

FRANKFURT UNIVERSITY OF APPLIED SCIENCES

Title

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1 Hermon Gimikael

1.1 Requirement1

Your caption



My first SVG

Your caption

My first SVG



1.2 Requirement2

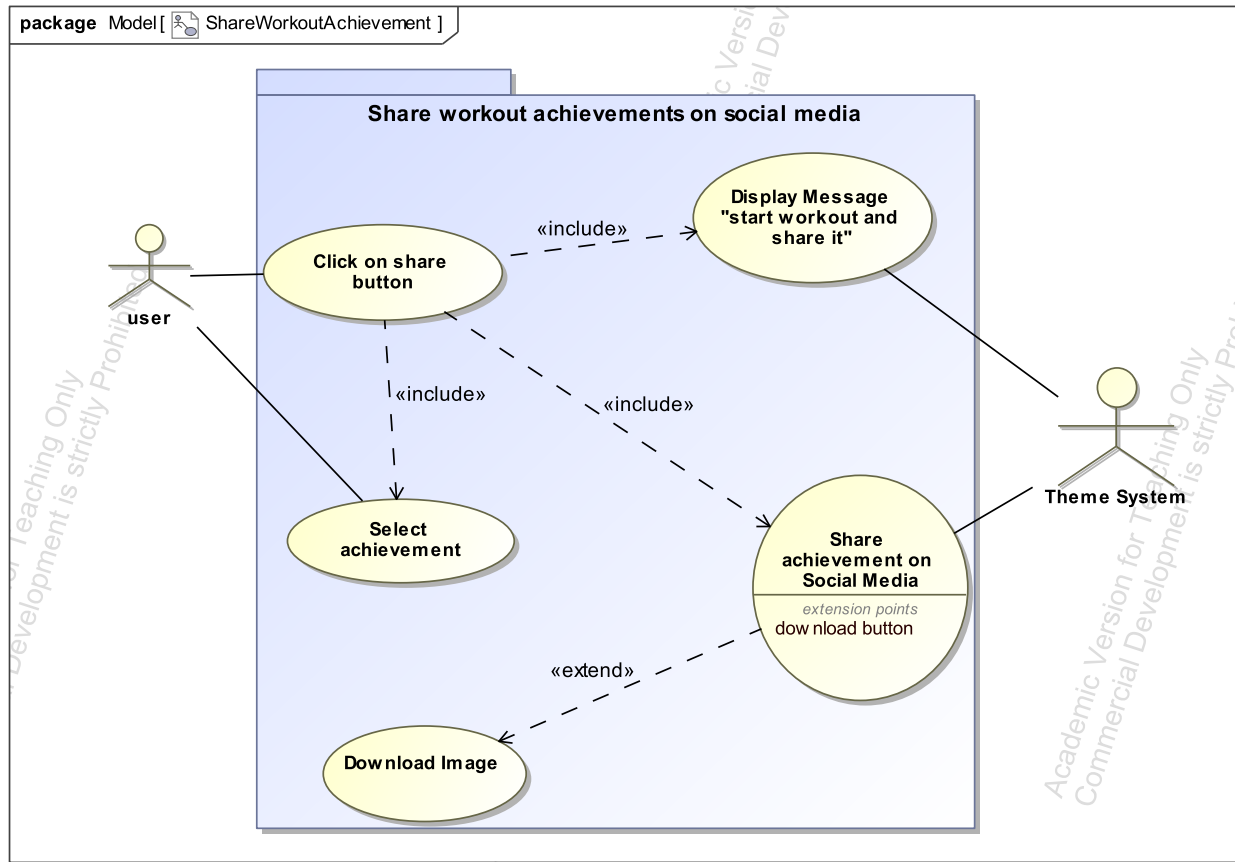
Your caption



2 Howard-Yi Hong Soon

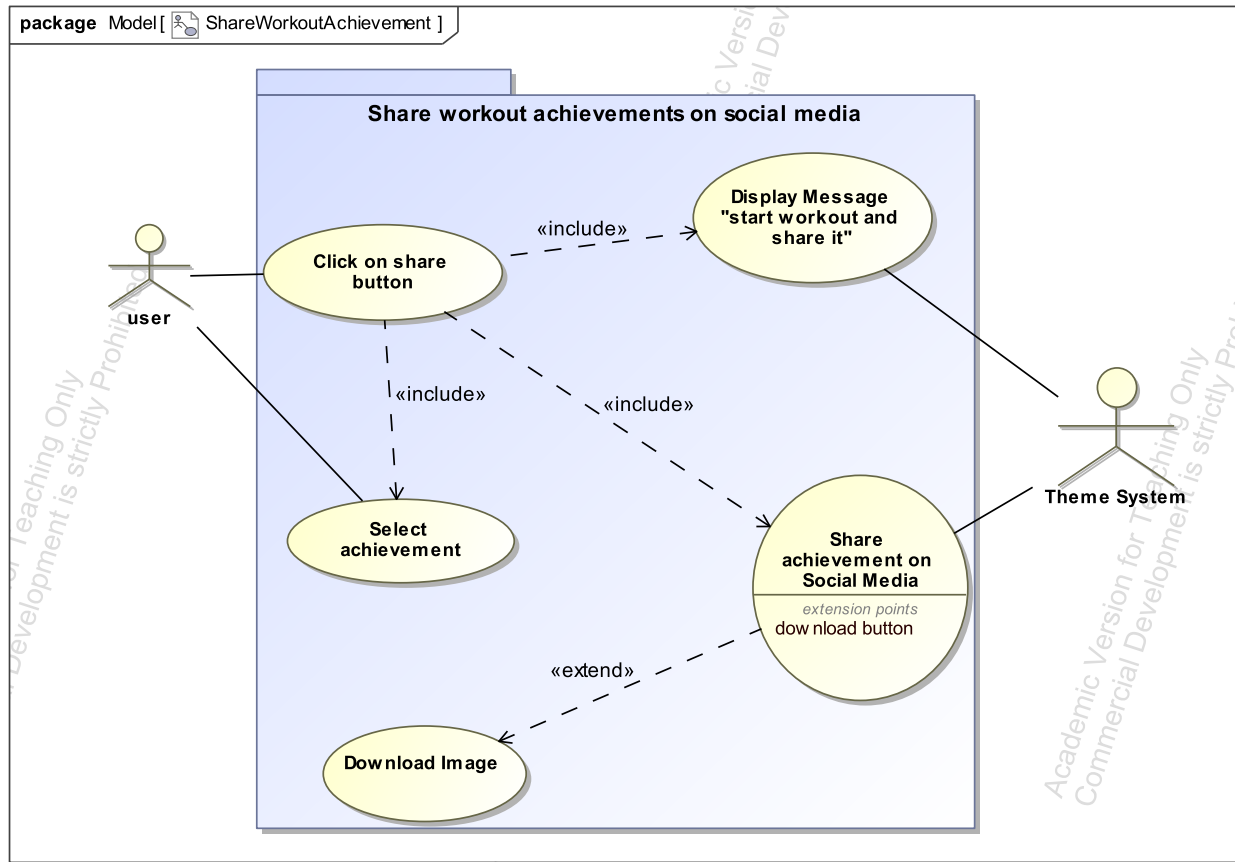
2.1 Requirement 10: Easy usability with Gesture Control

Name	Share workout achievements on social media
ID	5
Business Value	Low
Description	Create workout achievements page and share it to logged-in social media
Trigger	Push "share" button and chose specific social media to be delivered achievement page
Actors	User, Workout System, Social Media System
Pre-conditions	User successfully logged in social media, internet connected
Post-conditions	User post workout achievement page on social media
Basic Flow	
Description Actions	This is the main scenario when user has an achievement to share and linked social media account
1	The use chooses an achievement to share
2	The workout system creates the achievement post
3	The user chooses a social media app to share
4	The workout system sends the achievement post to the social media system
Alternative Flow	A
Description Actions	There isn't any achievement to share
1	The workout system shows "Start workout and share it"
Alternative Flow	B
Description Actions	The searched item is not found in the database and shows an error
1	The app requests the user to manually input the nutritional information's about the item
2	User has to tip in calories, nutrients, serving size and name of the item and saves it
3	The app takes the data through a verification process and adds it to the food database



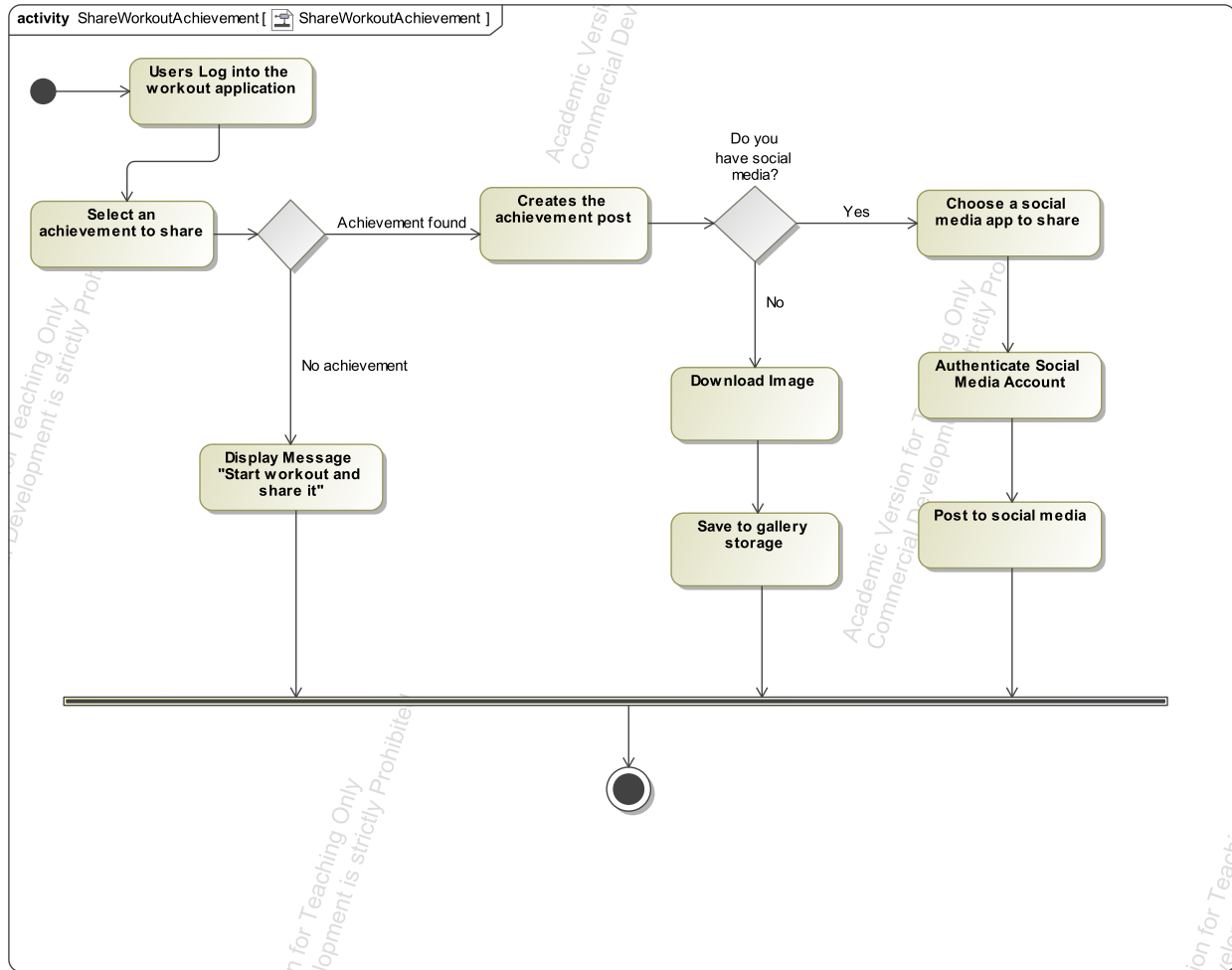
(a) Use Case Diagram

This ShareWorkoutAchievement use case shows the operations and the interaction between system and user of the requirement. It has a few of includes and extends, e.g. display message "start workout and share it" and select achievement, the user has to click on share button in order to trigger them. "Share achievement on Social Media" has an extend optional function to download image.



(a) Use Case Diagram

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3 Jiwon Won

3.1 Requirement1

Your caption



My first SVG

My first SVG

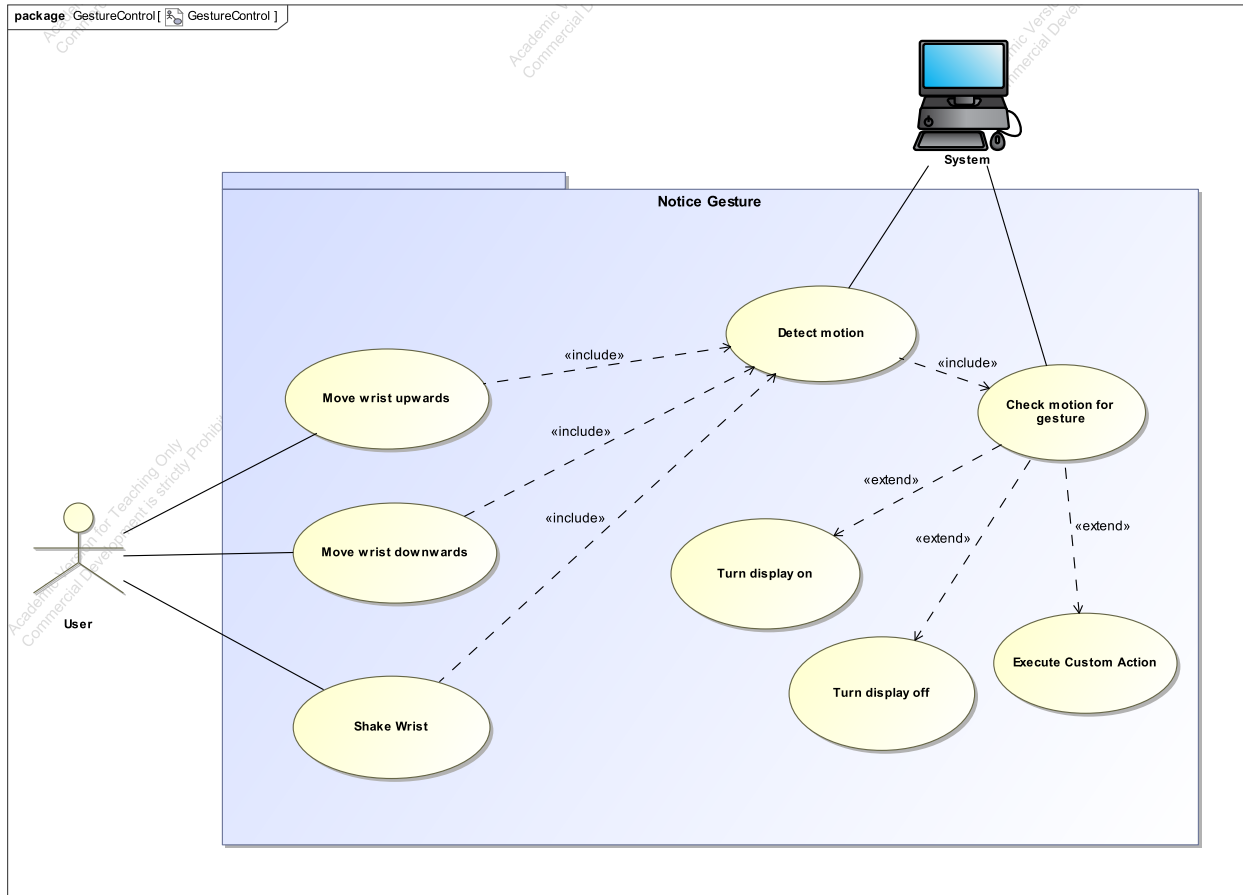


Your caption

4 Lars Frieese

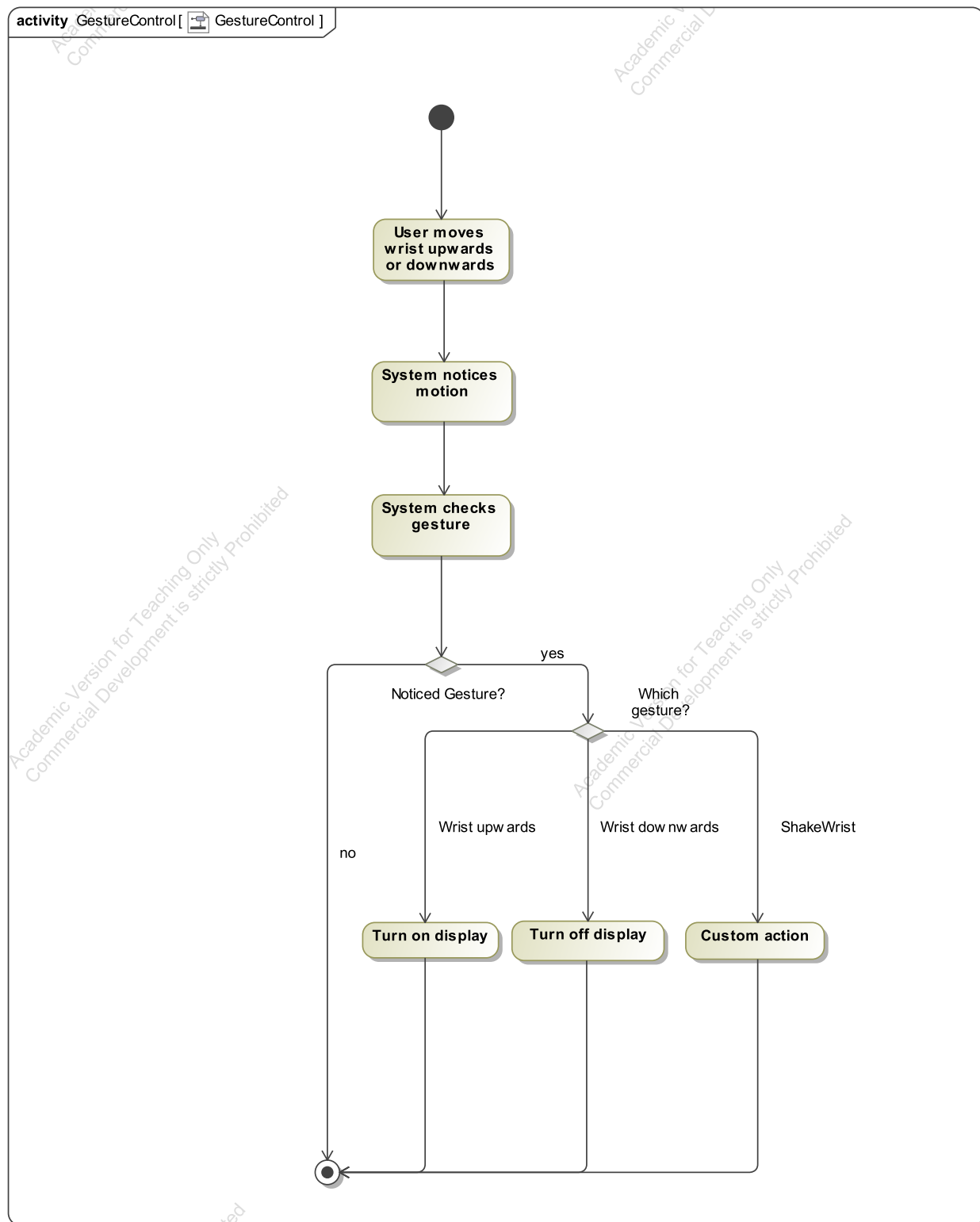
4.1 Requirement 10: Easy usability with Gesture Control

Name	Use gestures to execute actions on smartwatch
ID	12
Business Value	medium
Description	When the user lifts his arm and turns his wrist the smartwatch display turns on, when he lowers the arm the display turns of. Additionally the smartwatch executes a costum gesture
Trigger	User lifting/lowering arm and turning wrist or shaking his wrist
Actors	User, System, Gyroscope Sensor
Pre-conditions	Display is turned on/off
Post-conditions	Display is turned on/off, App opened
Basic Flow	
Description	This is the main scenario where the system recognizes the hand up movement
Actions	
1	User raises arm
2	System recognizes gesture
3	Display turns on
Alternative Flow	A
Description	Actions
	1
	2
Alternative Flow	B
Description	Actions
	1
	2
	3
	4
	5



(a) Use Case Diagram

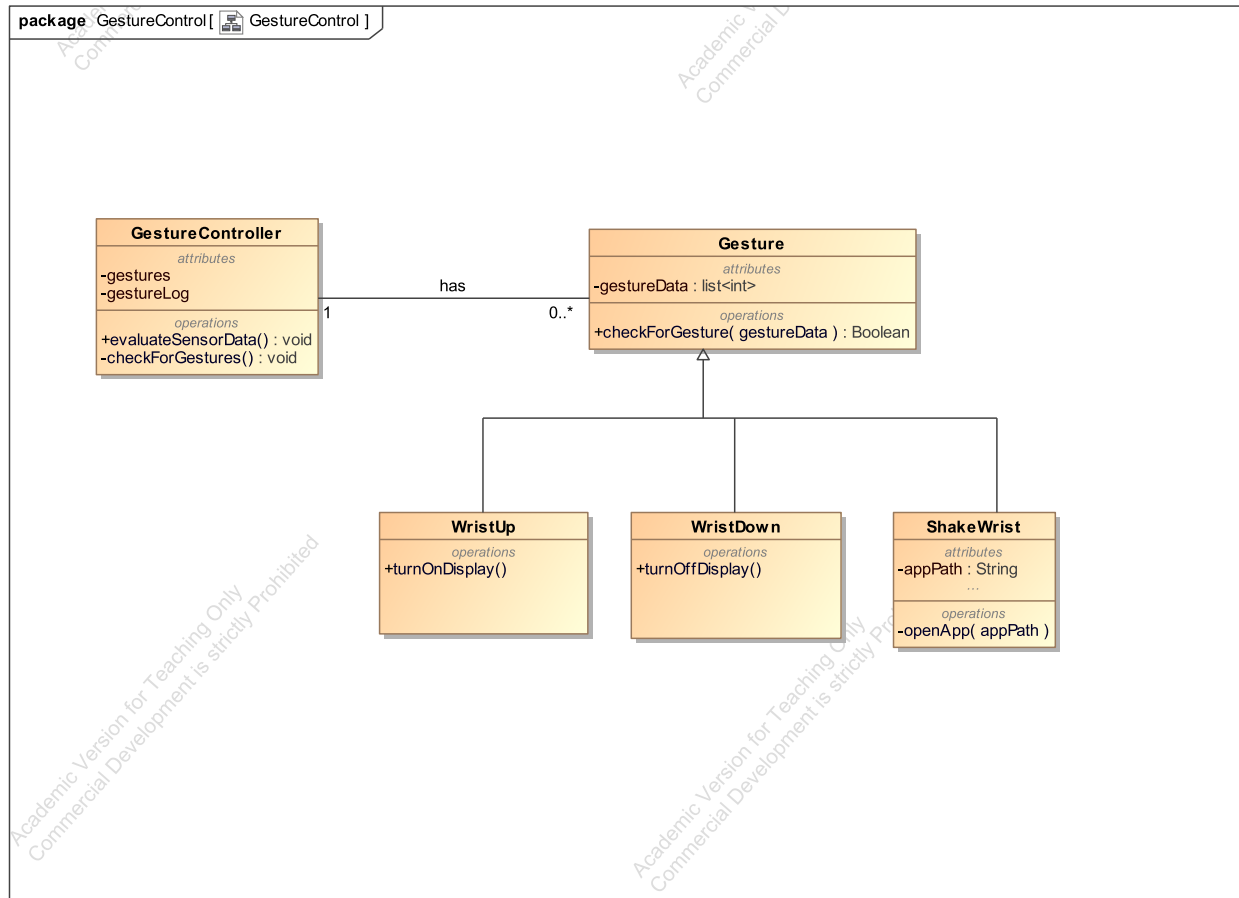
Example text 1 Example text 2



(a) Activity Diagram

Example text 3

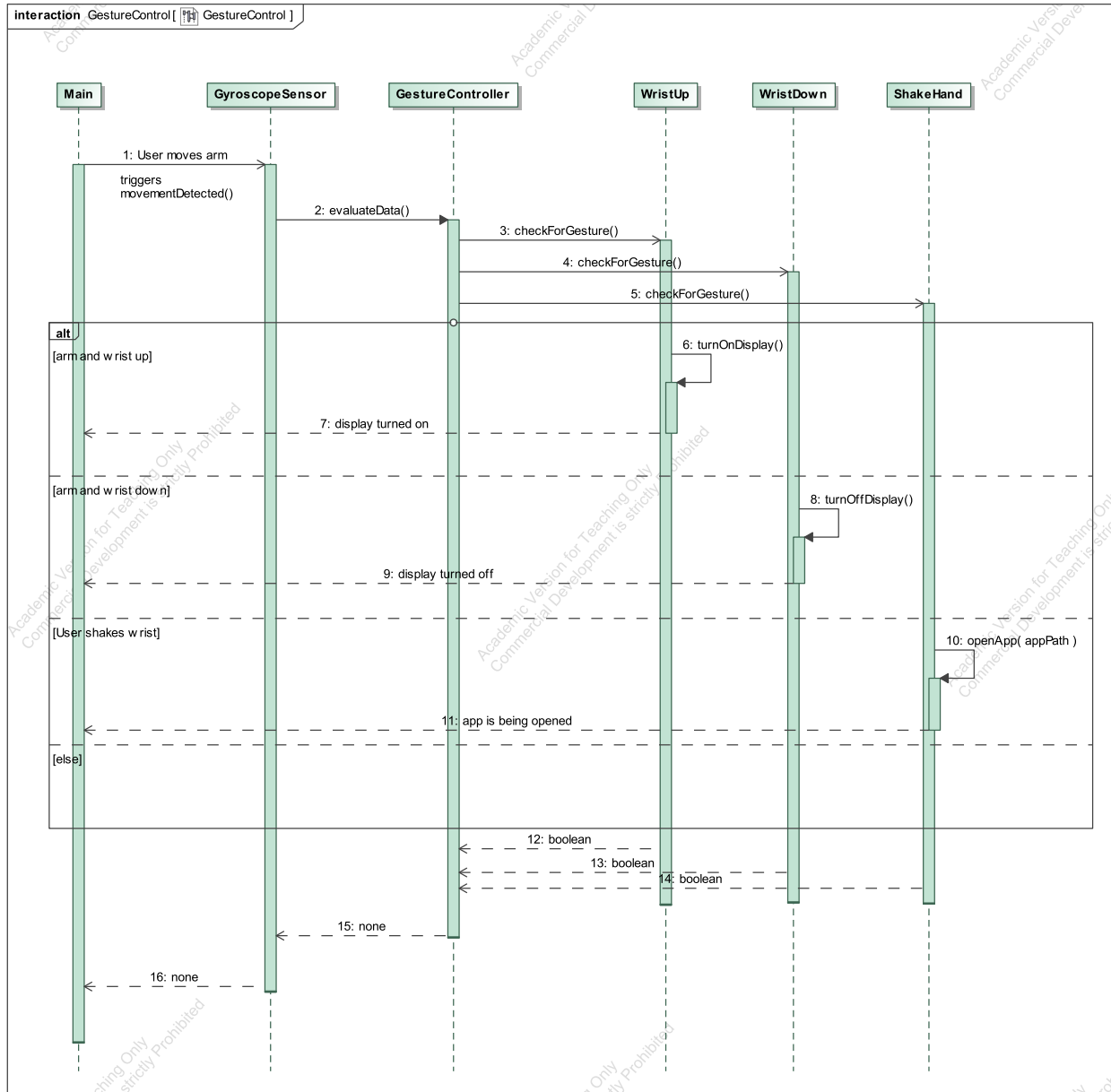
Example text STARWBERRY



(a) Class Diagram

Example text 5

Example text 6



(a) Sequence Diagram

Example text 7
Example text 8

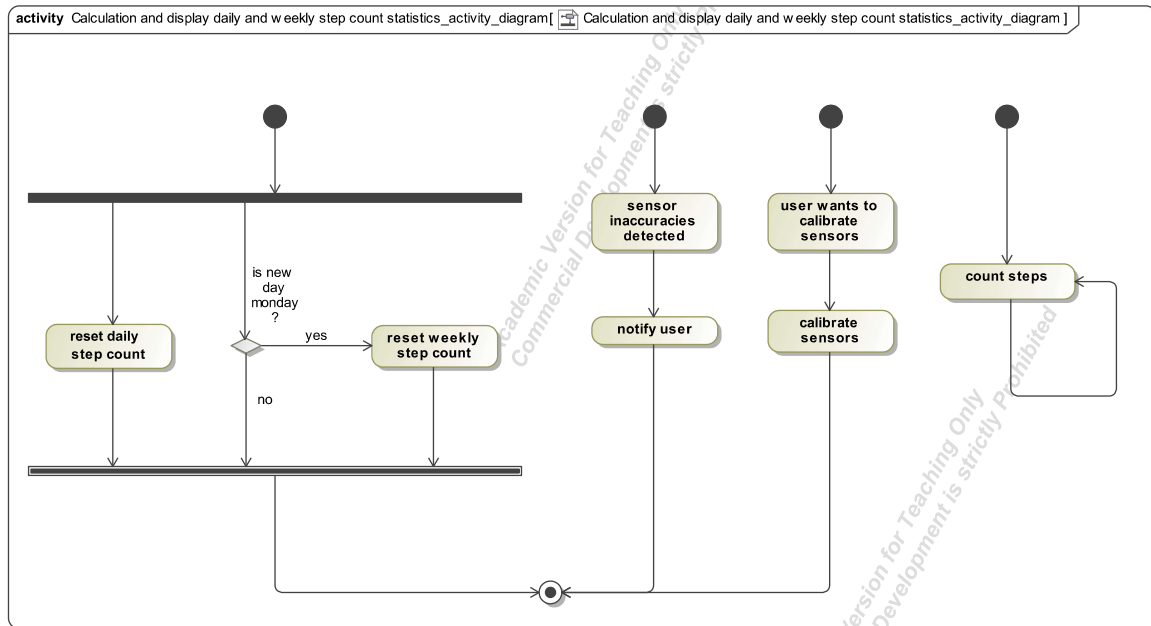
5 Marc Roemer

5.1 Requirement 9: Calculation and display daily and weekly step count statistics

UseCase

UI Prototype

Activity Diagram



UseCase Diagram

Sequence Diagram

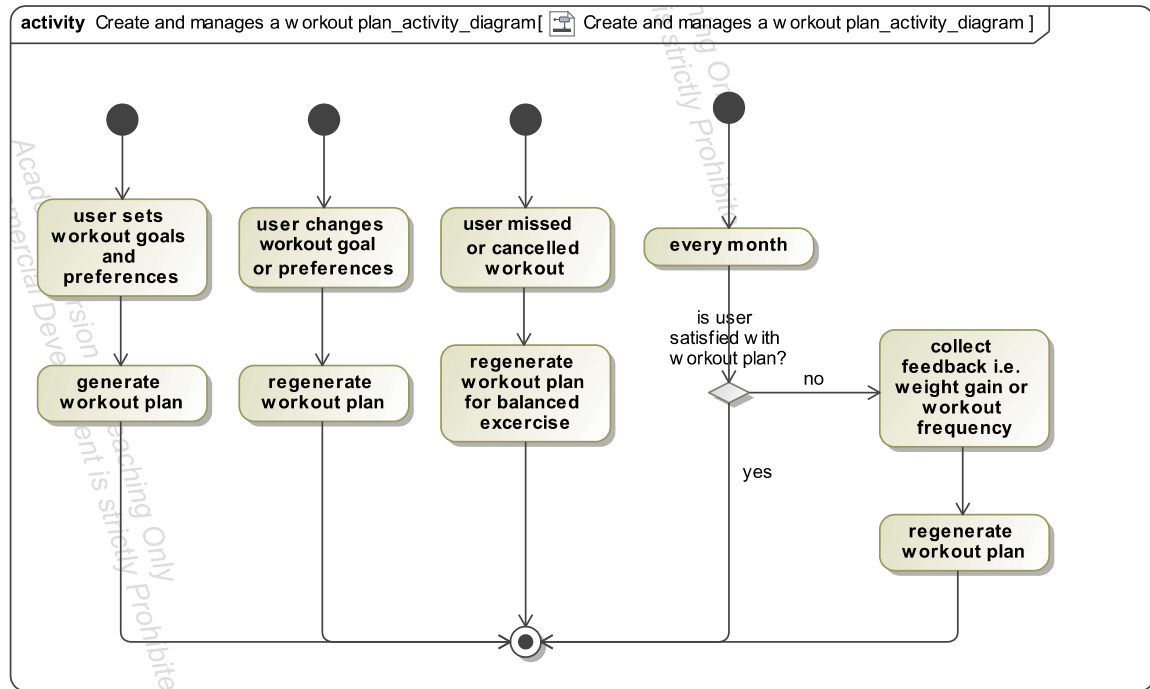
Class Diagram

5.2 Requirement 10: Create and manages a workout plan

UseCase

UI Prototype

Activity Diagram



UseCase Diagram

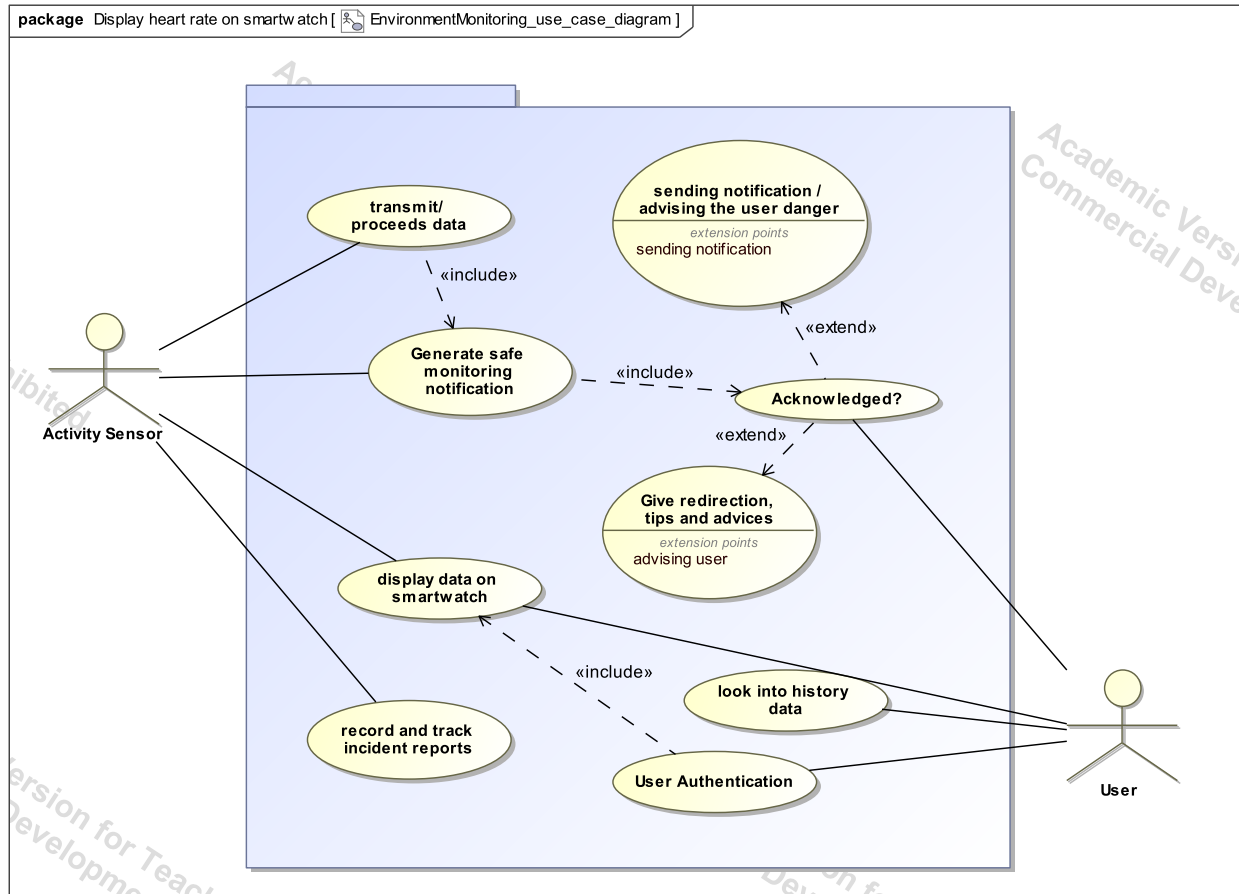
Sequence Diagram

Class Diagram

6 Stefan Nguyen

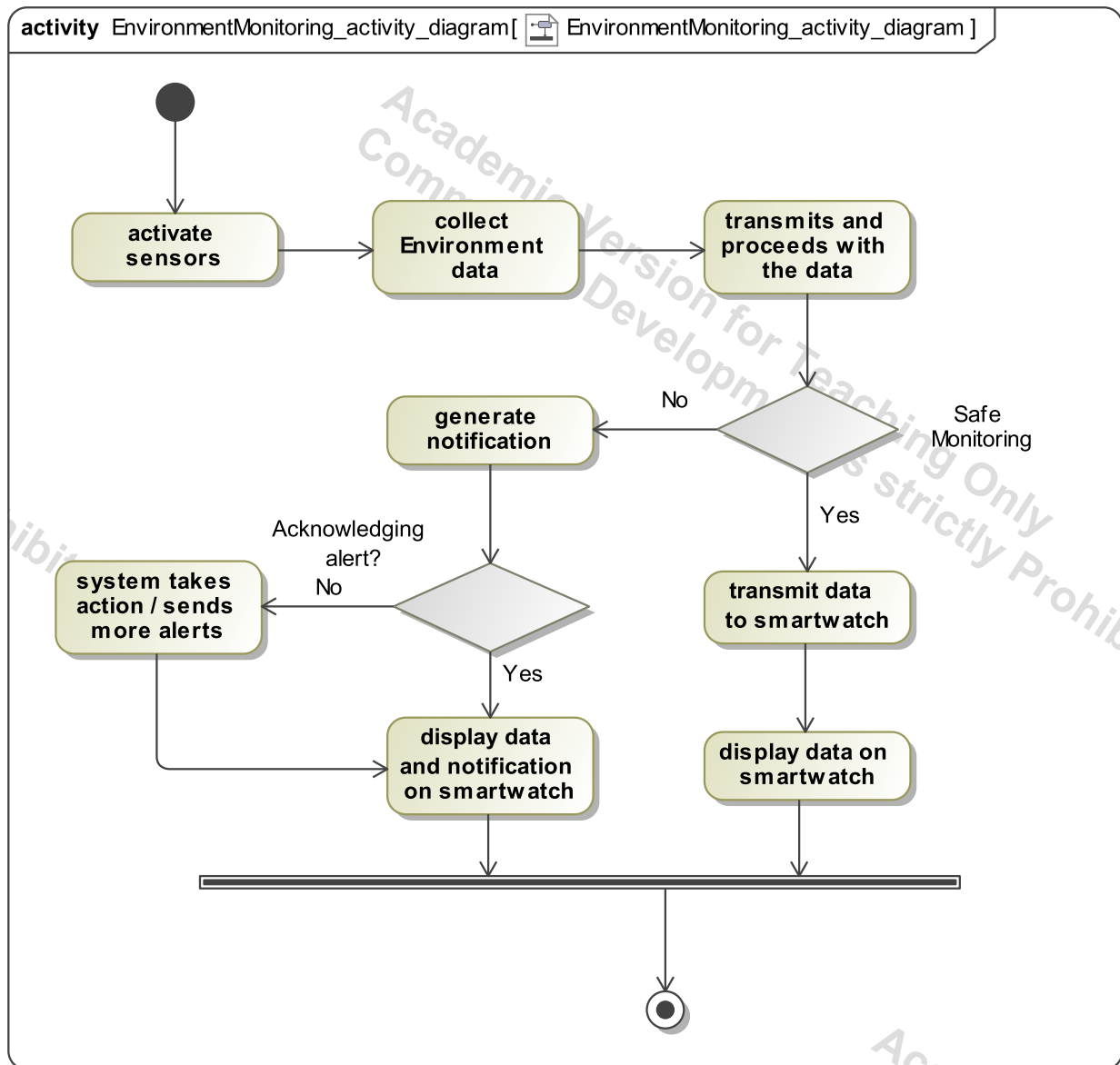
6.1 Display Heart Rate Data on Smartwatch

Name	Environment monitoring
ID	11
Business Value	Low
Description	Tracks UV exposure, air quality, temperature in real time
Trigger	Typical event which adjusts the changes in real time
Actors	Environmental Sensor Array, which is responsible for capturing environmental data
Pre-conditions	Environmental sensors are operational and calibrated
Post-conditions	Displays the data in the smartwatch
Basic Flow	
Description	Detail each change in the environment monitoring system
Actions	
1	activating the sensors
2	capturing the data (e.g. temperature, UV, etc)
3	processing data e.g. analysis or computations
4	transfer data into smartwatch
5	display data in smartwatch
Alternative Flow	A
Description	Error capturing data (network, communication etc)
1	sensor fails to capture data
2	fail, communication or network error in smartwatch or sensor
3	Error capturing data / false data display information
Alternative Flow	B
Description	Environmental sensor detect conditions which may threaten health conditions
1	sensor detects hazardous condition and flag it as highest priority
2	sends push notification and warns the user
3	displays the notification on the smartwatch and recommends actions (e.g. apply sunscreen, seek shelter, etc)
4	user acknowledges the notification
5	user doesn't acknowledge notification -> the system keeps sending notifications or warns the user



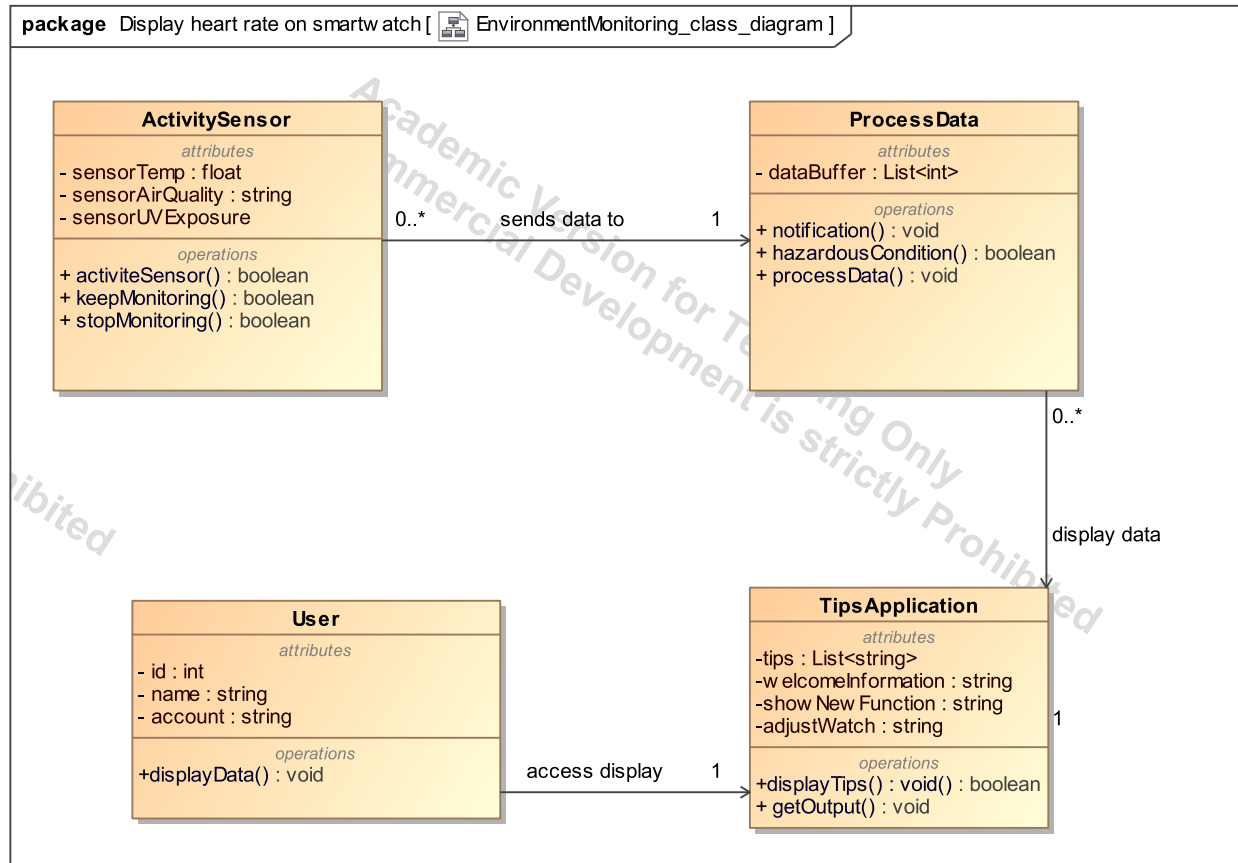
(a) Use Case Diagram

The Environment Monitoring shows the use cases. The Activity sensor sensors the environment and transmit proceeds the data and generate a safe monitoring notification. This tells the user the current environment e.g. temperature, UV exposure or more. If it comes to hazardous conditions it sends the user a notification and asks him to either acknowledge or not. Next the activity sensor displays the data on the smartwatch and record or track any other incident reports. The user on the other hand can acknowledge the notification and look into history data and has an authentication.



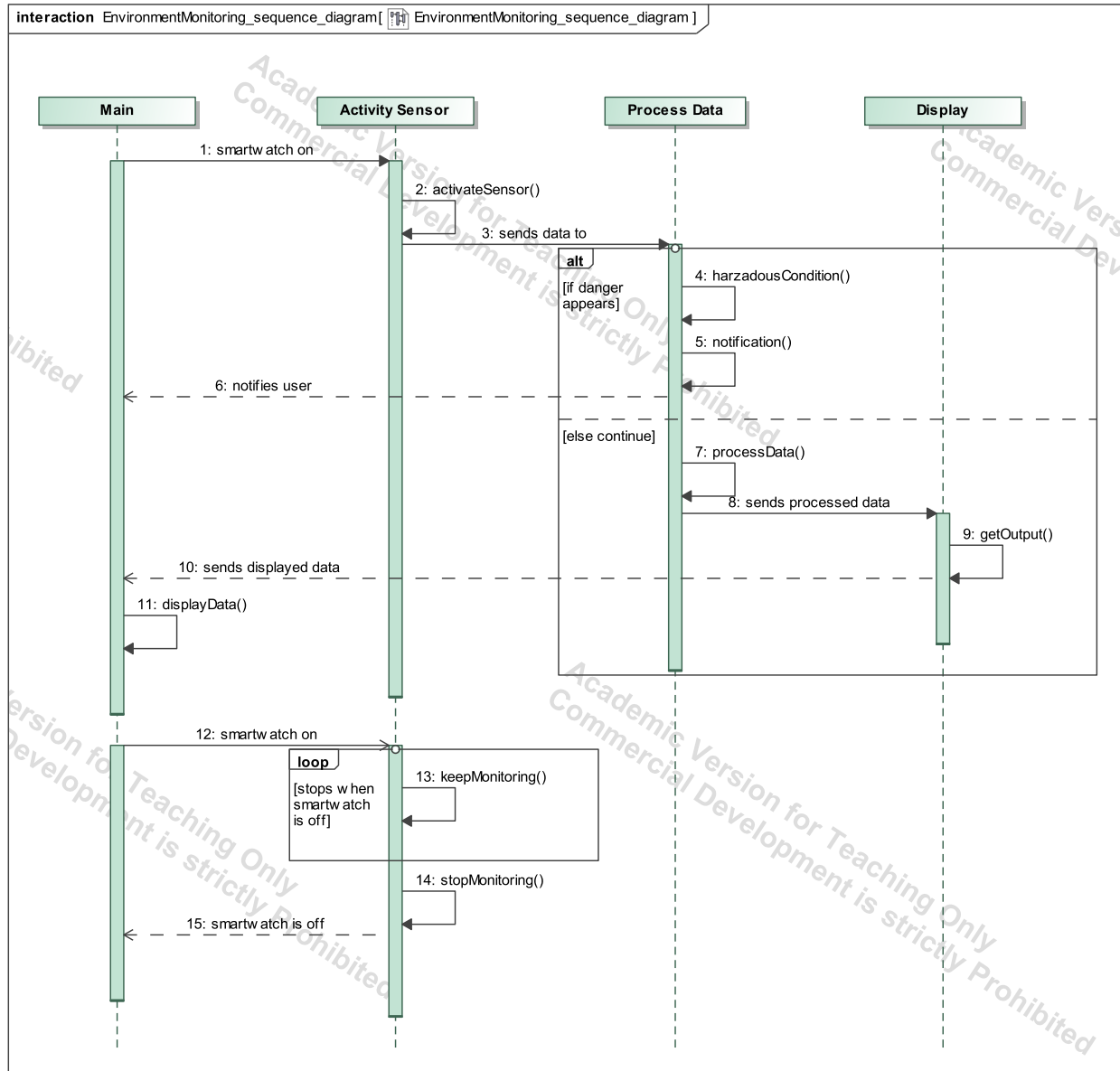
(a) Activity Diagram

The activity diagram shows a walkthrough of the operations or activities that need to be done, so it can monitor the environment. Firstly, it activates the sensor and collects all the environment data and transmits/proceeds them. It later asks for safe monitoring to ensure that there are no incidents like hazards or natural disasters. If the user clicks no then the system prepares the notification and asks the user to acknowledge the alert. The alert shows tips or recommendations which need to be done, to shorten the risk of endangering personal life. If the user doesn't accept the notification then the system keeps warning the user or keeps spamming alerts, else it displays the data with the notification.



(a) Class Diagram

The UML shows the structure of the classes, how they interact with each other and what methods are used later in the sequence diagram. For example, the Activity Sensor sends data to the process data which is a unidirectional relation with 1. The activity sensor has methods like activate sensor, keep monitoring and stop monitoring. The monitoring would work permanently while the smartwatch is on. The process list has the notifications, hazardous condition and process data and uses the unidirectional relation to the display. While the display formats the data to the smartwatch so that the user can access the data and can see the outputted data.



(a) Sequence Diagram

The sensor diagram almost works the same way as the display heartbeat data. It activates the sensor, does the process and checks for hazardous conditions in the environment and does the following alternative operations. Later it either sends a notification or outputs the data to the display of the smartwatch. The small part of smartwatch on represents that the sensor works permanently and keeps monitoring until the smartwatch is off.