
Product Requirements Document

Submission 1 Specification

SDA8

SWEN90007 SM2 2021 Project

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SCHOOL OF
**COMPUTING &
INFORMATION
SYSTEMS**

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13/08/2021	01.00	Initial draft	Zhuolun Wu
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13/08/2021	03.00-D1	Add use cases 1, 2, 3, 4, 5, and 6	Zhuolun Wu
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15/08/2021	04.00-D1	Added domain model draft	Shufan Xia
15/08/2021	04.00-D2	Refined and updated the domain model	Tom Capicchiano
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1. Introduction

1.1 Proposal

This document specifies the SWEN90007 project use cases, actors to be implemented, and the system's domain model.

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
AF	Alternative flow(s)
EF	Exception flow(s)

2. Actors

Actor	Description
Administrator	The system admin has access to all functionalities.
Health Care Provider	Provides vaccination services
Vaccine Recipient	Individuals who are making an appointment for vaccination

3. Use Cases

3.1 System Admin Operations

[UC001] Administrator creates accounts

Actors

Administrator

Pre-condition

The administrator has been contacted by the user who wants to create an account.

Main Events Flow

1. The administrator opens the register window
2. The administrator fills in all relative information [AF1] [AF2]
3. The system stores the registered account and relative information
4. The system sends the username and password to the user through email

Alternative Flows

[AF1] Type of account is vaccine recipient

1. Required fields include email, password, and date of birth
2. The account has access to book for vaccine and other related functionalities

[AF2] Type of account is health care provider

3. Required fields include name, postcode, and type of provider
4. The account has access to manage and provide vaccines and other related functionalities

Additional Information

Field	Description	Type (Length)	Mandatory	Unique	Editable	Filtered	Details
Email		Text	√	√	√		
Password		8-16 (length)	√		√		
Date of Birth		Date	√				
Name (of provider)	Name of the health care provider	Text	√				
Postcode (of provider)	Postcode of the health care provider	Integer	√				
Type of Provider		Text	√				GP, hospital, etc.

[UC002] Administrator Adds Vaccine Types

Actors:

Administrator

Pre-condition

The administrator is logged on and has access to the vaccine type management window. The vaccine type being added is a new one that has not been added before.

Main Events Flow

1. The administrator opens the vaccine type management window
2. The administrator enters the new vaccine type [EF1]
3. The system stores the new vaccine type (AstraZeneca/Pfizer)

Exception Flow**[EF1] The Vaccine Type Exists Already**

1. The system shows an error to the administrator

[UC003] Administrator views all users

Actors:

Administrator

Pre-condition

The administrator is logged on and has access to access the database and view all users.

Main Events Flow

1. The administrator opens the database window (only accessible to admin)
2. The administrator selects “all users”
3. The System shows all users in a list view

[UC004] Administrator views all timeslots

Actors:

Administrator

Pre-condition

The administrator is logged on and has access to view all timeslots.

Main Event Flow

1. The administrator opens the timeslot window
2. The system shows all timeslots in a calendar view

[UC005] Administrator views vaccine recipients

Actors:

Administrator

Pre-condition

The administrator is logged on and has access to the database and filter out all vaccinated users.

Main Event Flow

1. The administrator opens the database window
2. The administrator selects “all users”
3. The administrator adds a filter of “vaccinated”
4. The system shows all vaccinated users in list view

3.2 Health Care Provider Operations

[UC006] Health Care Provider adds timeslots

Actors:

Health Care Provider

Pre-condition

The health care provider is logged on and has access to set timeslots.

Main Event Flow

1. The health care provider opens the vaccine timeslots setting window
2. The health care provider views all available timeslots
3. The health care provider customizes the duration of any timeslot
4. The health care provider sets the number of shots available during any timeslot
5. The system stores all above information and make it bookable to vaccine recipients

[UC007] Health Care Provider views all timeslots

Actors:

Health Care Provider

Pre-condition

The recipient has been vaccinated and his Health Care Provider has recorded the vaccination.

Main Event Flow

1. The health care provider logs in the system
2. The health care provider records this vaccination details on system
3. The recipient is recorded as vaccinated

3.3 Vaccine Recipient Operations

[UC008] Recipient answers questionnaire for eligibility

Actors:

Vaccine Recipient

Pre-condition

The recipient is logged on and planning to book for a vaccination.

Main Event Flow

1. The recipient clicks the booking button
2. The system shows a questionnaire
3. The recipient enters all required information (age and other underlying health factors)
4. The system stores the questionnaire
5. The recipient now has access to view timeslots

Additional Information

Field	Description	Type (Length)	Mandatory	Unique	Editable	Filtered	Details
Age		Integer	✓		✓		
Health factors		Text			✓		

[UC009] Recipient searches for available timeslots

Actors:

Vaccine Recipient

Pre-condition

The recipient has answered the questionnaire and now trying to book for a vaccination.

Main Event Flow

1. The recipient enters the booking page (timeslots window)
2. The recipient searches for suitable timeslots to himself [AF1] [AF2]

Alternative Flows

[AF1] Select timeslots in a calendar view

1. The recipient selects timeslots calendar view
2. The system shows timeslots in a calendar view

[AF2] Select timeslots of a selected Health Care Provider

1. The recipient selects a specific Health Care Provider
2. The system shows all timeslots of the selected Health Care Provider

[UC010] Recipient books for vaccination

Actors:

Vaccine Recipient

Pre-condition

The recipient has answered the questionnaire and selected a timeslot.

Main Event Flow

1. The recipient enters other information
2. The system replies if the recipient can receive the injection [AF1] [AF2]

Alternative Flows**[AF1] The booking is successful**

1. The recipient receives system's reply that he/she can receive the vaccine injection

[AF2] Select timeslots of a selected Health Care Provider

1. The recipient receives system's reply that he/she cannot receive the vaccine injection
2. The recipient tries to book again

[UC011] Recipient shows vaccination certification

Actors:

Vaccine Recipient

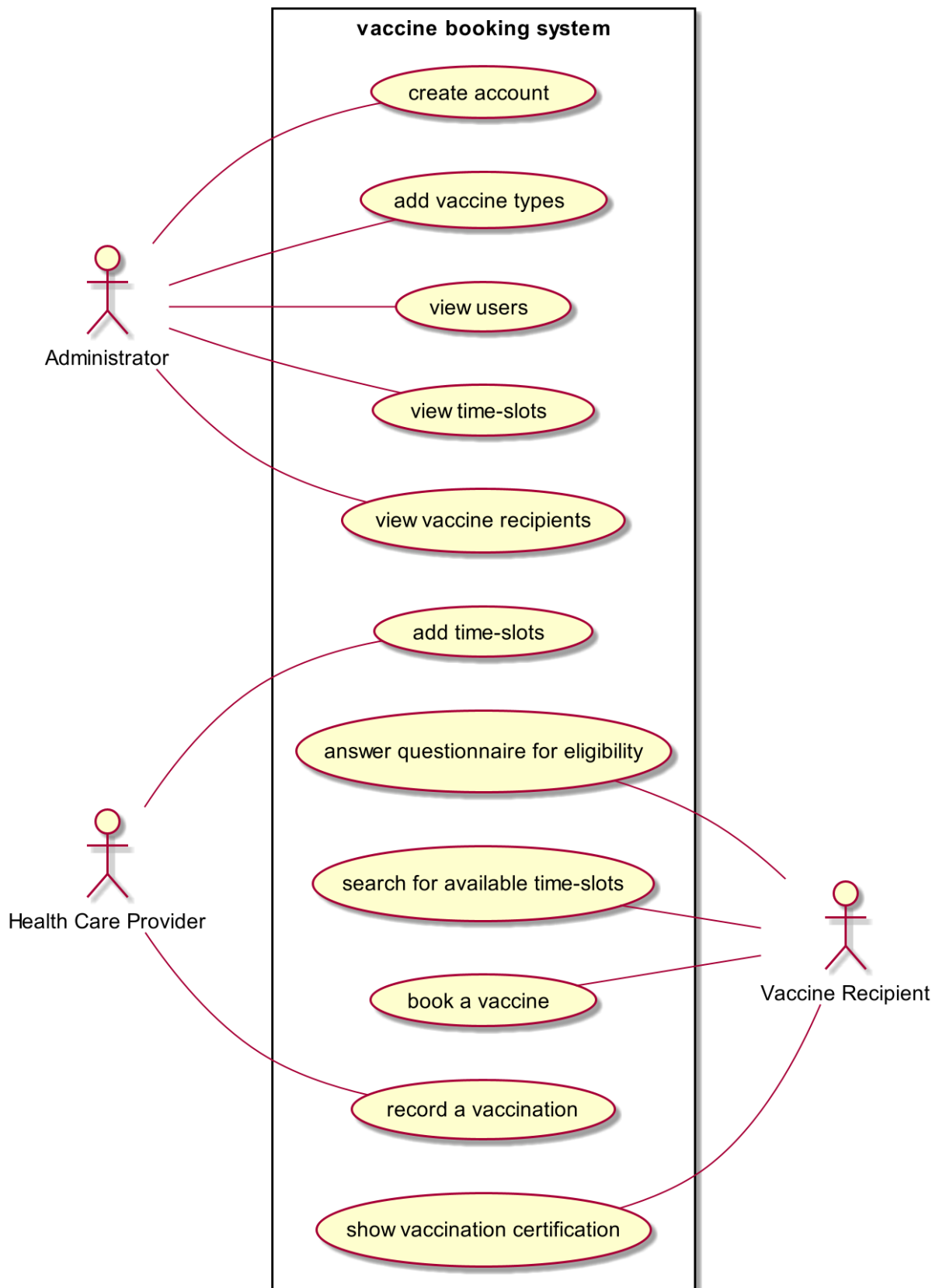
Pre-condition

The recipient is vaccinated and logged on.

Main Event Flow

1. The recipient opens his/her vaccination history
2. The recipient selects the vaccination record (assume COVID-19 vaccine requires at least two shots to assure effectiveness)
3. The system shows recipient's vaccination certification

3.4 Use case diagram



4. Domain Model

4.1 Domain Model Description

Based on the specifications provided for the COVID 19 Vaccine Booking and Management System, the system entities, attributes, and business rules can be summarised as:-

- One **Administrator** can create *one or more* **Vaccine Recipients** and *one or more* **Health Care Providers** and adds **vaccine types**
- There can be *one or more* **vaccine types**
- **Vaccine Recipients** must complete *one* **Questionnaire**
- **Vaccine Recipients** can make *one* **Booking** in *one* **Timeslot**
- **Health Care Providers** can create *one or more* **Timeslots**
- **Health Care Providers** will record a vaccination against a **Vaccine Recipient**
- A **Vaccine Recipient** can view their *one* **Vaccination Certification** once they are vaccinated

Entities have been bolded; attributes have been underlined; and important *associations* have been italicized.

4.2 Domain Model Diagram

