
Product Requirements Document

Use Cases Specification

[SDA7]

SWEN90007 SM2 2020 Project

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1. Introduction

1.1 Proposal

This document specifies the SWEN90007 project use cases, describing the flow of events, inputs and outputs of each use case to be implemented.

1.2 Target Users

This document is mainly intended for SWEN90007 students and teaching team.

1.3 Conventions, terms and abbreviations

This section explains the concept of some important terms that will be used throughout this document. These terms are detailed alphabetically in the following table.

Term	Description
LMS	Learning Management System
GitHub	Version control website for the project and the documents
Slack	Online communication channel for team members

2. Actors

Actor	Description
Vaccine Recipient	Vaccine recipients are the people who want to take a vaccine and apply for it.
Health Care Providers	Health care providers are doctors or organizations which have the capability to provide vaccines to recipients.
Administrator	The administrator takes the responsibility to manage the data of this system.

3. Use Cases

3.1 Basic Visualizations

[UC001] Log in

Pre-conditions

For all the roles in the system, to do a further operation, logging in is necessary. When the users open the home page, they can see a login page.

Main Events Flow

1. The users open the home page.
2. The system displays the username and the password blanks needed to be filled in.
3. The users fill in the blanks.
4. The system validates the correctness and jumps to the home page. [AF01]

Alternative Flows

[AF01] Incorrect username and password combination

1. The system cannot validate the username and password combination as a valid account in the database and displays an error message.

Post-conditions

After filling in them, the system will jump to the home page. Each account type (admin/recipient/health care provider) will be redirected to their specific home page. Each account type will gain permission to access their specific pages and operations.

[UC002] Create Vaccine Recipient Accounts

Pre-conditions

Vaccine recipients have the authority to create accounts for themselves, filling in personal details such as name and birth date to finish registration.

The administrator also has the authority to create vaccine recipient accounts for the disabled.

Main Events Flow

1. The vaccine recipients open the home page and click the “create new account” option.
2. Or after the administrator logging in, and clicks “create new vaccine recipient account”.
3. The system displays all the mandatory information needed to be filled in.
4. The vaccine recipients or the administrator fill in the blanks.
5. The system validates the fields. – [AF02]
6. The system updates the data and displays a confirmation message.

Alternative Flows

[AF01] Cancel the operation

1. The operators do not fill in the blanks to create a new account, and clicks “back”.
2. The execution flow continues from main flow step 1

[AF02] Mandatory field not filled

1. The system identifies a record containing at least one mandatory field unfilled and displays a message informing that.

Post-conditions

After filling in them, the system will display a confirmation message. The new vaccine recipient account will be recorded in the database.

Additional Information

Personal Information

Field	Description	Type (Length)	Mandatory	Unique	Editable	Filtered	Details
recipientID	The id of vaccine recipients	Integer	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Name	The name of vaccine recipients	String	<input type="checkbox"/>	<input type="checkbox"/>			The name will be used in logging in.
Password	The password of vaccine recipients	String	<input type="checkbox"/>		<input type="checkbox"/>		The password will be used in logging in.
Date of Birth	The birth date of the vaccine recipients	LocalDate	<input type="checkbox"/>				The birth date will be used in checking if the vaccine recipient is eligible to take a vaccine.

[UC003] Access vaccination certificate

Pre-conditions

After receiving a vaccine, vaccine recipients can log in to the system and choose to access their vaccination certificate.

Main Events Flow

1. The vaccine recipients open the home page and click the “View vaccination certificate” option.
2. The system displays the certification of the vaccination, including the type of vaccine and when the vaccine was taken.

Post-conditions

Users are shown their vaccination certificate, along with a button to return to their home page.

[UC004] Search for available timeslots by area

Pre-conditions

After logging in, the vaccine recipient chooses to search for time slots available. The vaccine recipient filters the list by area, showing only time slots from health care providers in their postcode.

Main Events Flow

1. The vaccine recipients open the home page and click the “Search for timeslots by area” option.
2. The system displays a blank for the vaccine recipients to fill in the postcode.
3. The vaccine recipients fill in the postcode.
4. The system validates the blanks. – [AF01]
5. The system displays all the available timeslots in this area.

Alternative Flows**[AF01] Mandatory field not filled**

1. The system identifies a record containing at least one mandatory field unfilled and displays a message informing that

Post-conditions

All the timeslots in this area will be displayed in the system and vaccine recipients could view them.

[UC005] Search for available time slots by health care providers

Pre-conditions

After logging in, the vaccine recipient chooses to search for time slots available that fit with their eligible vaccines. They are shown a list of available time slots. The vaccine recipient then filters the list by health care providers, leaving only time slots from chosen health care providers showing.

Main Events Flow

1. The vaccine recipients open the home page and click the “Search for timeslots by HCP ” option.
2. The system displays a blank for the vaccine recipients to fill in the name of the health care provider.
3. The vaccine recipients fill in the name of the health care provider.
4. The system validates the blanks. – [AF01]
5. The system displays all the available timeslots of this health care provider.

Alternative Flows**[AF01] Mandatory field not filled**

1. The system identifies a record containing at least one mandatory field unfilled and displays a message informing that

Post-conditions

All the timeslots of this health care provider will be displayed in the system and vaccine recipients could view them.

[UC006] Book a vaccine

Pre-conditions

After logging in, vaccine recipients could book a timeslot to take the vaccine with the health care provider.

Main Events Flow

1. The vaccine recipients select a timeslot in the system.
2. The system displays a questionnaire, including a list of questions.
3. The vaccine recipients answer these questions to check if they are eligible to take the vaccine.
4. The system validates the answers – [AF01]
5. The system displays a notification message to tell the vaccine recipients if they book the timeslot successfully. - [AF02]

Alternative Flows

[AF01] Mandatory field not filled

1. The system identifies a record containing at least one mandatory field unfilled and displays a message informing that

[AF02] Timeslot booking unsuccessful

1. The system rejects the vaccine recipient's booking attempt and displays an error message.

Post-conditions

The booking status of the timeslot will be updated if the vaccine recipients book the timeslot successfully.

Additional Information

Timeslots Field

Field	Description	Type (Length)	Mandatory	Unique	Editable	Filtered	Details
recipientID	The ID of vaccine recipient who books this timeslot, if no one books it, this field remains null.	Integer	□	□	□		The recipient account will be filled in after the timeslot is booked.

[UC007] Create Health Care Account

Pre-conditions

Administrators have the authority to create accounts for health care providers, filling in details such as name and postcode to finish registration.

Main Events Flow

1. After the administrator logging in and clicks “create new health care provider account”.
2. The system displays all the mandatory information needed to be filled in.
3. The administrator fills in the blanks.
4. The system validates the fields. – [AF01]
5. The system updates the data and displays an editing confirmation message.

Alternative Flows

[AF01] Mandatory field not filled

1. The system identifies a record containing at least one mandatory field unfilled and displays a message informing that

Post-conditions

After filling in them, the system will display a confirmation message. The new health care provider account will be recorded in the database.

Additional Information

Health care providers fields

Field	Description	Type (Length)	Mandatory	Unique	Editable	Filtered	Details
HCPID	The id of the health care providers	Integer	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Name	The name of the health care provider.	String	<input type="checkbox"/>	<input type="checkbox"/>			The names of health care providers will be used as a filter
Password	The password of the health care provider	String	<input type="checkbox"/>				The password of the health care provider will be used in logging in.

Postcode	The postcode of the location where the health care provider is.	String	<input type="text"/>			<input type="text"/>	The postcodes of health care providers will be used as a filter
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[UC008] Add available timeslots

Pre-conditions

After logging in, a health care provider can add time slots that they have available.

Main Events Flow

1. After the health care provider logging in and clicks “create new timeslots”.
2. The system displays all the mandatory information needed to be filled in.
3. The health care provider fills in the blanks.
4. The system validates the fields. – [AF01]
5. The system updates the data and displays an editing confirmation message.

Alternative Flows

[AF01] Mandatory field not filled

1. The system identifies a record containing at least one mandatory field unfilled and displays a message informing that

Post-conditions

The new timeslots will be added to the database and they can be searched by the vaccine recipients later.

Additional Information

Timeslots fields

Field	Description	Type (Length)	Mandatory	Unique	Editable	Filtered	Details
Starttime	The start time of a timeslot.	LocalDateTime	<input type="text"/>		<input type="text"/>		
Endtime	The end time of a timeslot	LocalDateTime	<input type="text"/>		<input type="text"/>		

ProviderID	The id of the health care provider of this timeslot	Integer	□			□	The provider id will be used in filtering.
recipientID	The ID of vaccine recipient who books this timeslot, if no one books it, this field remains null.	Integer		□	□		The recipient account will be filled in after the timeslot is booked.

[UC009] Record vaccination

Pre-conditions

After administering a vaccination, a health care provider records the details of the vaccination against the vaccine recipient. The details include the type of vaccination, date of vaccination, name of health care provider, and recipient name and date of birth.

Main Events Flow

1. After the health care provider logging in and clicks “Add vaccination record”.
2. The system displays all the mandatory information needed to be filled in.
3. The health care provider fills in the blanks.
4. The system validates the fields. – [AF01]
5. The system updates the data and displays an editing confirmation message.

Alternative Flows

[AF01] Mandatory field not filled

1. The system identifies a record containing at least one mandatory field unfilled and displays a message informing that

Post-conditions

The new vaccination record will be added to the database and they can be viewed by the vaccine recipients later.

Additional Information

Vaccination Record Fields

Field	Description	Type (Length)	Mandatory	Unique	Editable	Filtered	Details
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vaccinationrecordID	The id of this vaccination recording.	Integer	<input type="text"/>	<input type="text"/>			
timeslotID	The id of the timeslot of this recording.	Integer	<input type="text"/>	<input type="text"/>			
recipientID	The id of the vaccine recipient of this recording.	Integer	<input type="text"/>				
vaccinationID	The id of the vaccine was given in this recording.	Integer	<input type="text"/>				
providerID	The id of the Health Care Provider in this recording.	Integer	<input type="text"/>				

[UC010] View all vaccine recipients

Pre-conditions

The administrator can view the information of all vaccine recipients through the system, including the name, age, date of birth and vaccination record of the vaccine recipients.

Main Events Flow

1. After logging in, the administrator could select the option “View all vaccine recipients” on the home page.
2. The system displays all the existing vaccine recipients on the page, with a blank to fill in the vaccine name.
3. The administrator could fill in the blank and click the “Search” button to search for the recipients who took a particular vaccine.- [AF01]

Alternative Flows

[AF01] Search for the recipients who took a particular vaccine

1. The system illustrates a list of recipients who took the vaccine that the administrator put in.

Post-conditions

All the existing vaccine recipient’s information is displayed on the screen, and *the administrator* could choose to return to the home page.

[UC011] Add vaccine types

Pre-conditions

After logging in, the administrator could add available vaccine types to the system, so that the vaccine recipients can choose the vaccine they want to take, and the health care providers also could select the vaccine types they can offer.

Main Events Flow

1. After the administrator logging in and clicks “Add new vaccine”.
2. The system displays all the mandatory information needed to be filled in.
3. The administrator fills in the blanks.
4. The system validates the fields. – [AF01]
5. The system updates the data and displays an editing confirmation message.

Alternative Flows

[AF01] Mandatory field not filled

2. The system identifies a record containing at least one mandatory field unfilled and displays a message informing that

Post-conditions

The new vaccine will be added to the database and it will be able chosen by the health care providers to give.

[UC012] View all users

Pre-conditions

After logging in, the administrator could browse the list of all users, including vaccine recipients and health care providers. The list would contain the name and the type (vaccine recipients or health care providers) of each user.

Main Events Flow

1. After logging in, the administrator could select the option “View all users” on the home page.
2. The system displays all the existing users on the page.

Post-conditions

All users’ information will be listed on the screen for *the administrator*.

[UC013] View all timeslots

Pre-conditions

After logging in, the administrator could view all the timeslots created by health care providers and their availability.

Main Events Flow

1. After logging in, the administrator could select the option “View all timeslots” on the home page.

2. The system displays all the existing timeslots on the page.

Post-conditions

All timeslots created by health care providers will be listed on the screen for *the administrator*.