

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

THE UNIVERSITY OF TEXAS AT ARLINGTON

SYSTEM REQUIREMENTS SPECIFICATION

CSE 4316: SENIOR DESIGN I

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TEAM NAME : THE STREAMERS

Product Name : SWaP - Social Watch Party

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CONTENTS

1	PRODUCT CONCEPT	6
1.1	PURPOSE AND USE	6
1.2	INTENDED AUDIENCE	7
2	PRODUCT DESCRIPTION	7
2.1	FEATURES & FUNCTIONS	8
2.2	EXTERNAL INPUTS & OUTPUTS	8
2.3	PRODUCT INTERFACES	9
3	CUSTOMER REQUIREMENTS	9
3.1	CREATE PROFILE	10
3.1.3	CONSTRAINTS	10
3.1.4	STANDARDS	10
3.1.5	PRIORITY	10
3.2	LOGIN	10
3.2.3	CONSTRAINTS	11
3.2.4	STANDARDS	11
3.2.5	PRIORITY	11
3.3	AUTHENTICATION AND AUTHORIZATION	11
3.3.3	CONSTRAINTS	11
3.3.4	STANDARDS	11

3.3.5	PRIORITY	12
3.4	FORGET PASSWORD	12
3.4.3	CONSTRAINTS	12
3.4.4	STANDARDS	12
3.4.5	PRIORITY	12
3.5	ADD AN IMAGE TO PROFILE AND CHANGE	13
3.5.3	CONSTRAINTS	13
3.5.4	STANDARDS	13
3.5.5	PRIORITY	13
3.6	ADD FRIENDS	13
3.6.3	CONSTRAINTS	14
3.6.4	STANDARDS	14
3.6.5	PRIORITY	14
3.7	VIDEO STREAM	14
3.7.3	CONSTRAINTS	14
3.7.4	STANDARDS	14
3.7.5	PRIORITY	14
3.8	INVITE FRIENDS	15
3.8.3	CONSTRAINTS	15
3.8.4	STANDARDS	15
3.8.5	PRIORITY	15
3.9	CHAT WITH FRIENDS	15
3.9.3	CONSTRAINTS	16
3.9.4	STANDARDS	16
3.9.5	PRIORITY	16
3.10	DISPLAY LOCATION	16
3.10.3	CONSTRAINTS	16
3.10.4	STANDARDS	17
3.10.5	PRIORITY	17
3.11	VIDEO CHAT WITH FRIENDS	17
3.11.3	CONSTRAINTS	17
3.11.4	STANDARDS	17
3.11.5	PRIORITY	17
4	PACKAGING REQUIREMENTS	18
4.1	ACCESS THROUGH PLAY STORE	18
4.1.3	CONSTRAINTS	18
4.1.4	STANDARDS	18
4.1.5	PRIORITY	18
4.1	CONNECT TO OTHER PLATFORM	19
4.1.3	CONSTRAINTS	19

4.1.4	STANDARDS	19
4.1.5	PRIORITY	19
4.1	CHAT ACCURACY	19
4.1.3	CONSTRAINTS	20
4.1.4	STANDARDS	20
4.1.5	PRIORITY	20
5	PERFORMANCE REQUIREMENTS	20
6	SAFETY REQUIREMENTS	20
6.1	PERSONAL INFORMATION HACKED	20
6.2	FORGET LOGIN INFO/ PASSWORD	21
7	MAINTENANCE AND SUPPORT REQUIREMENTS	22
8	OTHER REQUIREMENTS	22
9	FUTURE ITEMS	23
9.1	REQUIREMENT NAME	23
9.1	CREATE PROFILE	23
9.1.3	CONSTRAINTS	23
9.1.4	STANDARDS	23
9.1.5	PRIORITY	23
9.2	LOGIN	24
9.2.3	CONSTRAINTS	24
9.2.4	STANDARDS	24
9.2.5	PRIORITY	24
9.3	AUTHENTICATION AND AUTHORIZATION	24
9.3.3	CONSTRAINTS	24
9.3.4	STANDARDS	25
9.3.5	PRIORITY	25
9.4	FORGET PASSWORD	25
9.4.3	CONSTRAINTS	25
9.4.4	STANDARDS	25
9.4.5	PRIORITY	25
9.5	ADD AN IMAGE TO PROFILE AND CHANGE	26
9.5.3	CONSTRAINTS	26
9.5.4	STANDARDS	26
9.5.5	PRIORITY	26
9.6	ADD FRIENDS	26
9.6.3	CONSTRAINTS	27
9.6.4	STANDARDS	27
9.6.5	PRIORITY	27
9.7	VIDEO STREAM	27

9.7.3	CONSTRAINTS	27
3.7.4	STANDARDS	27
9.7.5	PRIORITY	27
9.8	INVITE FRIENDS	28
3.8.3	CONSTRAINTS	28
3.8.4	STANDARDS	28
9.8.5	PRIORITY	28
9.9	CHAT WITH FRIENDS	28
9.9.3	CONSTRAINTS	29
9.9.4	STANDARDS	29
9.9.5	PRIORITY	29
9.10	DISPLAY LOCATION	29
9.10.3	CONSTRAINTS	29
9.10.4	STANDARDS	30
9.10.5	PRIORITY	30
9.11	VIDEO CHAT WITH FRIENDS	30
9.11.3	CONSTRAINTS	30
9.11.4	STANDARDS	30
9.11.5	PRIORITY	30

LIST OF FIGURES

1 X conceptual drawing 5

1 PRODUCT CONCEPT

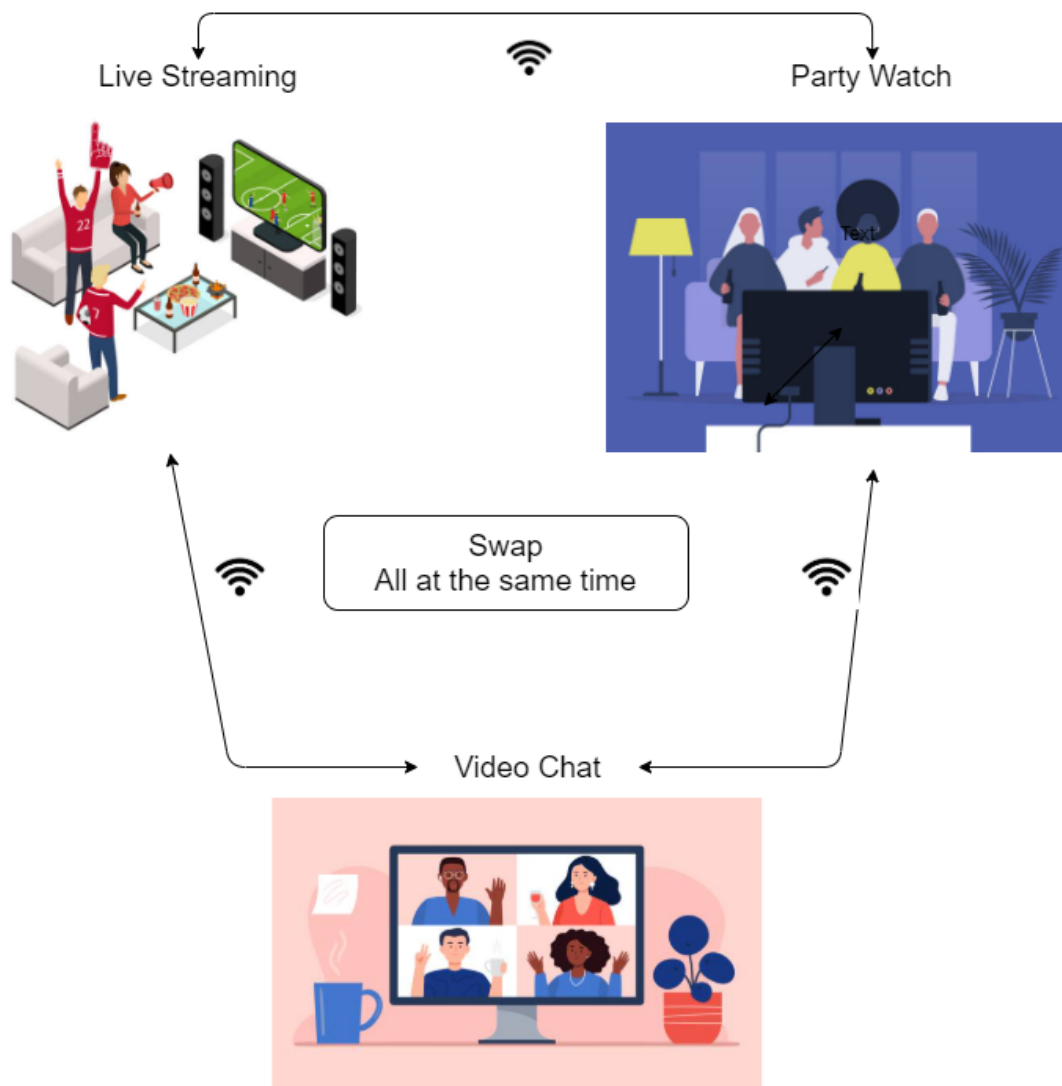
The SWrap is a social video watching app designed to connect people online in order to stream online videos from platforms like netflix, youtube and more, together with the connected friends. In this app, a user logs in into their profile and starts streaming videos from netflix or youtube (may add more platforms later) and they can also add or invite their friends using email address, once they are able to add a friend then they can stream the videos together including chatting at the same time. It is for entertainment purposes.

1.1 PURPOSE AND USE

The purpose of the project is to provide a platform for people to entertain and socialize digitally through streaming social videos online together with friends or strangers from anywhere in the world with connection to the internet.

1.2 INTENDED AUDIENCE

This product is related to streaming social videos online with friends together, so it is intended for any age group of audience publicly. Anyone who is able to use the internet can use this app and connect with their friends or families and watch videos with them together.



2 PRODUCT DESCRIPTION

This project is designed for entertainment and social purpose where; users can create an account, send request or invite friends to their account, accept invitations and friend requests, start streaming video with connected friends, only the host of any stream having the right to pause, play or stop the video unless he/she allows permission to others, anyone connected can chat(text, video or audio) while streaming if the hosts have allowed permission to them. Also, there will be a public streaming available where anyone in this app can join the video being streamed. For streaming video, users have the option to choose from youtube and netflix(maybe more) and if the video is being streamed through netflix every user is required to log in to the netflix with their own credentials to be able to join the stream. The host of any stream can stop the streaming at any time.

2.1 FEATURES & FUNCTIONS

Features and Functions our app is going to have are as follows:

- Register for an account
- Login to your existing account
- Add image to your profile
- Change profile information
- Change password if user forgets his/her password
- Choose a platform to stream videos from (eg: Youtube, Netflix)
- Add a user as your friend (send request/accept request)
- Invite friends to join the app by sharing the app
- Unfriend user from your friend list

- Displaying a world map locating the users in the map
- Connect to group of users (private streaming) and stream a video together
- Public streaming is allowed where any user using the app can join in the stream
- Chat (text,audio,video) while streaming any video
- Host(user starting the stream) can allow or not allow permission for any other users connected in the stream to be able to pause, play ,stop the video and also chat.
- Stop the streaming anytime only by the host
- Logout from the app

2.2 EXTERNAL INPUTS & OUTPUTS

Users in this app are streaming the videos of youtube or netflix like social platforms. So we can consider those videos as an output which we are going to use directly provided from the social video watching platform's website. Users require the internet inorder to stream those videos which is an external input. The app also uses a GPS satellite to locate what part in the world the user is and display it.

2.3 PRODUCT INTERFACES

This is an android mobile application. The user first goes through a login interface, user provides personal information while creating an account including an image of themselves, then has the option to choose from which platform to stream video and start. The user can click a button to decide whether the stream to be public or private, then can invite friends to that stream, and be able to chat with people joining the stream. The user must have been connected to the internet before streaming any video. Once the user selects the platform to stream from, they will be redirected to the main page of that platform and streaming starts. There will be an

icon of earth which will locate all the people joined in the stream, in a world map according to the location they are currently streaming from. Users can click logout to log out from the app, they can click a friend and unfriend them.

3 CUSTOMER REQUIREMENTS

The Swap application is mainly focused on people who want to watch the same video together with friends or family who are not together physically at that moment. The world is facing the problem of the coronavirus pandemic these days and people are not able to meet physically and watch videos together. In addition, some people are far from their family due to work, study, travel and so on. This application comes in handy in situations like this. They can watch any video together through this app, no matter where they live or how physically apart they are.

3.1 CREATE PROFILE

3.1.1 DESCRIPTION

The app will allow any user to create a profile who wants to use this application and get connected with the people.

3.1.2 SOURCE

All team members

3.1.3 CONSTRAINTS

N/A

3.1.4 STANDARDS

N/A

3.1.5 PRIORITY

High

3.2 LOGIN

3.2.1 DESCRIPTION

Once the profile is created, the user can log in into the application and get access to it.

3.2.2 SOURCE

All team members

3.2.3 CONSTRAINTS

N/A

3.2.4 STANDARDS

N/A

3.2.5 PRIORITY

High

3.3 AUTHENTICATION AND AUTHORIZATION

3.3.1 DESCRIPTION

The app will authenticate and authorize the email and password while creating the profile.

Unauthorized email and password will not be able to access the application.

3.3.2 SOURCE

All team members

3.3.3 CONSTRAINTS

N/A

3.3.4 STANDARDS

N/A

3.3.5 PRIORITY

High

3.4 FORGET PASSWORD

3.4.1 DESCRIPTION

If a user forgets his/her password, he/she can reset it using 'forget password'. A password reset link will be sent to the email and they can reset it using the provided link.

3.4.2 SOURCE

All team members

3.4.3 CONSTRAINTS

N/A

3.4.4 STANDARDS

N/A

3.4.5 PRIORITY

High

3.5 ADD AN IMAGE TO PROFILE AND CHANGE

3.5.1 DESCRIPTION

The application will allow the user to add an image to their profile. They have the option to remove it or change a new one.

3.5.2 SOURCE

Manish Phuyal (Team member)

3.5.3 CONSTRAINTS

N/A

3.5.4 STANDARDS

N/A

3.5.5 PRIORITY

Moderate

3.6 ADD FRIENDS

3.6.1 DESCRIPTION

Once their account is created, they can add friends. They can either search by their name or by email or through their contact list.

3.6.2 SOURCE

Subash Dahal (Team member)

3.6.3 CONSTRAINTS

N/A

3.6.4 STANDARDS

N/A

3.6.5 PRIORITY

High

3.7 VIDEO STREAM

3.7.1 DESCRIPTION

The app will allow users to stream the videos using the platform such as Youtube, Netflix and so on.

3.7.2 SOURCE

All team members

3.7.3 CONSTRAINTS

N/A

3.7.4 STANDARDS

N/A

3.7.5 PRIORITY

High

3.8 INVITE FRIENDS

3.8.1 DESCRIPTION

Once they start streaming video, they can invite other friends to join them and watch it together.

They can invite them through an invite link.

3.8.2 SOURCE

Rajkumar Jirel (Team member)

3.8.3 CONSTRAINTS

N/A

3.8.4 STANDARDS

N/A

3.8.5 PRIORITY

Moderate

3.9 CHAT WITH FRIENDS

3.9.1 DESCRIPTION

Users can chat with each other while watching the video. They can talk about the video, whether they like it or not or if they want to watch different videos.

3.9.2 SOURCE

Subash Sunar (Team member)

3.9.3 CONSTRAINTS

N/A

3.9.4 STANDARDS

N/A

3.9.5 PRIORITY

Moderate

3.10 DISPLAY LOCATION

3.10.1 DESCRIPTION

The app displays the location of the user. It allows them to enable or disable it as per their wish.

3.10.2 SOURCE

Lahana Maharjan (Team member)

3.10.3 CONSTRAINTS

N/A

3.10.4 STANDARDS

N/A

3.10.5 PRIORITY

Low

3.11 VIDEO CHAT WITH FRIENDS

3.11.1 DESCRIPTION

We will try to allow users to video chat with friends. We will try to complete within this project time, if not we will complete in future.

3.11.2 SOURCE

Subash Shahi (Team member)

3.11.3 CONSTRAINTS

N/A

3.11.4 STANDARDS

N/A

3.11.5 PRIORITY

Low/Future

4 PACKAGING REQUIREMENTS

Once the application is completed, it will be available on google play store and the customers can download it.

4.1 ACCESS THROUGH PLAY STORE

4.1.1 DESCRIPTION

People can download the app through google play store by searching the name or through the link provided.

4.1.2 SOURCE

Manish Phuyal (Team member)

4.1.3 CONSTRAINTS

N/A

4.1.4 STANDARDS

N/A

4.1.5 PRIORITY

High

4.1 CONNECT TO OTHER PLATFORM

4.1.1 DESCRIPTION

When the users try to connect to other platforms such as YouTube, Netflix, to stream the videos, the app should connect immediately. The performance should be high when they switch the platform as well.

4.1.2 SOURCE

Subash Dahal (Team member)

4.1.3 CONSTRAINTS

N/A

4.1.4 STANDARDS

N/A

4.1.5 PRIORITY

High

4.1 CHAT ACCURACY

4.1.1 DESCRIPTION

The chatting between friends should have high accuracy. The message needs to be delivered immediately and received as soon as it was sent.

4.1.2 SOURCE

Rajkumar Jirel (Team member)

4.1.3 CONSTRAINTS

N/A

4.1.4 STANDARDS

N/A

4.1.5 PRIORITY

High

5 PERFORMANCE REQUIREMENTS

Performance is one of the key requirements any application must have to attract its users. Faster response is directly proportional to more numbers of users. So, the Swap will have a better performance application.

6 SAFETY REQUIREMENTS

Swap is a software based web application, so the major safety issue would be protection of the personal information used for the application.

6.1 PERSONAL INFORMATION HACKED

6.1.1 DESCRIPTION

If the user's personal identity is hacked or used by others without their knowledge, then the user will be able to hide or change the personal information like login id and password.

6.1.2 SOURCE

Subash Sunar (Team member)

6.1.3 CONSTRAINTS

N/A

6.1.4 STANDARDS

N/A

6.1.5 PRIORITY

High

6.2 FORGET LOGIN INFO/ PASSWORD

6.2.1 DESCRIPTION

If the user forgets their login information or password the user will be able to regain that information by simply using the retrieve login ID or password safety feature.

6.2.2 SOURCE

Subash Sunar (Team member)

6.2.3 CONSTRAINTS

N/A

6.2.4 STANDARDS

N/A

6.2.5 PRIORITY

High

7 MAINTENANCE AND SUPPORT REQUIREMENTS

There won't be any maintenance and support requirements but if the project is sponsored later on the team will provide the entire project on private GitHub and they can access it and they can maintain it themselves and make the changes they need.

8 OTHER REQUIREMENTS

We have not planned on adding any other new feature on the app right now. Currently it is just an app that users will be able to download on an android device through Google play.

9 FUTURE ITEMS

The app will be a collection of different features that will make the app experience worth it.

Some of the future item and feature that will be added in the app are mentioned below:

REQUIREMENT NAME

9.1 AUTHENTICATION AND AUTHORIZATION

9.1.1 DESCRIPTION

The app will authenticate and authorize the email and password while creating the profile.

Unauthorized email and password will not be able to access the application.

9.1.2 SOURCE

All team members

9.1.3 CONSTRAINTS

N/A

9.1.4 STANDARDS

N/A

9.1.5 PRIORITY

High

9.2 LOGIN

9.2.1 DESCRIPTION

Once the profile is created, the user can log in into the application and get access to it.

9.2.2 SOURCE

All team members

9.2.3 CONSTRAINTS

N/A

9.2.4 STANDARDS

N/A

9.2.5 PRIORITY

High

9.3 CREATE PROFILE

9.3.1 DESCRIPTION

The app will allow any user to create a profile who wants to use this application and get connected with the people.

9.3.2 SOURCE

All team members

9.3.3 CONSTRAINTS

N/A

9.3.4 STANDARDS

N/A

9.3.5 PRIORITY

High

9.4 FORGET PASSWORD

9.4.1 DESCRIPTION

If a user forgets his/her password, he/she can reset it using 'forget password'. A password reset link will be sent to the email and they can reset it using the provided link.

9.4.2 SOURCE

All team members

9.4.3 CONSTRAINTS

N/A

9.4.4 STANDARDS

N/A

9.4.5 PRIORITY

High

9.6 ADD FRIENDS

9.6.1 DESCRIPTION

Once their account is created, they can add friends. They can either search by their name or by email or through their contact list.

9.6.2 SOURCE

Subash Dahal (Team member)

9.6.3 CONSTRAINTS

N/A

9.6.4 STANDARDS

N/A

9.6.5 PRIORITY

High

9.7 VIDEO STREAM

9.7.1 DESCRIPTION

The app will allow users to stream the videos using the platform such as Youtube, Netflix and so on.

9.7.2 SOURCE

All team members

9.7.3 CONSTRAINTS

N/A

3.7.4 STANDARDS

N/A

9.7.5 PRIORITY

High

9.8 INVITE FRIENDS

9.8.1 DESCRIPTION

Once they start streaming video, they can invite other friends to join them and watch it together.

They can invite them through an invite link.

9.8.2 SOURCE

Rajkumar Jirel (Team member)

3.8.3 CONSTRAINTS

N/A

3.8.4 STANDARDS

N/A

9.8.5 PRIORITY

High

9.9 CHAT WITH FRIENDS

9.9.1 DESCRIPTION

Users can chat with each other while watching the video. They can talk about the video, whether they like it or not or if they want to watch different videos.

9.9.2 SOURCE

Subash Sunar (Team member)

9.9.3 CONSTRAINTS

N/A

9.9.4 STANDARDS

N/A

9.9.5 PRIORITY

High