# **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; usecases |
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### System Requirements

#### Functional Requirements

##### **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 | [Requirements Modeling](#_Requirements_Modeling) BLOCK 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 | [Requirements Modeling](#_Requirements_Modeling) BLOCK 1 |

##### **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 | Browse through “upcoming list” of thumbnails of future event advertisements  Select specific thumbnail to be directed to an event page for event’s information  Browse through “library list” of thumbnails of past recorded events that can be purchased  Select specific thumbnail to be directed to recorded event  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  Browse through “my library list” of thumbnails of past purchased recordings  Select thumbnail and directed to ShowTime for streaming |
| Postconditions(s) | User is redirected to specific event pop-up info pages or ShowTime |
| Use Case Diagram | [Requirements Modeling](#_Requirements_Modeling) BLOCK 5 |

##### **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 | [Requirements Modeling](#_Requirements_Modeling) BLOCK 6 |

##### **Editing Account**

|  |  |
| --- | --- |
| Title | Editing Account |
| Description | Edits and shows user account information |
| Priority | 3 |
| Precondition(s) | Selected link from homepage |
| Basic Flow | User edits basic information (email, name, password)  User edits membership options and subscriptions  User edits payment information  User presses submit and information is updated in the account database  User redirected back to TS homepage |
| Postconditions(s) | User has access to TS content with account updates made |
| Use Case Diagram | [Requirements Modeling](#_Requirements_Modeling) BLOCK 4 |

##### **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 | [Requirements Modeling](#_Requirements_Modeling) BLOCK 8 |

##### **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 | [Requirements Modeling](#_Requirements_Modeling) BLOCK 7 |

##### **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 | [Requirements Modeling](#_Requirements_Modeling) BLOCK 3 |

#### Non-Functional Requirements

##### **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) |

##### **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) |

##### **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) |

##### **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) |

##### **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) |

##### **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) |

### System Constraints

#### Tool Constraints

< List all tool constraints in the following example format >

##### **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 library.It would consist of saving the username, password, type of membership and personal event library. |
| Priority | 0 |

#### Language Constraints

< List all language constraints in the following example format >

##### **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 |

##### **Java**

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

#### Platform Constraints

< List all platform constraints in the following example format >

##### **ThriveStream only compatible with PlayStation VRThriveStream 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 |

##### **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 |

#### Hardware Constraints

< List all hardware constraints in the following example format >

##### **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 |

##### **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 |

#### Network Constraints

< List all network constraints in the following example format >

##### **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 |

#### Deployment Constraints

< List all deployment constraints in the following example format >

##### **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 |

#### Transition & Support Constraints

< List all transition & support constraints in the following example format >

##### **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 |

#### Budget & Schedule Constraints

< List all budget & schedule constraints in the following example format >

##### **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 |

##### **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 size of at least 10 prerecorded performances. This library will increase in size as the application is in use. |
| Priority | 0 |

#### Miscellaneous Constraints

< List all miscellaneous constraints in the following example format >

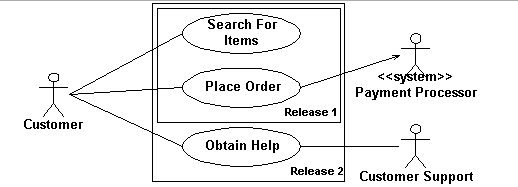
##### **Requirement Title**

|  |  |
| --- | --- |
| Title | <Insert title> |
| Description | <A one or two sentence description> |
| Priority | <Priority from 0 (highest) – 5 (lowest)> |

### Requirements Modeling

< List all Use-case diagrams for the functional requirements in the following format>

##### **Requirement Title**



Diagram

Description automatically generated

### Evolutionary Requirements

#### Functional Requirements

< List all functional requirements in the following example format >

##### **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 | <Link or number, if present> |

##### **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 | <Link or number, if present> |

##### **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 eachother. |
| Use Case Diagram | <Link or number, if present> |

##### **Adding Friends**

|  |  |
| --- | --- |
| Title | Adding friends |
| Description | Users can add fellow users 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 | <Link or number, if present> |

#### Non-Functional Requirements

< List all non-functional requirements in the following example format >

##### **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) |

##### **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) |

##### **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) |

##### **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) |