



Faculty of Computers and Information
Cairo University

Course: System Analysis & Design
Academic Year: 2021-2022
Under supervision: Dr Iman Helal & Dr. Dina Ezzat

Project Details

Project number *22*
Project title *Meeting Scheduler*

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Team Details

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1. Use cases model:

1.1. Using Event Decomposition technique:

Table 1- Types of Events

1.1.1. Types of Events

Event	Type (External/State/temporal)
Meetings are typically arranged by meeting initiator	External
initiator asks all potential meeting attendees for preference set	External
Initiator prescribes the date range	External
initiator asks all potential meeting attendees for preference set	External
all potential meeting attendees enter preference set	External
all potential meeting attendees enter exclusion set	External
initiator asks all potential meeting attendees for exclusion set	External
state preferences about the meeting location	External
the initiator extends the date range	External
participants remove some dates from their exclusion set	External
participants withdraw from the meeting	External
add some new dates to their preference set	External
determine, for each meeting request, a meeting date	External
determine, for each meeting request, a meeting location	External
re-plan a meeting dynamically	External
The intended system should considerably reduce	state



the amount of overhead usually incurred in organizing meetings	
the system should reflect as closely as possible the way meetings are typically managed	State
modify exclusion set	External
modify preference set	External
modify preferred location	External
The original meeting date may then need to be changed	External
The original meeting location may then need to be changed	External
meeting may even be cancelled	External

1.1.2. Formalize events with use cases

Table 2- Formalizing Events to usecases

Event	Type (External/State/temporal)	Use case
Meetings are typically arranged by meeting initiator	External	Arrange meeting
Initiator prescribes the date range	External	prescribes the date range
initiator asks all potential meeting attendees for preference set	External	asks for preference set
initiator ask important participants to state preferences about the meeting location	External	asks for preferred meeting location
initiator asks all potential meeting attendees for exclusion set	External	asks for exclusion set
all potential meeting attendees enter preference set	External	Enter preference set



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all potential meeting attendees enter exclusion set	External	Enter exclusion set
state preferences about the meeting location	External	state preferred meeting location
the initiator extends the date range	External	extends the date range
participants remove some dates from their exclusion set	External	remove dates from exclusion set
participants withdraw from the meeting	External	leave meeting
add some new dates to their preference set	External	add new dates to preference set
determine, for each meeting request, a meeting date	External	Determine meeting date
determine, for each meeting request, a meeting location	External	Determine meeting location
re-plan a meeting dynamically	External	re-plan a meeting
modify exclusion set	External	modify exclusion set
modify preference set	External	modify preference set
modify preferred location	External	modify preferred location
The original meeting date may then need to be changed	External	Change meeting date
The original meeting location may then need to be changed	External	Change meeting location
meeting may even be cancelled	External	Cancel meeting

1.1.3. Use case Descriptions:



Table 3 - Use cases descriptions

Use case name	Actor	Description
Arrange meeting	Initiator	The Initiator arrange the meeting and asks all potential meeting attendees for a set of dates.
prescribes the date range	Initiator	The initiator decides the date range for the meeting.
asks for preference set	Initiator	The initiator asks participant for their preference set to give it to the system.
asks for exclusion set	Initiator	The initiator asks participant for their exclusion set to give it to the system.
asks for preferred meeting location	Initiator	The initiator asks important participant to state their preferred location for the meeting
Enter preference set	Participants	The Participants set a dates which they would prefer the meeting to take place.
Enter exclusion set	Participants	The Participants set a dates which they cannot attend the meeting.
State preferred meeting location	Important participants	The important participant sends a preferred meeting location to the initiator.
Extends the date range	Initiator	Way to solve the conflict, The Initiator extends the date range
remove dates from exclusion set	Participants	Way to solve the conflict, The Participants remove some dates from their exclusion set.
Leave meeting	Participants	Way to solve the conflict, The Participants Withdraw from the meeting.



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add new dates to preference set	Participants	Way to solve the conflict, The Participants add some new dates to their preference set.
Determine meeting date	Initiator	The Initiator determine meeting date for each meeting request so that most of the intended Participants will effectively participate.
Determine meeting location	Initiator	The Initiator determine meeting Location for each meeting request so that most of the intended Participants will effectively participate.
Re-plan a meeting	Initiator	The Initiator can re-plan a meeting dynamically to support as much flexibility as possible.
Modify exclusion set	Participants	The Participants modify exclusion set when conflict appears by removing some dates from it.
Modify preference set	Participants	The Participants modify Preference set when conflict appears by adding some dates to it.
Modify preferred location	Important participants	The Important Participant can modify location before a location is proposed.
Change meeting date	Initiator	The Initiator can change the original meeting date when need to accommodate a more important meeting.
Change meeting location	Initiator	The Initiator can change the original meeting location when need to accommodate a more important meeting.
Cancel meeting	Initiator	The Initiator cancel meeting when the need to accommodate a more important meeting.

1.1.4. Matrix that maps all domain classes to the set of use cases

1.1.5.



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Use case Vs. Domain Class	Participants	Important Participants	Initiator	Location	Date	Meeting
Arrange meeting			#	#	#	#
prescribes the date range			#		#	#
asks for preference set	#		#		#	
asks for exclusion set	#		#		#	
asks for preferred meeting location		#	#	#		
Enter preference set	#				#	
Enter exclusion set	#				#	
state preferred meeting location		#		#		
extends the date range			#		#	#
remove dates from exclusion set	#				#	
leave meeting	#					#
add new dates to preference set	#				#	



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Determine meeting date			#		#	#
Determine meeting location			#	#		#
re-plan a meeting			#	#	#	#
modify exclusion set	#				#	
modify preference set	#				#	
modify preferred location		#		#		
Change meeting date			#		#	#
Change meeting location			#	#		#
Cancel meeting			#			#

1.1.6. Use case Diagram:



Domain class diagram

