

StreamWave

Software Engineering for Artificial Intelligence DVA269

Assignment 1

Grupp 2

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1 User Stories

ID	Who	What	Why
1	As an unauthenticated user	I want to create a user account	To stream music and save my playlists and listening history
2	As an unauthenticated user	I want to be able to login	To become an authenticated user and get access to my music collection
3	As a registered user	I want to search for songs, albums, artists and podcasts	To listen to the things I am interested in
4	As a registered user	I want to create, edit and delete playlists	To organize my favourite tracks into personal collections
5	As a registered user	I want to get recommendations on tracks, albums and playlists based on my listening history	To discover new music
6	As a registered user	I want to upgrade to a premium account	To get benefits like better audio quality on streams
7	As an Artist	I want to upload my music and manage album collections with cover images	To reach my fans
8	As an Administrator	I want to add, edit or delete user accounts	To keep the system secure
9	As an Administrator	I want to manage content items and handle the audio quality of Free/Premium tiers	To keep the system up to date

Table 1: User Stories for StreamWave

2 User Stories Descriptions

1: Register Account

Name: Register Account

Precondition: None

Initiator: Unauthenticated User

Goal: Create a user account to stream music and save playlists

Steps to reach the goal:

1. User enters username, email, and password
2. System checks username is available
3. System creates account
4. System displays confirmation message

Alternative flows:

1. Email already exists at step 2
 - a. System shows error message
 - b. Resume at 1

2: Login

Name: Login

Precondition: User has an account

Initiator: Unauthenticated User

Goal: Access music collection

Steps to reach the goal:

1. User enters username and password
2. System checks username and password exists and correct
3. System approves access
4. User sees music collection on front page

Alternative flows:

1. Invalid credentials at step 2
 - a. System displays error message
 - b. Resume at 1

3: Search and Play Content

Name: Search and Play Content

Precondition: User is logged in

Initiator: Registered User

Goal: Listen to songs, albums, artists, or podcasts

Steps to reach the goal:

1. User enters what to search for
2. System searches library for that content
3. System displays search results
4. User selects content to play
5. System streams selected content

Alternative flows:

1. No results found at step 3
 - a. System shows message that nothing was found.
 - b. Resume at 1
2. Free tier user at step 5
 - a. System plays normal quality audio
 - b. Stop
3. Premium tier user at step 5
 - a. System plays high quality audio
 - b. Stop

4: Manage Playlists

Name: Manage Playlists

Precondition: User is logged in

Initiator: Registered User

Goal: Organize favourite tracks into personal collections

Steps to reach the goal:

1. User selects playlist management option
2. User chooses action (create, edit, or delete)
3. For create: User enters name and adds tracks
4. For edit: User modifies existing playlist
5. For delete: User confirms deletion
6. System saves changes

Alternative flows:

1. User cancels action at step 3, 4, or 5
 - a. System cancel changes
 - b. Stop

5: Receive Recommendations

Name: Receive Recommendations

Precondition: User is logged in

Initiator: Registered User

Goal: Get recommendations based on listening history

Steps to reach the goal:

1. User opens front page
2. System analyzes listening history
3. System displays similar content
4. User can stream suggested content

Alternative flows:

1. New user with no listening history at step 2
 - a. System shows trending and popular content
 - b. Resume at 4

6: Manage Subscription

Name: Manage Subscription

Precondition: User is logged in

Initiator: Registered User

Goal: Upgrade to premium account for better audio quality

Steps to reach the goal:

1. User clicks upgrade account button
2. User enters payment information
3. System processes payment
4. System upgrades account to premium
5. System confirms upgrade

Alternative flows:

1. Payment fails at step 3
 - a. System displays payment error
 - b. Resume at 2
2. User cancels at step 3
 - a. System returns to previous page
 - b. Stop

7: Upload and Manage Catalog

Name: Upload and Manage Catalog

Precondition: Artist is logged in

Initiator: Artist

Goal: Upload music and manage album collections with cover images

Steps to reach the goal:

1. Artist chooses to upload song or create album
2. Artist uploads audio files
3. Artist enters title, genre, album name
4. Artist uploads cover image
5. System processes and publishes content
6. System confirms if upload was successful

Alternative flows:

1. Invalid file format at step 2
 - a. System displays error message
 - b. Resume at 2
2. Edit existing content at step 2
 - a. Artist selects existing content
 - b. Artist modifies details or replaces files
 - c. System updates content
 - d. Resume at 6
3. Delete content at step 2
 - a. Artist selects content to delete
 - b. System confirms deletion
 - c. System removes content
 - d. Stop

8: Manage Users

Name: Manage Users

Precondition: Administrator is logged in

Initiator: Administrator

Goal: Add, edit, or delete user accounts for system security

Steps to reach the goal:

1. Administrator opens user management
2. Administrator selects action (add, edit, or delete)
3. For add: Administrator enters new user details
4. For edit: Administrator modifies user information
5. For delete: Administrator confirms deletion
6. System executes action
7. System confirms changes

Alternative flows:

1. Username already exists at step 3
 - a. System shows error message
 - b. Resume at 3
2. User not found at step 4 or 5
 - a. System displays "User not found"
 - b. Resume at 2

9: Manage Content and Tiers

Name: Manage Content and Tiers

Precondition: Administrator is logged in

Initiator: Administrator

Goal: Manage content items and handle audio quality for Free/Premium tiers

Steps to reach the goal:

1. Administrator opens content and tier management
2. Administrator selects management option (content or tiers)
3. For content: Administrator adds, edits, or deletes content items
4. For tiers: Administrator sets audio quality levels for Free and Premium
5. System applies changes
6. System confirms update

Alternative flows:

1. Content upload fails at step 3
 - a. System displays error message
 - b. Resume at 3
2. Invalid quality settings at step 4
 - a. System shows validation error
 - b. Resume at 4

3 Requirements

Requirements					
ID	Description	Inputs	Outputs	Precondition	Postcondition
1	Register user account	Username, email, password	Account confirmation	None	User account created
2	Login to system	Username, password	Access to logged in frontpage	User account exists	User is logged in
3	Search and stream content	Search string	List of results, audio stream	User is logged in	Content displayed or played
4	Manage playlists	Playlist name, tracks	Playlist confirmation or deletion	User is logged in	Playlist created, updated, or removed
5	Create recommendations	User history, trends	Recommended content list	User is logged in	Results displayed
6	Upgrade to Premium	Payment information	Premium confirmation	User has Free tier	Account upgraded to Premium
7	Manage artist catalog	Audio files, Info	Action confirmation	Artist is logged in	Content published, updated, or removed
8	Manage users	User details	Action confirmation	Admin is logged in	User account created, modified, or removed
9	Manage content	Content files, Info	Action confirmation	Admin is logged in	Content added, updated, or removed from library
10	Configure tier settings	Audio quality levels for Free/Premium	Configuration confirmation	Admin is logged in	Settings updated

4 Product Backlog

PRODUCT BACKLOG					
ID	Name	Imp	Est	How to demo	Notes
1	User registration	10	7	Create account with username and password, and show it in "database-file" on disk	Check input format is correct
2	User login	10	5	Enter username and password, Show access to logged in frontpage	Check input format is correct
3	Search and stream content	9	10	Log in as user, search for content and show search results	Show message if there are no results
4	Manage playlist	8	7	Log in as user, choose a playlist and re-order tracks. Rename playlist.	Tracks are added to playlist from search results page (not in here)
5	Receive recommendations	7	5	Log in as user, listen to tracks, show that frontpage updates with new tracks based on this	Show a default list of songs if no history found
6	Manage subscriptions	8	4	Log in as user, click "upgrade", enter payment information, shows a "Premium user" badge.	Payment must succeed, user allowed to abort/downgrade
7	Upload and manage catalog	9	7	Log in as artist, upload and publish song. Show it in search results.	Only mp3 (or wav?) allowed, otherwise error message
8	Manage users	6	5	Log in as administrator, choose "edit" and modify user information. Choose "delete" and delete a user. Confirm changes	Users are added using "registration". Maybe allow to add custom users during development
9	Manage content	6	5	Log in as administrator, edit and delete content items	Show updated content
10	Configure tier settings	5	4	Set audio quality levels for free and premium tiers. Verify by streaming in free and premium account	Maybe use wav for premium, and mp3 for free

5 Points redistribution

Total points - 100

Martin Dahlgren - 25 points

Linos Hurmiz Dawod - 25 points

Neo Norman - 25 points

Jonathan Stenvi - 25 points