

Schedule Optimizer  
Requirements Traceability Matrix

Submitted to:     Ma. Rowena C. Solamo  
                          Faculty Member  
                          Department of Computer Science  
                          College of Engineering  
                          University of the Philippines, Diliman

Submitted by:     Cavan, Antonio D.  
                          Ramos, John Matthew G.  
                          See, Engelberg Jeremy T.

In partial fulfillment of Academic Requirements  
for the course  
CS 191 Software Engineering  
1st Sem AY 2019-2020

History Revision:

Revision Date	Person Responsible	Version Number	Modification
11/18/2019	Antonio Cavan	1.0	Created Document. Added Use Cases
11/18/2019	Engelberg See	2.0	Added Scenarios
11/19/2019	Antonio Cavan	3.0	Added and Developed UC 1.0 UAT, UC2.0 UAT: UC 2.1 to UC 2.1.1
11/19/2019	Engelberg See	4.0	Added and Developed UC2.0 UAT: UC 2.1.2 to UC 2.4
11/19/2019	John Matthew Ramos	5.0	Added and Developed UC 3.0 UAT: UC3-S1, UC3-S2, UC3-S3, UC3-S4

Use Case No.	Description
UC1.0	Create Account
UC2.0	Make Schedule
UC2.1	Indicate desired Subjects
UC2.1.1	Add Subjects
UC2.1.2	Edit Subjects
UC2.1.3	Delete Subjects
UC2.2	Indicate Preferences
UC2.2.1	Add a Preference
UC2.2.2	Edit Category or Priority of a Preference
UC2.2.3	Delete a Preference
UC2.3	Generate Schedules
UC2.4	View Schedules
UC3.0	Save to Gallery

Scenarios				
Use Case No.	Scenario No.	RTM ID	Scenario Description	Priority Status
UC1.0	S1	UC1-S1	Successful Log-in	Must Have
UC1.0	S2	UC1-S2	Invalid Username	Must Have
UC1.0	S3	UC1-S3	Invalid Password	Must Have
UC1.0	S4	UC1-S4	Non-registered user	Should have
UC1.0	S5	UC1-S5	No database connection	Must Have
UC2.0	S1	UC2-S1	Successfully started making a schedule	Must Have
UC2.0	S1	UC2.1-S1	Successfully started indicating subjects	Must Have
UC2.1.1	S1	UC2.1.1-S1	Successfully added desired subjects	Must Have
UC2.1.1	S2	UC2.1.1-S2	Invalid: Subject does not exist	Should have
UC2.1.1	S3	UC2.1.1-S3	No database connection	Must Have
UC2.1.1	S4	UC2.1.1-S4	Indicated subjects exceed limit	Should have
UC2.1.1	S5	UC2.1.1-S5	No subjects selected	Should have
UC2.1.2	S1	UC2.1.2-S1	Successfully edited hierarchy of subjects	Must Have
UC2.1.2	S2	UC2.1.2-S2	No subject selected	Must Have
UC2.1.2	S3	UC2.1.2-S3	No subjects to be edited	Should have
UC2.1.3	S1	UC2.1.3-S1	Successfully deleted subject	Must Have
UC2.1.3	S2	UC2.1.3-S2	No subjects to be deleted	Should have
UC2.1.3	S3	UC2.1.3-S3	No subject selected	Should have
UC2.2	S1	UC2.2-S1	Successfully started indicating preferences	Must Have
UC2.2.1	S1	UC2.2.1-S1	Successfully added three desired preferences	Must Have
UC2.2.1	S2	UC2.2.1-S2	No preferences selected	Should have
UC2.2.2	S1	UC2.2.2-S1	Successfully edited priority of preferences	Must Have
UC2.2.2	S2	UC2.2.2-S2	No preferences selected	Should have
UC2.2.2	S3	UC2.2.2-S3	No preferences to be edited	Should have
UC2.2.3	S1	UC2.2.3-S1	Successfully deleted preference	Must Have
UC2.2.3	S2	UC2.2.3-S2	No preferences to be deleted	Should have
UC2.2.3	S3	UC2.2.3-S3	No preferences selected	Should have
UC2.3	S1	UC2.3-S1	Successfully generated schedules	Should have
UC2.3	S2	UC2.3-S2	Failed to generate schedules	Must Have
UC2.3	S3	UC2.3-S3	No database connection	Should have
UC2.4	S1	UC2.4-S1	Successfully viewed schedule	Must Have
UC2.4	S2	UC2.4-S2	No schedules to be viewed	Should have

				Scenarios
UC3.0	S1	UC3-S1	Successfully Saved	Must Have
UC3.0	S2	UC3-S2	Insufficient Storage	Should have

UC1.0 UAT

Use Case No.	Scenario No.	RTM ID	Scenario Description	User Name Valid	User Password Valid	User Account exists in system	Database connection active	Expected Results
UC1.0	S1	UC1-S1	Successful Log-in	rjcsolamo	password	Yes	Yes	Home page will be displayed
UC1.0	S2	UC1-S2	Invalid Username	norjcsolamo	password	Yes	Yes	Error Message: Invalid User Name
UC1.0	S3	UC1-S3	Invalid Password	rjcsolamo	nopassword	Yes	Yes	Error Message: Invalid Password
UC1.0	S4	UC1-S4	Non-registered user	mesolamo	password	No	Yes	Error Message: User not registered.
UC1.0	S5	UC1-S5	No database connection	rjcsolamo	password	Yes	No	Error Message: Timeout

UC2.0 UAT								
Use Case No.	Scenario No.	RTM ID	Scenario Description	List of Subjects	Subject Query	Preferred Subject Exist in Database?	List of Preferences	
UC2.0	S1	UC2-S1	Successfully started making a schedule	CS 191 CS 176 CS 130 Stat 130	N/A	N/A	N/A	
UC2.1	S1	UC2.1-S1	Successfully started indicating subjects	CS 133 CS 191 CS 176 CS 130 Stat 130	Bio 1	Yes	N/A	
UC2.1.1	S1	UC2.1.1-S1	Successfully added desired subject	CS 133 CS 191 CS 176 CS 130 Stat 130	Bio 1	Yes	N/A	
UC2.1.1	S2	UC2.1.1-S2	Invalid: Subject does not exist	CS 133 Bio 1 CS 191 CS 176 CS 130 Stat 130	VS 2391	No	N/A	
UC2.1.1	S3	UC2.1.1-S3	No database connection	CS 133 Bio 1 CS 191 CS 176 CS 130 Stat 130	Fil 40	Yes	N/A	
UC2.1.1	S4	UC2.1.1-S4	Indicated subjects exceed limit	CS 133 Bio 1 CS 191 CS 176 CS 130 Stat 130	CS 191	Yes	N/A	
UC2.1.1	S5	UC2.1.1-S5	No subjects selected	CS 133 Bio 1	N/A	Yes	N/A	

UC2.0 UAT							
Use Case No.	Scenario No.	RTM ID	Scenario Description	List of Subjects	Subject Query	Preferred Subject Exist in Database?	List of Preferences
UC2.1.2	S1	UC2.1.2-S1	Successfully edited hierarchy of subjects	CS 191	CS 191	Yes	N/A
				CS 176	CS 176		
				CS 130	CS 130		
				Stat 130	Stat 130		
				CS 133	Bio 1		
				Bio 1	CS 133		
UC2.1.2	S2	UC2.1.2-S2	No subject selected	CS 191	N/A	Yes	N/A
				CS 176			
				CS 130			
				Stat 130			
				CS 133			
				Bio 1			
UC2.1.2	S3	UC2.1.2-S3	No subjects to be edited		CS 191	No	N/A
UC2.1.3	S1	UC2.1.3-S1	Sucessfully deleted subject	CS 191	Bio 1	Yes	N/A
				CS 176			
				CS 130			
				Stat 130			
				CS 133			
				Bio 1			
UC2.1.3	S2	UC2.1.3-S2	No subjects to be deleted		Bio 1	No	N/A
UC2.1.3	S3	UC2.1.3-S3	No subject selected	CS 191	N/A	Yes	N/A
				CS 176			
				CS 130			
				Stat 130			
				CS 133			
				Bio 1			
UC2.2	S1	UC2.2-S1	Successfully started indicating preferences	CS 191	N/A	N/A	
				CS 176			
				CS 130			
				Stat 130			
				CS 133			
				Bio 1			

UC2.0 UAT							
Use Case No.	Scenario No.	RTM ID	Scenario Description	List of Subjects	Subject Query	Preferred Subject Exist in Database?	List of Preferences
UC2.2.1	S1	UC2.2.1-S1	Successfully added three desired preferences	CS 191	N/A	N/A	Pedagogy Easiness
				CS 176			
				CS 130			
				Stat 130			
				CS 133			
UC2.2.1	S2	UC2.2.1-S2	No preferences selected	Bio 1	N/A	N/A	Pedagogy Easiness Helpfulness
				CS 191			
				CS 176			
				CS 130			
				Stat 130			
UC2.2.2	S1	UC2.2.2-S1	Successfully edited priority of preferences	CS 133	N/A	N/A	Pedagogy Easiness Helpfulness
				Bio 1			
				CS 191			
				CS 176			
				CS 130			
UC2.2.2	S2	UC2.2.2-S2	No preferences selected	Stat 130	N/A	N/A	Pedagogy Helpfulness Easiness
				CS 133			
				Bio 1			
				CS 191			
				CS 176			
UC2.2.2	S3	UC2.2.2-S3	No preferences to be edited	CS 130	N/A	N/A	Pedagogy Helpfulness Easiness
				Stat 130			
				CS 133			
				Bio 1			
				CS 191			
UC2.2.3	S1	UC2.2.3-S1	Sucessfully deleted preference	CS 176	N/A	N/A	Pedagogy Helpfulness Easiness
				CS 130			



UC2.0 UAT							
Use Case No.	Scenario No.	RTM ID	Scenario Description	List of Subjects	Subject Query	Preferred Subject Exist in Database?	List of Preferences
UC2.2.3	S2	UC2.2.3-S2	No preferences to be deleted	CS 191	N/A	N/A	
				CS 176			
				CS 130			
				Stat 130			
				CS 133			
UC2.2.3	S3	UC2.2.3-S3	No preferences selected	Bio 1	N/A	N/A	Pedagogy Helpfulness Easiness
				CS 191			
				CS 176			
				CS 130			
				Stat 130			
UC2.3	S1	UC2.3-S1	Succesfully generated schedules	CS 133	N/A	N/A	Pedagogy Helpfulness Easiness
				Bio 1			
				CS 191			
				CS 176			
				CS 130			
UC2.3	S2	UC2.3-S2	Failed to generate schedules	Stat 130	N/A	N/A	Pedagogy Helpfulness Easiness
				CS 133			
				Bio 1			
				CS 191			
				CS 176			
UC2.3	S3	UC2.3-S3	No database connection	CS 130	N/A	N/A	Pedagogy Helpfulness Easiness
				Stat 130			
				CS 133			
				Bio 1			
				CS 191			
UC2.4	S1	UC2.4-S1	Sucessfully viewed schedule	CS 176	N/A	N/A	Pedagogy Helpfulness Easiness
				CS 130			
				Stat 130			
				CS 133			
				Bio 1			

UC2.0 UAT

Use Case No.	Scenario No.	RTM ID	Scenario Description	List of Subjects	Subject Query	Preferred Subject Exist in Database?	List of Preferences
UC2.4	S2	UC2.4-S2	No schedules to be viewed	CS 191 CS 176 CS 130 Stat 130 CS 133 Bio 1	N/A	N/A	Pedagogy Helpfulness Easiness

UC2.0 UAT				
Preferences Query	List of Schedules	Schedule Query	Databse Connection Active?	Expected Results
N/A	N/A	N/A	Yes	Indicate Subject tab appears with an empty list of subjects
N/A	N/A	N/A	Yes	Search bar succesfully show suggestions based from User input
N/A	N/A	N/A	Yes	Succesfully added subject. Displays updated subjects list.
N/A	N/A	N/A	Yes	Error Message: Subject does not exist in the database.
N/A	N/A	N/A	No	Error Message: Connection Timeout
N/A	N/A	N/A	Yes	Error Message: Subjects selected exceed maximum amount.
N/A	N/A	N/A	Yes	Error Message: No subjects selected.

UC2.0 UAT				
Preferences Query	List of Schedules	Schedule Query	Databse Connection Active?	Expected Results
N/A	N/A	N/A	Yes	Succesfully edited hierarchy of subjects. Displays updated subjects list.
N/A	N/A	N/A	Yes	Error Message: No subjects selected.
N/A	N/A	N/A	Yes	Error Message: No subjects to edit.
N/A	N/A	N/A	Yes	Succesfully deleted subject. Displays updated subjects list.
N/A	N/A	N/A	Yes	Error Message: No subjects to delete.
N/A	N/A	N/A	Yes	Error Message: No subjects selected.
	N/A	N/A	Yes	Indicate Preference tab appears with three preferences to choose from.

UC2.0 UAT				
Preferences Query	List of Schedules	Schedule Query	Databse Connection Active?	Expected Results
Helpfulness	N/A	N/A	Yes	Successfully indicated preferences. Displays preference list.
N/A	N/A	N/A	Yes	Error Message: No Preferences Selected
Pedagogy Helpfulness Easiness	N/A	N/A	Yes	Successfully edited preferences. Displays updated preference list.
N/A	N/A	N/A	Yes	Error Message: No Preferences Selected
Pedagogy Helpfulness Easiness	N/A	N/A	Yes	Error Message: No preferences to edit.
Easiness	N/A	N/A	Yes	Successfully deleted preference. Displays updated preference list.

UC2.0 UAT				
Preferences Query	List of Schedules	Schedule Query	Databse Connection Active?	Expected Results
Pedagogy	N/A	N/A	Yes	Error Message: No preferences to delete.
N/A	N/A	N/A	Yes	Error Message: No Preferences Selected
N/A	Schedule - Pedagogy Schedule - Helpfulness Schedule - Easiness	N/A	Yes	Successfully generated schedules. Displays Schedules tab.
N/A		N/A	Yes	Error Message: No Schedules generated.
N/A	Schedule - Pedagogy Schedule - Helpfulness Schedule - Easiness	Schedule - Pedagogy	No	Error Message: Connection Timeout
N/A	Schedule - Pedagogy Schedule - Helpfulness Schedule - Easiness	Schedule - Pedagogy	Yes	Displays selected schedule.

UC2.0 UAT				
Preferences Query	List of Schedules	Schedule Query	Databse Connection Active?	Expected Results
N/A		Schedule - Pedagogy	Yes	Error Message: No Schedules to view.

UC3.0 UAT								
Use Case No.	Scenario No.	RTM ID	Scenario Description	List of subjects present in database	List of subject time present in database	Schedule present in database	Database connection active	Expected Results
UC3.0	S1	UC3-S1	Successfully Saved	CS 191	WF 10:00 AM-11:30 AM	yes	yes	Schedule successful
				CS 176	TTH 1:00 PM-2:30 PM			
				CS 130	WF 8:30 AM- 10:00 AM			
				Stat 130	WF 1:00 PM-2:30 PM			
				CS 133	TTH 2:30 PM-4:00 PM			
UC3.0	S2	UC3-S2	Insufficient Storage	CS 191	WF 10:00 AM-11:30 AM	yes	yes	Error Message: Insufficient storage
				CS 176	TTH 1:00 PM-2:30 PM			
				CS 130	WF 8:30 AM- 10:00 AM			
				Stat 130	WF 1:00 PM-2:30 PM			
				CS 133	TTH 2:30 PM-4:00 PM			
UC3.0	S3	UC3-S3	No database connection	CS 191	WF 10:00 AM-11:30 AM	yes	no	Error Message: Time out
UC3.0	S4	UC3-S4	No schedule present	CS 176	TTH 1:00 PM-2:30 PM			
				CS 130	WF 8:30 AM- 10:00 AM			
				Stat 130	WF 1:00 PM-2:30 PM			
				CS 133	TTH 2:30 PM-4:00 PM			
UC3.0	S4	UC3-S4	No schedule present	N/A	N/A	no	yes	Error Message: Schedule not found



ly saved in gallery.

efficient Storage

icout  
edule not available.