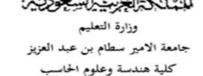
Kingdom of Saudi Arabia Ministry of Education Prince Sattam Bin Abdulaziz University College of Computer Engineering and sciences





**Project:** 

Twitch app

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**Year:** 2023

# 1: Feasibility Study & Project Proposal:

#### A - Introduction:

We will talk about Twitch application and go into all the details about the application.

#### **B** - Statement of Problem:

- 1- Monetization
- 2- Discovering new and unique content.
- 3- A platform specialized in streaming only.

## **C- Background Survey:**

Twitch is a live streaming platform that allows users to stream their video game gameplay, creative content, and other forms of entertainment to a global audience. It was launched in 2011.

# **D** - Proposed solution:

- 1-Monetization: subscriptions and donations and sponsorships.
- 2-Discovering for new and unique content: The ease of finding new content and the diversity of streamers in all fields
- 3- A platform specialized in streaming only: Twitch lets the whole world look at twitch as the best platform for streaming and attract the creators of content.

# E - work plan:

By improving the quality of streams and search and discovery features and offline viewing and mobile optimization, Twitch can provide a better user experience for its viewers and creators.

# 2: Project requirements:

## **Functional requirement:**

## 1. Create accounts and log in:

The user creates a personal account for him, and the system must allow users to log into their accounts by entering their email and password.

## 2. Live Streaming:

The application must allow users to livestream video content while minimizing delay and providing high-quality video and audio.

## 3. Chat System:

The application should provide a chat system that allows users to interact with each other and the streamer while the stream is ongoing.

#### 4. User Profiles:

The application must provide the ability for users to create profiles that include information about themselves and the content they provide on the platform.

#### 5. Channel Customization:

The application should provide users with the ability to customize their channels using branding, graphics, and other visual elements.

# 6. Subscription System:

The application should provide a subscription service to viewers, as it will allow them to subscribe to channels and receive additional content and multiple benefits in exchange for a specific fee. Moreover, the platform should provide a transparent and secure payment processing system. The platform must also provide a user-friendly interface for managing subscriptions and payments, and the ability to cancel and control subscriptions.

# 7. Mobile App:

The application should provide a mobile application that enables users to stream and watch content with ease and flexibility on their smartphones and tablets.

#### 8. Notifications:

The application must provide notifications when their favorite channels start going live.

# **Non-functional requirement:**

## 1. Security:

The application should have robust security measures in place to protect user data and prevent unauthorized access or hacking.

#### 2. Performance:

The application should perform high and fast for anything users want without delay or downtime.

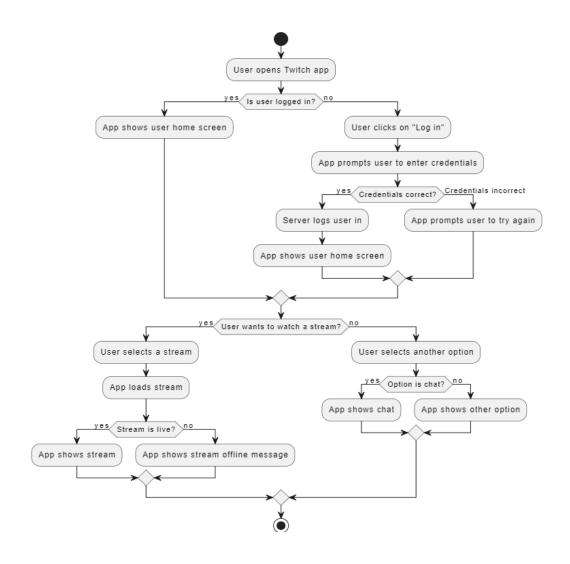
# 3. Compatibility:

The application must support all operating systems, for example Windows, iOS and Android to facilitate access to the platform from any device.

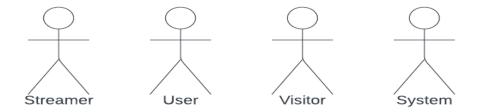
# 4. Reliability:

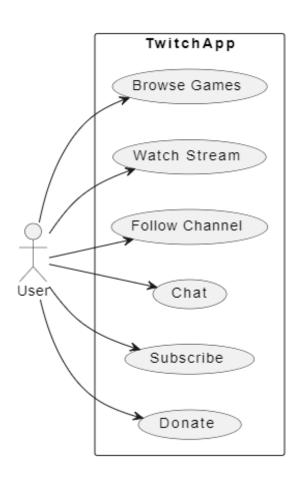
The application must carry out regular updates and maintenance to reduce problems and errors that may occur.

# 3: Activity diagram:



# 4: Project Use Case Modelling:





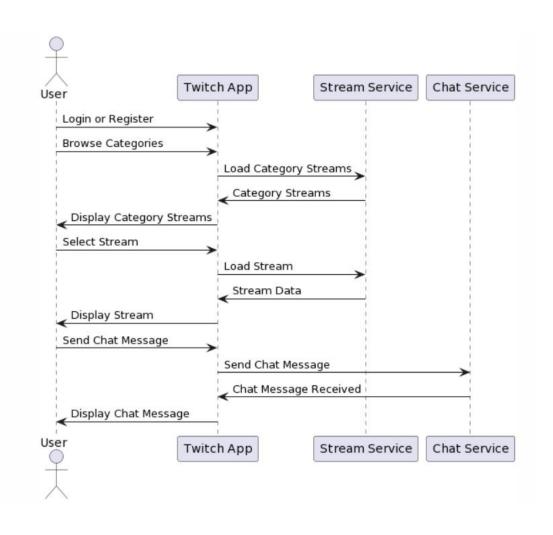
# **Table 1: Chat**

Actors	User, System, Streamer, Visitor
Description	A user may send messages or GIF to the streamer or the
	viewer
Data	Messages, GIF, etc
Stimulus	User command issued by User
Response	Confirmation that User data has been send

# **Table 2: Subscribe**

Actors	User, System, Streamer, Visitor
Description	Making a subscription for the streamer allows features
	for the subscriber such as writing in the chat or using
	some of posters
Data	Moaney, information user
Stimulus	User command issued by user
Response	Confirmation that User data has been send and updated

# **5: Creating Sequence Diagrams:**



# 6: Creating Class Diagram:

# TwitchApp - users: User - streamers: Streamer - viewers: Viewer - videos: Video - categories: Category + registerUser() + loginUser() + loginUser() + loginStreamer() + cleitesUserAccount() + registerStreamer() + loginStreamer() + loginStreamer() + loginStreamer() + stopinStreamer() + updateStreamerAccount() + startStreamerStream() + stopStreamerStream() + updateStreamerStreamTitle() + updateStreamerStreamDescription() + getStreamerStreamRey() + registerViewer() + loginViewer() + loginViewer() + loginViewer() + deleteViewreAccount() + followStreamer() + unfollowStreamer() + unfollowStreamer() + updateVideoTitle() + updateVideoTitle() + updateVideoTitle() + updateVideoTotle() + createCategory() + deleteCategory() + deleteCategory() + updateVateoTotle()

(	User
	<ul> <li>username: String</li> <li>email: String</li> <li>password: String</li> <li>dateOfBirth: date</li> <li>country: String</li> </ul>
	+ register() + login() + logout() + updateProfile() + deleteAccount()
	+ deleteAccount()
	Admin

- username: String	
- email: String	Viewer
- password: String - dateOfBirth: date - country: String - streamKey: String - streamTitle: String - streamDescription: String	- username: String - email: String - password: String - dateOfBirth: date - country: String
+ register() + login() + logout() + updateProfile() + deleteAccount() + startStream() + stopStream() + updateStreamTitle() + updateStramDescription() + getStreamKey()	+ register() + login() + logout() + updateProfile() + deleteAccount() + followStreamer() + unfollowSreamer() + viewStream()

Streamer

Admin
+ banUser()
+ unbanUser()

- title: String
<ul> <li>description: String</li> </ul>
- url: String
- duration: int
- thumbnail: String
+ upload()
+ delete()

+ updateTitle() + updateDescription()

Video

- name: String + create() + delete() + updateName()

Category