa)	Able to enter text		
5	Input seat number(e.g. 50)	Able to enter number		
6	Input credit(e.g. 3)	Able to enter number		
7	Choose day(e.g. Monday)	System provide Monday to Sunday to choose		

8	Choose semester(e.g. 1/2560)	System provide this year and next year semester		
9	Click submit	System show confirmation message "Are you sure to add this course?" with "OK" and "Cancel"		
10	Click OK	System save the course in database and then redirect to admin index page		
Alternative Flow 1: Admin click cancel after click submit				
11	Navigate to admin add course page	Able to navigate to admin add course page		
12	Input course id in correct form(e.g.953234)	Able to enter text		
13	Input course name(e.g. computer programming)	Able to enter text		
14	Input lecture name(e.g. thapakorn tuwaemuesa)	Able to enter text		
15	Input seat number(e.g. 50)	Able to enter number		
16	Input credit(e.g. 3)	Able to enter number		
17	Choose day(e.g. Monday)	System provide Monday to Sunday to choose		
18	Choose semester(e.g. 1/2560)	System provide this year and next year semester		
19	Click submit	System show confirmation message "Are you sure to add this course?" with "OK" and "Cancel"		

20	Click cancel	System stay at current page		
Alternative Flow A2: Course ID is duplicate or input wrong				
21	Navigate to admin add course page	Able to navigate to admin add course page		
22	Input course id in correct form(e.g.953234)	Able to enter text		
23	blank course name	Able to enter text		
24	Input lecture name(e.g. thapakorn tuwaemuesa)	Able to enter text		
25	Input seat number(e.g. 50)	Able to enter number		
26	Input credit(e.g. 3)	Able to enter number		
27	Choose day(e.g. Monday)	System provide Monday to Sunday to choose		
28	Choose semester(e.g. 1/2560)	System provide this year and next year semester		
29	Click submit	System show confirmation message "Are you sure to add this course?" with "OK" and "Cancel"		
30	The course is duplicate or input wrong	System provide error message "Please do not left the form blank or input wrong format, please try again."		
31		System stay at add course page.		
Alternative Flow A3: Admin click cancel without click submit before				
32	Navigate to admin add course page	Able to navigate to admin add course page		
33	Input course id in correct form(e.g.953234)	Able to enter text		

34	Input course name(e.g. computer programming)	Able to enter text		
35	Input lecture name(e.g. thapakorn tuwaemuesa)	Able to enter text		
36	Input seat number(e.g. 50)	Able to enter number		
37	Input credit(e.g. 3)	Able to enter number		
38	Choose day(e.g. Monday)	System provide Monday to Sunday to choose		
39	Choose semester(e.g. 1/2560)	System provide this year and next year semester		
40	Click cancel	System redirect to admin index page.		

TC-06 Test enroll course feature

Purpose: Test enroll course feature	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OSX 10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a student**

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to Student home page	Able to navigate to student homepage		
2	Click enroll course button	System go to enroll course page. This page show list of course record from database		
3	Click add button after course	System pop up message "Are you sure to add this course ?"		
4	Click ok	System add new record to database and go to home page.		
Alternative Flow 1:click cancel at step 4				
5	Navigate to Student home page	Able to navigate to student homepage.		
6	Click enroll course button	System go to enroll course page. This page show list of course record from database.		

7	Click add button	System pop up message "Are you sure to add this course ?"		
8	Click cancel	System do nothing and stay at this page		
Alternative Flow 2 : Student's credit more than 22				
9	Navigate to Student home page	Able to navigate to student homepage		
10	Click enroll course button	System go to enroll course page. This page show list of course record from database		
11	Click add button	System pop up message "Are you sure to add this course ?"		
12	Click ok	System show message "Sorry, Your remaining credit is not enough to enroll."		

TC-07 Test search course by id

Purpose: Test search course by id	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OS10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a student**

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to students home page	Able to navigate to student homepage		
2	Click Enroll course	System go to add course page		
3	Choose course id in front of search bar	System provide "course id" and "course name" to choose		
4	Input course id(e.g. 953234)	Able to enter text		
5	Click search	System show all record from database which course have same id with input.		
Alternative Flow : The keyword does not match any course				
6	Navigate to student enroll page	System provides input box for inputting course Id or course Name and		

		show search box as search tab.		
7	Student input id (853231)	Able to enter text		
8	Click search	System show the blank table		

TC-08 Test search course by name

Purpose: Test search course by name	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OS10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a student**

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to Student home page	Able to navigate to student homepage		
2	Click add course	System go to add course page		
3	Choose course name in front of search bar	System provide course id and course name to choose		
4	Input course name (e.g. Tennis)	Able to enter text		
5	Click search	System show all record from database which course have same name with input.		
Alternative Flow : The keyword does not match any course				
6	Navigate to student enroll page	System provides input box for inputting course Id or course Name and		

		show search box as search tab.		
7	Student input name (ADT)	Able to enter text		
8	Click search	System show the blank table		

TC-09 Test withdraw course feature

Purpose:	Test withdraw course feature

Tester Name: Date(s) of Test:	Prerequisites for this test: None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OS10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a student**

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to Student home page	System show all course enrolled at student home page		
2	Click withdraw button after course record	System pop up confirmation message ""Are you sure to withdraw this course ?" with "OK" and "Cancel" button"		
3	Click OK	System refresh the page and delete this course from database		
Alternative Flow 1: click cancel at step 3				
4	Navigate to Student home page	System show all course enrolled at student home page		
5	Click withdraw button	System pop up confirmation message		

		""Are you sure to withdraw this course ?" with "OK" and "Cancel" button"		
6	Click cancel	System do nothing and stay in current page.		

TC-10 Test see grade summary

Purpose: Test see grade summary	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OS10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a student**

TEST SCRIPT STEPS/RESULTS				
STEP	TEST STEP/INPUT	EXPECTED RESULTS	ACTUAL RESULTS	PASS/FAIL
Normal Flow:				
1	Navigate to Student home page	Able to navigate to student homepage		
2	Click "my transcript" button on top of page	System go to transcript page and show transcript of student from database		

TC-11 Test see tuition fee feature

Purpose:	Test see tuition fee feature

Tester Name: Date(s) of Test:	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OS10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a student**

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to Student home page	Able to navigate to student homepage		
2	Click "payment" button	System go to tuition fee page and show tuition fee summary		

TC-12 Test grading feature

Purpose: Test grading feature	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OS10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a lecturer**

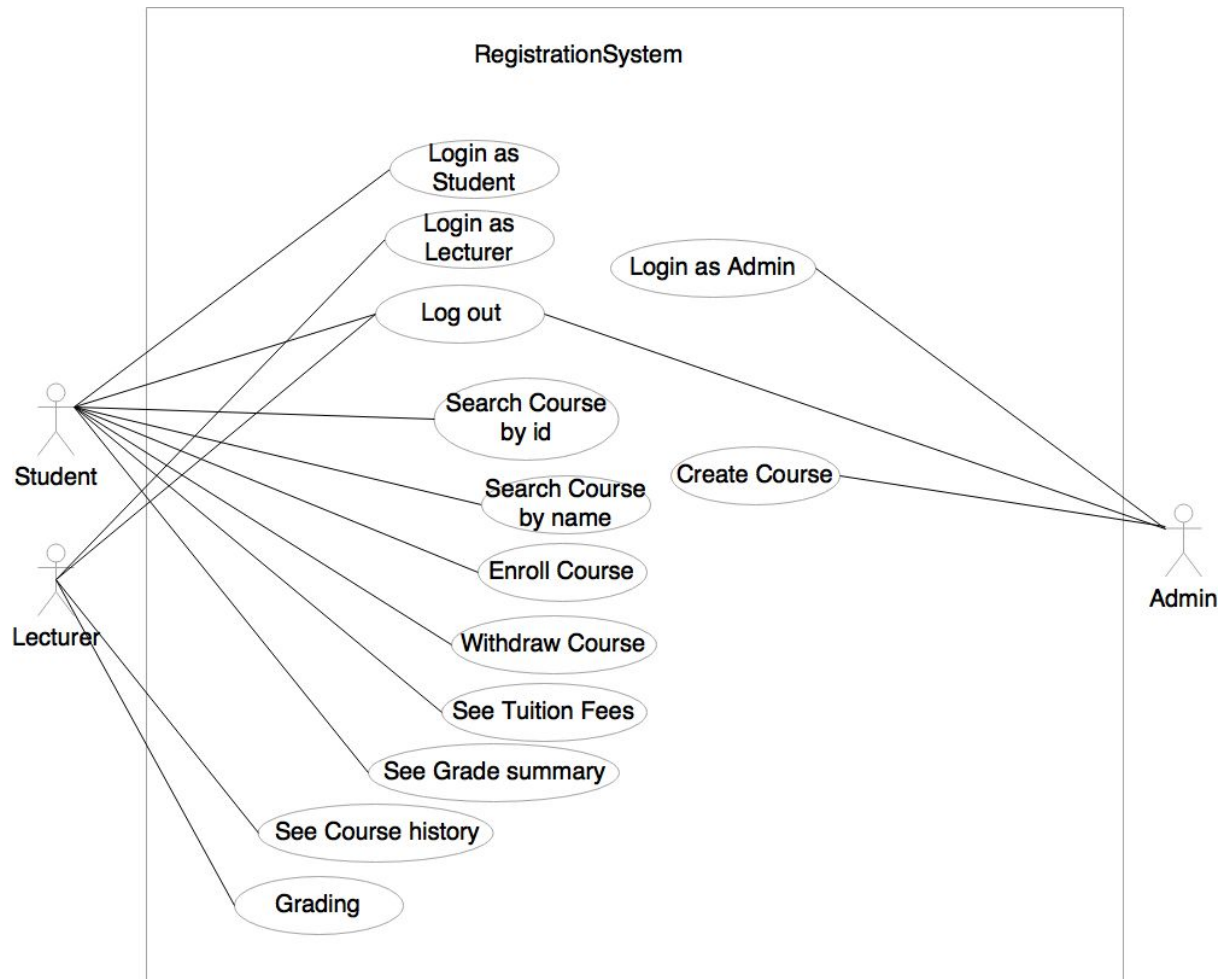| TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to lecturer home page	Able to navigate to lecturer homepage		
2	Click "grading" button on top of page	System go to grading page and show course list which provide the courses in current semester and student grade of that course		
3	Click to select course in box	System show the all student of that course and input area of their score		
4	Input grade for certain student.	Able to input number from A,B,C,D,F.		
5	Click "save" button	System save the certain student's score and show message "Successfully update."		
Alternative Flow 1:input wrong or blank in step 4				

6	Navigate to lecturer home page	Able to navigate to lecturer homepage		
7	Click "grading" button on top of page	System go to grading page and show course list which provide the courses in current semester and student grade of that course		
8	Click to select course in box	System show the all student of that course and input area of their score		
9	Input nothing	Able to input number from A,B,C,D,F.		
10	Click "save all" button	System pop up message "Please put the grade as correct format or do not left it blank."		
Alternative Flow 2: click "save all" button at step 5				
11	Navigate to lecturer home page	Able to navigate to lecturer homepage		
12	Click "grading" button on top of page	System go to grading page and show course list which provide the courses in current semester and student grade of that course		
13	Click to select course in box	System show the all student of that course and input area of their score		
14	Input grade for one student	Able to input number from A,B,C,D,F.		
15	Click "save all" button after that student	System save all grade of input in database and show message "Successfully update"		

TC-13 Test see course history

Purpose: Test see course history	
Tester Name: **Date(s) of Test:**	**Prerequisites for this test:** None
	Software Versions: Application: CMU register system demo Browser : Google Chrome Version 65.0.3325.181 Database: mock data Operating System: Mac OS10.3.13
	Required Configuration: [browser setup, security or user ID roles] **login as a lecturer**

TEST SCRIPT STEPS/RESULTS				
STEP	**TEST STEP/INPUT**	**EXPECTED RESULTS**	**ACTUAL RESULTS**	**PASS/FAIL**
Normal Flow:				
1	Navigate to lecturer home page	Able to navigate to lecturer homepage		
2	Click "history" button on top of page	System go to history page and show history of course taught by lecturer		

6. Use Case Diagram

7. Use Case Description

UC - 01 Login as student

Use Case ID	UC-01		
Use Case Name	Login as student		
Created By	Thanawat Lukuan	Last Update By	Thanawat Lukuan
Date Created	26/2/18	Last Revision Date	28/3/18
Actors	Student		
Description	Student can login to the Registration system by input correct account and password. After login Student can use other function of the system.		
Trigger	Student enter "Login" page.		
Preconditions	Student must have an account.		

Use Case Input Specification			
Input	type	Constraint	Example
Account	String	Less than 20 characters	"student"
Password	String	Less than 20 characters	"student"

Post conditions	Student arrive Student index page	
Normal Flows	Student	Registration System
	2. Student input account. 3. Student input password. 4. Student select "Student". 5.Student click "Sign in" button.	1.System provides input box for account and password, dropdown for position and "Sign In",Cancel" button. 6. System validate the account and password.**[A1][E1]** 7.System show student index page.**[E1]**

Alternative Flow	[A1:Student input account wrong or password wrong] 1.System provides error message "You put wrong account, password or left it blank, please try again". 2.System provides login page. 3.Go back to NF-1.
Exception Flow	[E1:Internet lost connection]
Assumption	Student should understand English.

UC - 02 Login as admin

Use Case ID	UC-02		
Use Case Name	Login as Admin		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	25/3/18
Actors	Admin		
Description	Admin can login to the Registration system by input correct identity and password.		
Trigger	Admin enter "Admin" page		
Preconditions	Admin must have an identity and password		

Use Case Input Specification			
Input	type	Constraint	Example
Identity	String	Less than 20 character	"admin"
Password	String	Less than 20 character	"admin"

Post conditions	Admin arrive admin index page	
Normal Flows	Student	Registration System
	2. Admin input identity. 3. Admin input password. 4. Admin click "Sign in" button.	1.System provides input box for identity and password,and "Sign In",Cancel" button. 5.System validate the account and password.**[A1].[E1]** 6.Registration system show admin index page.**[E1]**
Alternative Flow	[A1:Admin input identity wrong or password wrong] 1.System shall provide error message. 2.System provide Admin page 3.Go back to NF-1.	

Exception Flow	[E1:Internet lost connection]
Assumption	Admin should understand English.

UC - 03 Logout

Use Case ID	UC-03		
Use Case Name	Log out		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	25/3/18
Actors	User and Admin		
Description	User or Admin log out from the system to leave the system.		
Trigger	User or Admin click "Logout" button.		
Preconditions	User or Admin must first login to the system.		
Use Case Input Specification			
Input	type	Constraint	Example
Post conditions	User or Admin arrive the Login page.		
Normal Flows	Student		Registration System
	2. User click ok**[A1]**		1 System pop up confirmation message "Are you sure you want to log out?" with "OK" and "Cancel" button 3. System show index page.**[E1]**
Alternative Flow	[A1: User click cancel] 3. System provides current page before click logout.		
Exception Flow	[E1:Internet lost connection]		
Assumption	User and Admin should understand English.		

UC - 04 Create Course

Use Case ID	UC-04		
Use Case Name	Create Course		
Created By	De wang	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	25/3/18
Actors	Admin		
Description	Admin can create new course in this system. Admin should provide course id, course name,lecturer name,seat semester and credit(s) to create a new course		
Trigger	Admin click "add course" at navigation bar		
Preconditions	Admin must first login to the admin page		
Use Case Input Specification			

Input	type	Constraint	Example
Course ID	String	6 characters	953211
Course Name	String	Less than 20 characters	"Object-Oriented Programming"
Lecturer Name	String	Less than 20 characters	"Thanawat Lukuan"
Semester	String	none	"1/2560"
Seat	Int	Less than 3 digits numbers	45
Credit	Int	Only 1 to 9	2

Post conditions	The course has been created successfully.	
Normal Flows	Student	Registration System

		1.System provides add course page which contains input box for course information and "Submit", "Cancel" button
	2. Admin input an information course id,course name, lecturer name, semester, seat and credit 3. Admin click Submit.**[A3]**	
	5. Admin click OK.**[A1]**	4.System show confirmation message "Are you sure to add this course?" with "OK" and "Cancel"
		6. System check whether Course ID is duplicate or not or the input is wrong or not.**[A2]** 7.System add course to database**[E1]** 8.System alert "Successfully added" 9.System redirect to admin index page**[E1]**
Alternative Flow	[A1: Admin Click cancel after click submit]. 1.Back to NF-1 [A2: Course ID is duplicate or input wrong] 1.System provide error message "Please do not left the form blank or input wrong format, please try again." 2.Back to NF-1 [A3 : Admin click cancel without click submit before] 1.System redirect to admin index page.	
Exception Flow	[E1: Internet lost connection.]	
Assumption	Admin should understand English.	

UC - 05 Enroll Course

Use Case ID	UC-05		
Use Case Name	Enroll Course		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	25/3/18
Actors	Student		
Description	Student can enrolled the course by select from the course they want.		
Trigger	Student click "Enroll Courses" at Navigation bar.		
Preconditions	Student must first login to the registration system		
Use Case Input Specification			
Input	type	Constraint	Example
Post conditions	Student enrolled course successfully and see the course at student index.		
Normal Flows	Student		Registration System
	5. Student click "ADD" button. 7. Student click "OK".**[A1]**		1.System show the enrollment page contains course table with "ADD" button" 6.System shall provides confirmation message "Are you sure to add this course ?" with "OK" and "Cancel" button. 8.System check whether student's remaining credit and course credit is enough.**[A2]** 9.System add the course into student database.**[E1]** 10.System redirect to index page**[E1]**

Alternative Flow	[A1: Student click cancel] 1.Go back to NF-1 [A2: Student's credits more than 22] 1.System provides error message "Sorry, Your remaining credit is not enough to enroll." 2.Go back to NF-1
Exception Flow	[E1:Internet lost connection.]
Assumption	Student should understand English.

UC - 06 Search course by id

Use Case ID	UC-06		
Use Case Name	Search Course by id		
Created By	Thanawat Lukuan	Last Update By	Thanawat lukuan
Date Created	26/2/18	Last Revision Date	28/03/18
Actors	Student		
Description	Student can search course by inputting course id		
Trigger	Student click "Enroll courses" at Navigation bar		
Preconditions	Student must first login to the registration system		
Use Case Input Specification			
Input	type	Constraint	Example
Course Id	Int	Not more than 6 digits number	953234
Post conditions	The result of searching method provided as table.		
Normal Flows	Student		Registration System
	2.Student select Course Id. 3.Student input course id. 4. Student click "Search" button.		1.System provides input box for inputting course Id or course Name and show search box as search tab. 5.System show the result which are all course that matched to the keyword.**[E1][A1]**
Alternative Flow	[A1 : The keyword does not match any course] 1.System show the blank table.		
Exception Flow	[E1:Internet lost connection]		
Assumption	Student should understand English.		

UC - 07 Withdraw course

Use Case ID	UC-07		
Use Case Name	Withdraw course		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	25/03/18
Actors	Student		
Description	Student can delete the course from their course list by clicking withdraw.		
Trigger	Student enter "student index" page		
Preconditions	Student must first login to the registration system		

Use Case Input Specification			
Input	type	Constraint	Example

Post conditions	The course will removed from student's courses list.	
Normal Flows	Student	Registration System
	1. Student click "Withdraw" button.	2.System provides confirmation message "Are you sure to withdraw this course ?" with "OK" and "Cancel" button
	3. Student click "OK".**[A1]**	4.System delete course from student list.**[E1]** 5.System provide "student index"page with course list table.**[E1]**
Alternative Flow	[A1: Student click cancel]. 1.Go back to "student index" page	
Exception Flow	[E1: Internet lost connection.]	
Assumption	Student should understand English.	

UC - 08 See grade summary

Use Case ID	UC-08		
Use Case Name	See grade summary		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	28/02/18
Actors	Student		
Description	Student can see transcript of their current semester.		
Trigger	Student click "My Transcript" at navigation bar.		
Preconditions	Student must first login to the registration system		

Use Case Input Specification			
Input	type	Constraint	Example

Post conditions	Student can see Transcript (GPA, Enrolled credits ,Received of Current semester summary and All semester summary.)

Normal Flows	Student	Registration System
		1.System provides Transcript page which contains table of courses and received grade for each course in a row and overall grade summary as a tab.**[E1]**
Alternative Flow	none	
Exception Flow	[E1:Internet lost connection]	
Assumption	Student should understand English.	

UC - 09 See tuition fees

Use Case ID	UC-09		
Use Case Name	See Tuition fees		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	28/2/18
Actors	Student		
Description	Student can see tuition fees receipt. It will represent each course price and overall price.		
Trigger	Student click "Payment" at Navigation bar.		
Preconditions	Student must first login to the registration system.		
Use Case Input Specification			
Input	type	Constraint	Example
Post conditions	Tuition fees provided to Student completely.		
Normal Flows	Student		Registration System
			1.System provides the payment page which contains tuition fee table that show each course price in a row and summary the price in total.**[E1]**
Alternative Flow	none		
Exception Flow	[E1:Internet lost connection.]		
Assumption	Student should understand English.		

UC - 10 Grading

Use Case ID	UC-10		
Use Case Name	Grading		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	25/3/18
Actors	Lecturer		
Description	Lecturer can put grade at the course their want to the students who enrolled the course by input score.		
Trigger	Lecturer click "Grading"at navigation bar.		
Preconditions	Lecturer must first login to the registration system		
Use Case Input Specification			
Input	type	Constraint	Example
Grade	String	Only 'A', 'B', 'C', 'D' and 'F'	A
Post conditions	The grade has been set successfully.		
Normal Flows	Student		Registration System
	4. Lecturer input grade. 5.Lecturer clicks "Save" button.**[A1][A2][A3]**		1.System provides grading page which contain side tab to select the course and table to show student in each course also, input box for grade. 2.System provides grading table for that course.**[E1]** 6.System save the grade for student.**[E1]** 7.System provides alert message "Successfully update!"
Alternative Flow	[A1: Input wrong data type or blank]		

	1.System shall provide error message "Please put the grade as correct format or do not left it blank." [A2: Lecturer click "clear all" button] 1.System clear all input in input box from grading table. 2.Go back to NF-1 [A3:Lecturer click "save all" button] 1.System save the grade for all students in table. **[A1]** 2.Go back to NF-1
Exception Flow	[E1:Internet lost connection]
Assumption	Lecturer should understand English.

UC - 11 See course history

Use Case ID	UC-11		
Use Case Name	See course history		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	26/2/18	Last Revision Date	28/2/18
Actors	Lecturer		
Description	Lecturer can see all courses list that he/she has been teaching.		
Trigger	Lecturer click "History" at navigation bar.		
Preconditions	Lecturer must first login to the registration system.		
Use Case Input Specification			
Input	type	Constraint	Example
Post conditions	The history of lecturer has been provided successfully.		
Normal Flows	Student		Registration System
			1.System shall provide course history page which contain all courses that lecturer has been teaching as table.**[E1]**
Alternative Flow	none		
Exception Flow	[E1: Internet lost connection]		
Assumption	Lecturer should understand English.		

UC - 12 Login as lecturer

Use Case ID	UC-12		
Use Case Name	Login as lecturer		
Created By	Thanawat Lukuan	Last Update By	Thanawat Lukuan
Date Created	28/3/18	Last Revision Date	28/3/18
Actors	Lecturer		
Description	Lecturer can login to the Registration system by input correct account and password. After login Lecturer can use other function of the system.		
Trigger	Lecturer enter "Login" page.		
Preconditions	Lecturer must have an account.		
Use Case Input Specification			
Input	type	Constraint	Example
Account	String	Less than 20 characters	"lecturer"
Password	String	Less than 20 characters	"lecturer"
Post conditions	Lecturer arrive Lecturer index page		
Normal Flows	Student		Registration System
	2. Lecturer input account. 3. Lecturer input password. 4. Lecturer select "Student". 5.Lecturer click "Sign in" button.		1.System provides input box for account and password, dropdown for position and "Sign In","Cancel" button. 6. System validate the account and password.**[A1][E1]** 7.System show Lecturer index page.**[E1]**
Alternative Flow	[A1:Lecturer input account wrong or password wrong]		

	1.System provides error message "You put wrong account, password or left it blank, please try again". 2.System provides login page. 3.Go back to NF-1.
Exception Flow	[E1:Internet lost connection]
Assumption	Lecturer should understand English.

UC - 13 Search course by name

Use Case ID	UC-13		
Use Case Name	Search Course by name		
Created By	Thanawat Lukuan	Last Update By	Thapakorn Tuwaemuesa
Date Created	28/3/18	Last Revision Date	28/03/18
Actors	Student		
Description	Student can search course by inputting course name		
Trigger	Student click "Enroll courses" at Navigation bar		
Preconditions	Student must first login to the registration system		

Use Case Input Specification			
Input	type	Constraint	Example
Course Name	String	Less than 20 characters	"Tennis"

Post conditions	The result of searching method provided as table.	
Normal Flows	Student	Registration System
	2.Student select Course name. 3.Student input course name. 4. Student click "Search" button.	1.System provides input box for inputting course Id or course Name and show search box as search tab. 5.System show the result which are all course that matched to the keyword.**[E1][A1]**
Alternative Flow	[A1 : The keyword does not match any course] 1.System show the blank table.	
Exception Flow	[E1:Internet lost connection]	
Assumption	Student should understand English.	