



CSC 431

## ThriveStream

# Software Requirements Specification (SRS)

Team Number 07

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# Version History

Version	Date	Author(s)	Change Comments
1.0	2/23/21	Team07	Added functional and nonfunctional requirements
2.0	3/7/21	Team07	Fixed errors; updated all requirements; use cases
3.0	4/29/21	Team 07	Final edits

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# 41. System Requirements

## 41.1 Functional Requirements

### 1.1.1 Login

Title	Login
Description	Users enter existing account information to log into their ThriveStream account. Users redirected according to info inputted.
Priority	0
Precondition(s)	Launch application VR is configured
Basic Flow	Launch ThriveStream application [Case 1: TS(ThriveStream) Profile is not saved but created] User enters username and password to login Password forgotten, click link and option to reset the password is sent to email inputted [Case 2: User does not have TS profile created] Select link to create a new TS profile [Case 3: User has TS profile saved and logged in] Redirected to user TS home page
Postconditions(s)	User has access to TS content
Use Case Diagram	<a href="#">Requirements Modeling</a> 1.1.1

### 1.1.2 Sign up

Title	Sign up
Description	Users create a user account with payment information
Priority	0
Precondition(s)	Launch application Clicked create profile link from login page
Basic Flow	User enters basic information (email, name, password) User chooses membership options and subscriptions User inputs payment information User presses submit and information is saved to the account database User directed to TS homepage
Postconditions(s)	User has access to TS content
Use Case Diagram	<a href="#">Requirements Modeling</a> 1.1.2

### 1.1.3 Browsing Events

Title	Browsing Events
Description	Shows schedule of upcoming live concerts and events. Provides access to library of previously recorded concerts.
Priority	3
Precondition(s)	User is signed into ThriveStream and payment method is approved

Basic Flow	<p>Browse through "upcoming list" of thumbnails of future event advertisements Select specific thumbnail to be directed to an event page for event's information</p> <p>Browse through "library list" of thumbnails of past recorded events that can be purchased Select specific thumbnail to be directed to recorded event</p> <p>Browse through "coming up next for you" of thumbnails of purchased future events for the user Select thumbnail and directed to ShowTime for live-streaming</p> <p>Browse through "my library list" of thumbnails of past purchased recordings Select thumbnail and directed to ShowTime for streaming</p>
Postconditions(s)	User is redirected to specific event pop-up info pages or ShowTime
Use Case Diagram	<a href="#">Requirements Modeling</a> 1.1.3

## 1.1.4 Searching Events

Title	Searching Events
Description	User utilizes the search bar to browse through content relevant to the keywords.
Priority	4
Precondition(s)	User is browsing through events on the homepage.
Basic Flow	User types a name, key words, or phrases into a search bar. The search sifts through the database to return relevant events.
Postconditions(s)	The user has a list of events to browse through pertaining to the search made.
Use Case Diagram	<a href="#">Requirements Modeling</a> 1.1.4

## 1.1.5 Editing Account

Title	Editing Account
Description	Edits and shows user account information
Priority	3
Precondition(s)	Selected link from homepage
Basic Flow	<p>User edits basic information (email, name, password)</p> <p>User edits membership options and subscriptions</p> <p>User edits payment information</p> <p>User presses submit and information is updated in the account database</p> <p>User redirected back to TS homepage</p>
Postconditions(s)	User has access to TS content with account updates made
Use Case Diagram	<a href="#">Requirements Modeling</a> 1.1.5

## 1.1.6 Streaming of User Events

Title	Streaming of User Events
Description	Streams live and prerecorded events for users.
Priority	0

Precondition(s)	Event launched from event pop-up page by selecting ShowTime button
Basic Flow	User is in event-pop up page for selected event User selects ShowTime button and begins streaming selected content User directed to TS homepage following completion of streaming or selects exit option Saves progress through current event (if exited can continue later from saved spot)
Postconditions(s)	Returns to homepage. Progress/ event saves to "my library list"
Use Case Diagram	<a href="#">Requirements Modeling</a> 1.1.6

## 1.1.7 Purchasing Events

Title	Purchasing Events
Description	Payment system charges customer for events.
Priority	1
Precondition(s)	User has authenticated account information and selects an event to purchase.
Basic Flow	Payment information on file in the database is billed and the receipt is automatically sent to user's email on file. Event is added to user's library.
Postconditions(s)	Purchase is complete for access in user library.
Use Case Diagram	<a href="#">Requirements Modeling</a> 1.1.7

## 1.1.8 Submit and Verify Credentials

Title	Submit and Verify Credentials
Description	User information regarding their personal and billing information is validated by the ThriveStream system.
Priority	0
Precondition(s)	User is creating an account, updating an account, or purchasing an event.
Basic Flow	User information is verified by the profile and payment systems of ThriveStream.
Postconditions(s)	Access is granted or denied; updates are invalid or valid depending on the verification of the credentials with the systems.
Use Case Diagram	<a href="#">Requirements Modeling</a> 1.1.8

# 41.2 Non-Functional Requirements

## 1.2.1 Payment Information Encryption

Title	Payment Information Encryption
Description	User's submitted payment information must be encrypted through the PlayStation payment system for privacy purposes.
Priority	0



Applicable FR(s)	Sign up (1.1.2); Editing Account (1.1.4); Purchasing Events (1.1.6)
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## 1.2.2 Allow for two password attempts

Title	Password Recovery
Description	The user is allowed to attempt their password twice before being directed to password recovery.
Priority	3
Applicable FR(s)	Login (1.1.1); Submit and Verify (1.1.7)

## 1.2.3 Increase ThriveStream Library Monthly

Title	Increase ThriveStream Library
Description	The amount of streaming options should increase monthly to ensure that users have new events to purchase.
Priority	1
Applicable FR(s)	Browsing events(1.1.3)

## 1.2.4 Payment receipt is sent to user email within 10 minutes

Title	Payment receipt is sent to user email within 10 minutes
Description	A digital payment receipt is sent to the user's email within 10 minutes to ensure confirmation of payment.
Priority	2
Applicable FR(s)	Purchasing Events (1.1.7)

## 1.2.5 ShowTime streaming loads events in under 5 seconds

Title	ShowTime load
Description	ShowTime loads in under 5 seconds
Priority	4
Applicable FR(s)	Streaming of user events(1.1.6)

## 1.2.6 Search results in under 3 seconds

Title	Search results
Description	Search results loads in under 3 seconds
Priority	5
Applicable FR(s)	Searching events(1.1.4)

## 42. System Constraints

### 42.1 Tool Constraints

#### 2.1.1 SQL Database

Title	Database Management
Description	The databases for ThriveStream would be managed securely with SQL database to save, manage and add profiles for ThriveStream. It would consist of saving the username, password, type of membership and personal event library.
Priority	0

### 42.2 Language Constraints

#### 2.2.1 PSVR DevKit

Title	PSVR set-up
Description	The devkit used to set up the PlayStation VR for the ThriveStream app. In order to run the app on PlayStation using the VR this is the devkit used.
Priority	0

#### 2.2.2 Java

Title	Code Language
Description	Most of the software code will be written in java since that is what the group is most familiar with and comfortable with.
Priority	1

### 42.3 Platform Constraints

#### 2.3.1 ThriveStream compatible with PlayStation VR

Title	Platform
Description	The application and main feature of ThriveStream which is the virtual concerts is used with the PlayStation VR so it is necessary for the app to be functional with the PlayStation VR.
Priority	1

#### 2.3.2 PlayStation must have up to date Software

Title	PlayStation up to date
Description	In order for the PS4 console and the app to run correctly and smoothly the PlayStation console must be up to date with the latest software updates from PlayStation
Priority	1

## 42.4 Hardware Constraints

### 2.4.1 PlayStation 4+

Title	PlayStation4 and above
Description	In order for the PlayStation VR to work, you need to have either a PlayStation 4 or 5, the current consoles which are compatible with the VR. Without the correct console, the VR would not configure and work.
Priority	0

### 2.4.2 PlayStation VR necessary

Title	PlayStation4 VR
Description	In order for the application to work, you need to have the correct VR which is compatible with the PlayStation console. Without a VR the app would not be able to run as that is the main feature and if it is not the correct VR headse it would not configure with the console or work.
Priority	0

## 42.5 Network Constraints

### 2.5.1 Network must be fast enough to keep up with playback

Title	Network
Description	Strong network connection is necessary for livestreaming and downloading, and to support VR headset connection
Priority	4

## 42.6 Deployment Constraints

### 2.6.1 Incremented release

Title	Incremented release
Description	Thrivestream can be released in versions, aligned with updates to PlayStation system software and VR software, and can adapt to include new features
Priority	5

## 42.7 Transition & Support Constraints

### 7.1 Periodic System Updates

Title	System Updates
Description	System updates will be released as they become available to the user, can be downloaded on PlayStation
Priority	4

## 42.8 Budget & Schedule Constraints

### 2.8.1 Project must be complete by May 1st

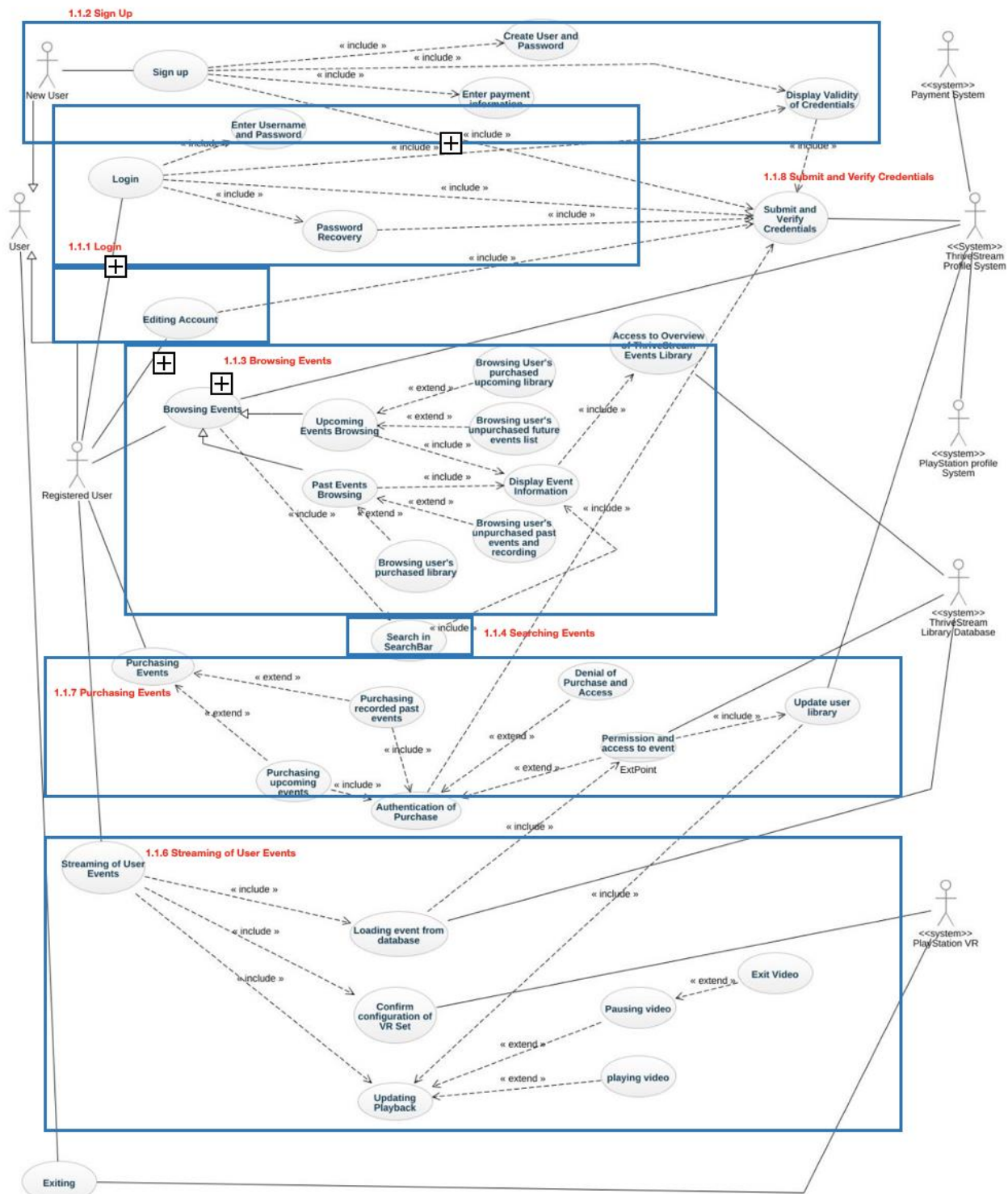
Title	Completion date May 1st
Description	Project must be complete by May 1, 2021 for CSC 431
Priority	0

### 2.8.2 Content

Title	There must be enough content available for release
Description	The application relies on the streaming of content, so upon release there must be at least 10 artists scheduled to perform live, and a library of prerecorded performances. This library will increase in size as the application is in use.
Priority	0

# Requirements Modeling

Figure 1: Use Case Diagram



# 43. Evolutionary Requirements

## 43.1 Functional Requirements

### 3.1.1 Browsing Personalized Streaming Suggestions

Title	Browsing Personalized Streaming Suggestions
Description	Event Browsing will make more personalized suggestions based on what the user watches and what similar users have purchased.
Priority	4
Precondition(s)	Need users to purchase many events to have the data to develop what the user likes. Need to implement software that tracks length of scrolling time to categorize what events the user looks at more than others.
Postconditions(s)	User will be presented suggestions that are personalized to their liking.
Use Case Diagram	Not yet present

### 3.1.2 Rating events

Title	Rating and reviewing events
Description	Following streaming, users can opt to review and rate the event.
Priority	4
Precondition(s)	User streams event. Following the event, the user can give the event a "thumbs up" or "thumbs down".
Postconditions(s)	This rating information will be stored in the database to aid in browsing personalization.
Use Case Diagram	Not yet present

### 3.1.3 Multiplayer streaming

Title	Multiplayer streaming
Description	Users can connect with other ThriveStream users to stream events in unison.
Priority	5
Precondition(s)	Both users must have active ThriveStream accounts with purchased access to the same event. Users will select to "connect with a friend" in their friends list to send an invitation. Upon acceptance, the users will stream the event together.
Postconditions(s)	Both users will stream the event in unison and can interact with each other.
Use Case Diagram	Not yet present

### 3.1.4 Adding Friends

Title	Adding friends
Description	Users can add fellow user's to their friends list
Priority	5

Precondition(s)	User with an active Thrivestream account can search for other active ThriveStream users by their username. The sending user will send an invitation for friendship to a receiving user.
Postconditions(s)	The receiving user can accept or decline the invitation. Depending on the response, the respective user friends lists' will be updated.
Use Case Diagram	Not yet present

## 43.2 Non-Functional Requirements

### 3.2.1 Search results return in same time

Title	Search results return in the same time
Description	Search results return in 3 seconds regardless of an increase in the library database
Priority	3
Applicable FR(s)	Searching events (1.1.4)

### 3.2.2 Increase Library of events biweekly

Title	Increase Library of events biweekly
Description	ThriveStream should add new events to the library database biweekly to keep user interest.
Priority	2
Applicable FR(s)	Browsing Events (1.1.3)

### 3.2.3 Multiplayer streaming increases to 3+ users

Title	Multiplayer streaming increases to 3+ users
Description	Streaming of events will increase from only 2 users to 3+ users at one time.
Priority	5
Applicable FR(s)	Multiplayer Streaming(4.1.3)

### 3.2.4 Facebook can pair with ThriveStream

Title	Facebook can pair with Thrivestream
Description	User can pair their Facebook to import friends for their friends list.
Priority	5
Applicable FR(s)	Adding Friends(4.1.4); Editing Account(1.1.5)