
Product Requirements Document

Use Cases Specification

[SDA1]

SWEN90007 SM2 2023 Project

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SCHOOL OF
**COMPUTING &
INFORMATION
SYSTEMS**

Revision History

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06/08/2023	D01	Initial identification of use cases	Hanming Mao
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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
AF	Alternative Flow
UC	Use Case
EF	Exception Flow

2. Actors

Actor	Description
Administrator	Exclusive access to manage the application and can view all users of the system
Event Planner	Responsible for managing event and related bookings
Customer	Can book tickets to events

3. Use Cases

[UC000] User login

Main actors:

All users (including Administrator, customer, event planner)

Pre-conditions

1. The system is up and running.

Main Events Flow

1. The user clicks on “Log in” button on the home page.
2. The Administrator inputs all the login credentials.
3. The system validates the input – [AF01] [AF02]
4. The user was granted access and the corresponding user panel is available for viewing (depends on the access level of the user) – [AF03]

Alternative Flows**[AF01] Incorrect login credentials**

1. The input given by the user does not match the data stored in the system.
2. A message informing user of wrong input is displayed and access to user page is denied.

[AF02] Invalid input data type

1. The user input information other than a combination of English letters, numbers or special character into login field.
2. A message informing user the correct format for login credentials is displayed.

[AF03] Database offline

1. The database is down because of maintenance/error, a message saying “User information currently unavailable is displayed”.

Exception Flow**[EF01] Corrupted user data**

1. Pathway to user data is invalid, causing user information not properly displayed on the “user management” page.

Post-conditions

1. The user can now manage his/her account.

3.1 Administrator Interface

[UC001] Viewing all user info

Main actors:**Administrator****Pre-conditions**

2. The Administrator can log into the system using correct credential.
3. The system is up and running.

Main Events Flow

5. The Administrator clicks on “Log in” button on the home page.
6. The Administrator inputs all the login credentials.
7. The system validates the input – [AF01] [AF02]
8. The Administrator was granted access and the “user management” page is available for viewing – [AF03]

Alternative Flows**[AF01] Incorrect login credentials**

3. The input given by the Administrator does not match the data stored in the system.
4. A message informing user of wrong input is displayed and access to user page is denied.

[AF02] Invalid input data type

3. The user input information other than a combination of English letters, numbers or special character into login field.
4. A message informing user the correct format for login credentials is displayed.

[AF03] Database offline

2. The database is down because of maintenance/error, a message saying “User information currently unavailable is displayed”.

Exception Flow**[EF01] Corrupted user data**

2. Pathway to user data is invalid, causing user information not properly displayed on the “user management” page.

Post-conditions

2. The administrator can view all the user information.

- The information displayed is up to date and reflects the current state of the user.

Data type

Field	Description	Type (Length)	Mandatory	Unique	Editable	Details
Username	Used for login	String	✓	✓		The Username must be a combination of English characters and letters
Password	Used for login	String	✓	✓		

[UC002] Viewing all events

Main actors:
Administrator

Pre-conditions

- The Administrator can log into the system using correct credential.
- The system is up and running.

Main Events Flow

- The administrator log into the system
- The administrator is now at the “Admin” main panel
- The administrator clicks on “All events” button and list of all available events is played –[AF01]
- The administrator clicks on a specific event and view its details – [AF02]

Alternative Flows

[AF01] The Event page is offline

- An error message informing user that event page is unavailable is displayed.

[AF02] Incorrect pathway to event data

- The path to attributes to event is corrupted, causing the information of individual event not being displayed properly.

Post-conditions

- The administrator can view all the user information.
- The information displayed is up to date and reflects the current state of the event.

[UC003] Viewing purchased tickets

Main actors: Administrator

Pre-conditions

1. The Administrator can log into the system using correct credential.
2. There have been tickets purchased using the system.

Main Events Flow

1. The Administrator has logged into the system and is currently viewing the “User management” page [UC001].
2. The Administrator select a specific user from the user list.
3. The system displays a user detail page.
4. The Administrator clicks on the “order history” button on the page.
5. A list of all purchased tickets by that specific user is displayed [AF01].
6. For each ticket, the system shows attributes such as ticket ID, event name, section and other information [AF02].

Alternative Flows

[AF01] No order history

1. The user has not purchased any ticket before.
2. A notification saying “no order history” will be displayed on the screen.

[AF02] Ticket was cancelled

1. The ticket is cancelled by Administrator or customer in prior.
2. The ticket will be greyed out and not selectable on the purchase history page.

[AF03] Database offline

1. The database is down because of maintenance/error, a message saying “User information currently unavailable is displayed”.

Exception Flow

[EF01] Concurrency issue

1. If the ticket information is being modified by the user, the admin will not be able to access the ticket information until the change has been submitted.

Post-conditions

1. The administrator successfully viewed all the tickets purchased by users
2. The administrator is able to navigate to other pages of the website and continue his/her work.

Data type

Field	Description	Type (Length)	Mandatory	Unique	Editable	Details
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Ticket ID	Unique identifier for ticket	Integer	✓	✓		Integer within the [IntMin, IntMax] range
Event name	Name for event	String	✓			The event that the ticket is used for. Has to match to an existing event.
Session	Session that the buyer is seated at	Enum	✓			An event can have four sections(standing, seated, VIP)
Date purchased	Date of ticketed purchased	Date-time	✓			A date-time data

[UC004] Authorize user as Event Planner

Main actors: Administrator

Pre-conditions

1. The event being assigned a planner already existed.
2. The user to be authorized already existed.

Main Events Flow

1. The administrator logged into the system and is at the “All events” page [UC002].
2. The administrator clicked into a specific event.
3. The administrator selects the “Assign Event Planner” option on the page.
4. A search bar appears on the screen [AF01].
5. The administrator searches for the user to be assigned as planner, if found, can be added to planer list [AF02].
6. Repeat step 5 if multiple users need to be assigned as planner.

Alternative Flows

[AF01] No available user to be assigned as planner

1. If there are no user available to be assigned as an Event Planner, a message saying “no user available” will be displayed.

[AF02] No search result found

1. The username that Administrator typed in does not match any user in the database.
2. The dropdown menu from the search bar displays ‘empty’.

Exception Flow

[EF01] No available user

1. See [AF01].

Post-conditions

1. The administrator has successfully authorized one or more users as the Event Planner.
2. The system updates event's information.

Data type

Field	Description	Type (Length)	Mandatory	Unique	Editable	Details
isEventPlanner	If true, the user has access to modify events	Boolean	✓			On default is False for all users, can be turned true by Administrator

[UC005] Create venues

Main actors:**Administrator****Pre-conditions**

1. The administrator logs into the system with the correct account and password.

Main Events Flow

1. The administrator clicks on the "Create Venue" button and goes to the corresponding page.
2. The administrator clicks on the edit box and types the name of the venue after "Name".[AF01][AF02]
3. After the "Section 1(or N)" tab, the administrator clicks on the edit box and types the name of the section, such as mosh, standing, seated, VIP, etc.[AF03]
4. After the "Capacity 1(or N)" tab The administrator clicks on the edit box and types number of persons that can be accommodated in the corresponding section. [AF04]
5. Administrator clicks the "+" button.
6. A next line of the editorial column appears in the page, indicating "Section 2(or by increments of 1)" and "Capacity 2(or by increments of 1)".
7. Repeat steps 3, 4, 5 and 6 until all sections have been entered.
8. The administrator clicks the "Confirm" button to submit the creation of the avenue.[AF05][AF06]
9. A pop-up window prompts "Venue Created Successfully".
10. The system jumps to a blank "Create Venue"page.

Alternative Flows**[AF01] Zero character input**

1. A message which says "The venue name must contain at least 1 character." appears after the edit box.

[AF02] Duplicate venue names

1. A message which says "This venue exists." appears after the edit box.

[AF03] Duplicate section names

1. A message which says "This section exists." appears after the edit box.

[AF04] Illegal input

1. A message which says "Capacity must be an integer between 1 and 50000." appears after the edit box.

[AF05] Sections are not created

1. A popup appears saying "At least one section needs to be created."

[AF06] Creation Cancelled

1. Go directly to Main Events Flow Step 10.

Post-conditions

1. The venue should be added to the venue list and can be associated by a specific event by Event Planners.

3.2 Event Planner Interface

[UC006] Create musical events

Main actor:**Event planner****Pre-conditions**

1. A venue has been created.
2. Event Planner successfully logs into the system with the correct account and password.

Main Events Flow

1. The Event Planner clicks on "Create musical events" button and goes to the corresponding page.
2. The administrator clicks on the edit boxes and types the name of the music event and artist in corresponding boxes.[AF01]
3. The administrator clicks on the drop-down box named "Venue".
4. Venue list is displayed in the page.
5. The Event Planner selects and click on one venue from the list.[AF02]
6. A calendar showing available dates of this venue displays in the page.
7. The Event Planner picks up one date and clicks on it.
8. Available time of this date for the venue displays in the page.

9. The Event Planner selects the desired time period.
10. The Event Planner clicks the “Confirm” button to submit the creation of the event.[AF03]
11. A pop-up window prompts "Music event Created Successfully".
12. The system jumps to a blank “Create musical events”page.

Alternative Flows

[AF01] Duplicate music event names

1. A message which says "This event name exists." appears after the edit box.

[AF02] Empty venue list

1. No venue has been created.
2. The Event Planner clicks on the “Cancel” button, exits the page and waits for the administrator to create venue.

[AF03] Creation Cancelled

1. Go directly to Main Events Flow Step 12.

Post-conditions

1. A music event has been added to the event list, which can be managed by one or more associated Event Planners and be searched and viewed by customers.

[UC007] Change ticket price and event date and time

Main actor:

Event planner

Pre-conditions

1. At least a music event has been created.
2. Event Planner successfully logs into the system with the correct account and password.

Main Events Flow

1. The Event Planner clicks on the "Manage event" button and goes to the corresponding page.
2. Music event list is displayed in the page. The Event Planner selects an event from the list and clicks on the “modify” button.
3. The event details including ticket prices, event data and time are shown in the page. The Event Planner clicks on the different modules and performs re-keying or re-selection operations.
4. The Event Planner clicks the “Confirm” button to submit the modification of the event. [AF01]
5. A pop-up window prompts "Event details change successfully".
6. The system jumps to Music event list..

Alternative Flows

[AF01] Changes Cancelled

1. A pop-up window prompts "Changes have not been saved. Do you continue to exit?".
2. The Event Planner clicks “Yes” button. Go to Main Events Flow Step 6.

Post-conditions

1. The details of the music event have been changed and can be synchronized to consumers in real time..

[UC008] Cancel event

Main actor**Event planner****Pre-conditions**

1. The event planner has the permission to manage one or more events.

Main Events Flow

1. The event planner selects an event in the event list. - [AF01]
2. The system displays the event's details.
3. The event planner clicks the cancel event button.
4. The system displays a prompt box for cancel confirmation.
5. The event planner confirms the cancellation act. - [AF03]
6. The system returns to the event list and displays a message containing the deleted event name..

Alternative Flows**[AF01] No available event is assigned to this event planner**

1. The system displays the message "No available events" on the event list page.

[AF02] Cancel the operation

1. The event planner does not choose the option to confirm the cancellation.
2. The execution flow continues from main flow step 2.

[AF03] The event is canceled by another event planner

1. The system displays a message informing that the event has been canceled.
2. The system renavigates to the event list page.

Post-conditions

1. The event should be deleted from the event list and all customers who have booked the tickets of the specific event should get a cancellation notification

[UC009] View all bookings for specific event

Main actor**Event planner**

Pre-conditions

1. The event planner has the permission to manage one or more events.

Main Events Flow

1. The event planner selects an event in the event list. - [AF01]
2. The system displays the event's details containing all the bookings made by customers. - [AF02]

Alternative Flows**[AF01] No available event is assigned to this event planner**

1. The system displays the message "No available events" on the event list page.

[AF02] The event is canceled by another event planner

1. The system displays a message informing that the event has been canceled.
2. The system renavigates to the event list page.

Post-conditions

1. The event planner visualized all the booking details under the specific event.

[UC010] Cancel bookings for specific event

Main actor:**Event planner****Pre-conditions**

1. The event planner has the permission to manage one or more events.

Main Events Flow

1. The event planner selects an event in the event list. - [AF01]
2. The system displays the event's details containing all the bookings made by customers. - [AF02]
3. The event planner clicks the cancel button for one booking record.
4. The system displays a prompt box for cancel confirmation.
5. The event planner confirms the cancellation act. - [AF02][AF03][AF04]
6. The system displays a successfully canceled message.

Alternative Flows**[AF01] No available event is assigned to this event planner**

1. The system displays the message "No available events" on the event list page.

[AF02] The event is canceled by another event planner

1. The system displays a message informing that the event has been canceled.
2. The system renavigates to the event list page.

[AF03] The booking is canceled by another event planner

1. The system displays a message informing that the booking has been canceled.
2. The execution flow continues from main flow step 2.

[AF04] Cancel the operation

1. The system displays a message informing that the booking has been canceled.
2. The execution flow continues from main flow step 2.

Post-conditions

1. The booking record should be deleted from the event detail page. The customers who have made the booking should get a cancellation notification.

3.3 Customer Interface

[UC011] View own bookings

Main actors:

Customer

Pre-conditions

1. N/A

Main Events Flow

1. The customer chooses the booking history menu.
2. All the booking records made by this customer are shown. - [AF01][AF02][AF03]
3. The customer chooses a booking record.
4. Navigate to the booking details page.

Alternative Flows

[AF01] No booking records

1. The system displays the message “No booking history” on the booking history page.

[AF02] The event is canceled by event planner

1. The system prompts a box with the message “Sorry, the event XXX (event name) is canceled by the event planner.”
2. The booking record for this event is tagged as invalid.

[AF03] The booking is canceled by event planner

1. The system prompts a box with the message “Sorry, the booking XXX (booking number) is canceled by the event planner.”
2. The booking record for this event is tagged as invalid

Post-conditions

1. The customer visualized the booking details with all related information.

[UC012] Cancel own bookings

Main actor:
customer

Pre-conditions

1. The customer has made one or more bookings.

Main Events Flow

1. The customer chooses the booking history menu.
2. All the booking records made by this customer are shown. - [AF01][AF02]
3. The customer clicks the cancel button on a specific booking record.
4. The system displays a prompt box for cancel confirmation.
5. The customer confirms the cancellation act. - [AF01][AF02][AF03]
6. The system displays a successfully canceled message.

Alternative Flows

[AF01] The event is canceled by event planner

1. The system prompts a box with the message “Sorry, the event XXX (event name) is canceled by the event planner.”
2. The booking record for this event is tagged as invalid.

[AF02] The booking is canceled by event planner

1. The system prompts a box with the message “Sorry, the booking XXX (booking number) is canceled by the event planner.”
2. The booking record for this event is tagged as invalid.

[AF03] Cancel the operation

1. The customer does not choose the option to confirm the cancellation.
2. The execution flow continues from main flow step 2.

Post-conditions

1. The booking record should be deleted from the booking history page. The customers who have made the booking should get a cancellation notification.

[UC013] Search for music acts by name

Main actor:
Customer

Pre-conditions

1. N/A.

Main Events Flow

1. The customer chooses the events menu.
2. The customer inputs an event name in the search box and clicks the search button.

3. Only the related records are shown. - [AF01]

Alternative Flows

[AF01] No related event exists

1. The system displays the message “No related result” on the page.

Post-conditions

1. All events containing the keyword input by the customer should be displayed..

[UC014] A calendar view of all upcoming acts up to 6 months from the current date

Pre-conditions

1. There must have some upcoming acts in the event list.

Main Events Flow

1. The customer chooses the events menu.
2. The customer clicks on the calendar in the event menu
3. The customer selects the period they want to search for up to 6 months from the current date.
eg: one months, 3 months.
4. The customer will see only the acts within the period he entered.

Alternative Flows

[AF01] No related event exists

1. The system displays the message “No related result” on the page.

Post-conditions

1. All upcoming events within the period of time the customer entered should be displayed.

[UC015] Book ticket for one or more people

Main Actors:

Customer

Pre-conditions

1. There are enough tickets available in the system.

Main Events Flow

1. The customer chooses the events menu.
2. The customer selects a specific event for purchasing.
3. The system displays all the tickets available.
4. The customer selects a specific ticket and enters the number of tickets he wants to purchase.
5. The customer enters the personal information for tickets and confirms it.
6. The system displays the checkout page.

Alternative Flows

[AF01] No tickets available

1. The system displays the message “No Ticket Available” on the page.

[AF02] The ticket has been purchased by others

1. The system displays the message “The ticket you are looking for has been purchased, please select another one” on the page.
2. Redirect the customer to the event page.

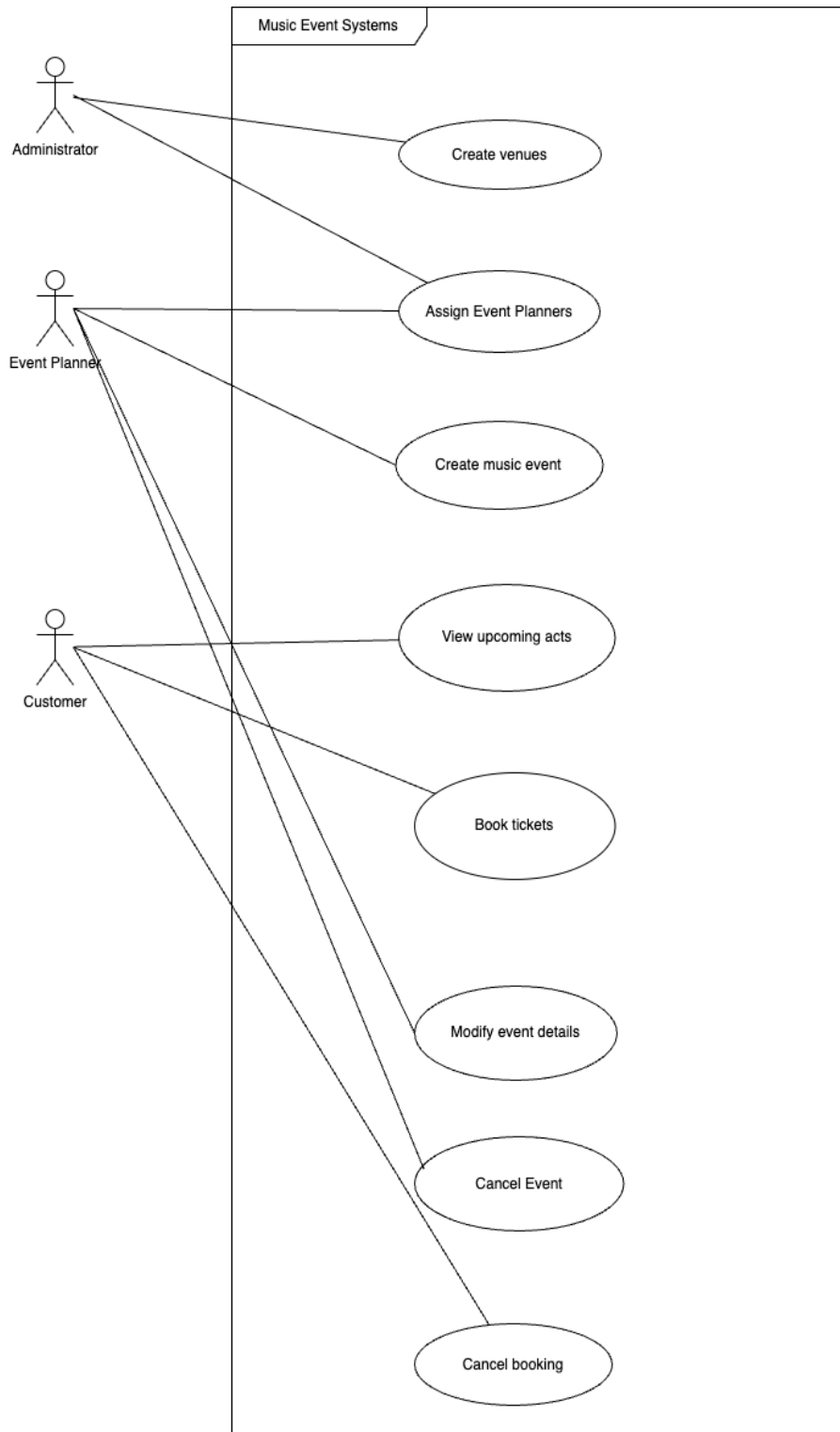
[AF03] Personal information has not been completed or incorrect.

1. The system displays the message “The information entered is incorrect, please enter it again” on the page.

Post-conditions

1. All available tickets are displayed and categorized based on different sections the seat is
2. Located in the venue.

3.4 Use case diagram



4. domain

4.1 Domain Model description

There are certain assumptions we made on the parts that were vaguely described or not mentioned in the project description:

1. Event Planners and Customers are a subclass of Users, they can log into the system using the same portal
2. Administrator is preassigned as the system is built, thus doesn't need to be registered
3. Event Planners are assigned by Administrator
4. Event may or may not have different sections

Based on the specifications provided for the Music Event System and the assumptions made by the team, rules can be summarised as:

- **Event Planner** or **Customer** is a subclass of **User**
- Only the **Administrator** can assign Event Planner
- **Ticket** is a weak entity to **Bookings**
- An **Event Planner** can manage multiple events
- A **Venue** must have at least one **section**
- **Ticket** may or may not have a seat number

Entities have been bolded; attributes have been underlined;

4.2 Domain Model Diagram

