

Project title:  
TikTok application

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## Feasibility study & project proposal

### ➤ Introduction:

People now days are looking for apps for fun and communication away from serious life, and TikTok serves that. The number of TikTok users reached 1.7 billion in 2023, which indicates its global success.

### ➤ Problem:

The world is looking for an app that combines creativity and fun at the same time, see the latest news and trends, and communicate with others in one app!

### ➤ Background:

TikTok's global headquarters are located in Los Angeles and Singapore. The company was founded in 2014 and flourished in 2018 when its name changed from “Musical. ly” to “TikTok”. One of it’s important services is that it’s dedicated to short video clips created by user, and the duration of the video is usually 15 to 60 seconds.

### ➤ Proposed solutions:

TikTok’s mission is to inspire creativity, bring fun, the ability to communicate with everyone, and search for what is trending these days.  
Post what you love to inspire people and go viral to gain more followers.

### ➤ Work plan:

Project title	TikTok application
Project duration	TikTok application took 6 months to build
Project team	<ul style="list-style-type: none"> <li>-Project Manager</li> <li>-UI/UX Designer</li> <li>-Front-end Developer</li> <li>-Back-end Developer</li> <li>-Database Administrator</li> <li>-Quality Assurance Engineer</li> </ul>
Purpose of TikTok	Creating, sharing and discovering short videos
Feasibility study & project proposal	An introduction to the TikTok app, and what's problem will solve, and a way to make the requirements into executable application
Requirements specification	Functional requirements and non-functional requirements and UML diagrams
System design	<ul style="list-style-type: none"> <li>-System Architecture</li> <li>-User interface design</li> </ul>
Implementation & software requirements	<ul style="list-style-type: none"> <li>-Database</li> <li>-Code</li> <li>-I/O screens</li> </ul>

## Project requirements

### ➤ Functional requirements:

Requirements are features and components that must be implemented in a system, and functional requirements are what a system must do to enable users to do their tasks.

1. Login: user shall be able to login with their existing account by username and password.
2. Logout: user shall be able to logout.
3. Profile management: user shall be able to view their own profile and edit their account information.
4. Search: user shall be able to search for specific information (account, music and anything is trend).
5. Add friends: user shall be able to add their friends.
6. Add sound: user shall be able to choose any sound and add it to their video.
7. Post video: user shall be able to post video they already create it.
8. Comment: user shall be able to comment on any videos they enjoyed.

### ➤ Non-functional requirements:

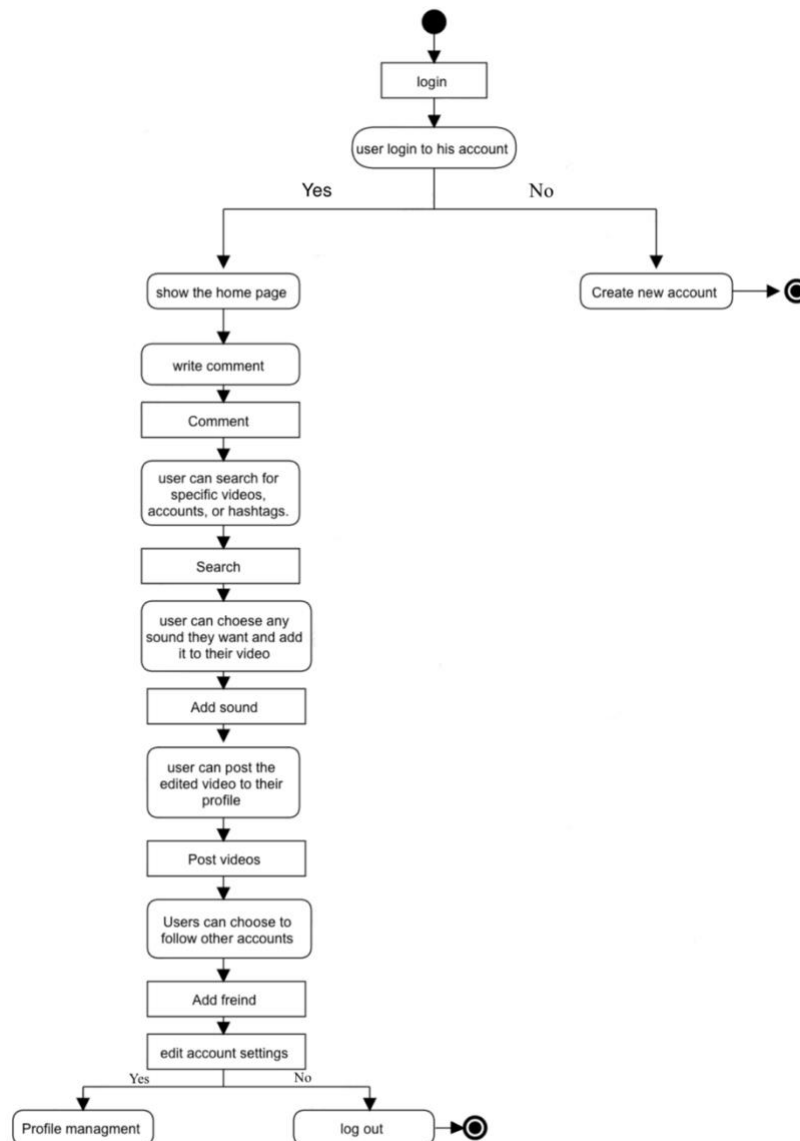
1. Performance: the system processes searchers requests for content and lists them directly on the home page. The system processes all the clips published by influential people, then includes them on the home page for those interested.
2. Availability: the system should be available for users 24 hours once they connect to the internet.
3. Security: TikTok app must prioritise the privacy and security of users data, and protect users accounts and personal information, and delete inappropriate content. These measures may include encryption and compliance with privacy regulations.

4. Usability: the system have a friendly graphic user interface, and the system should be simple for users to comprehend and they can find what they want easily without wasting time.

## UML diagram

### ➤ Activity diagram:

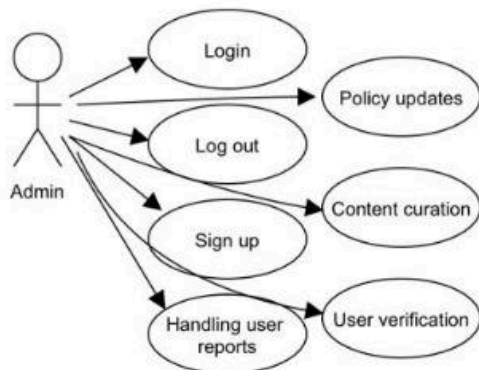
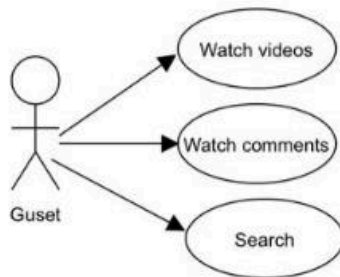
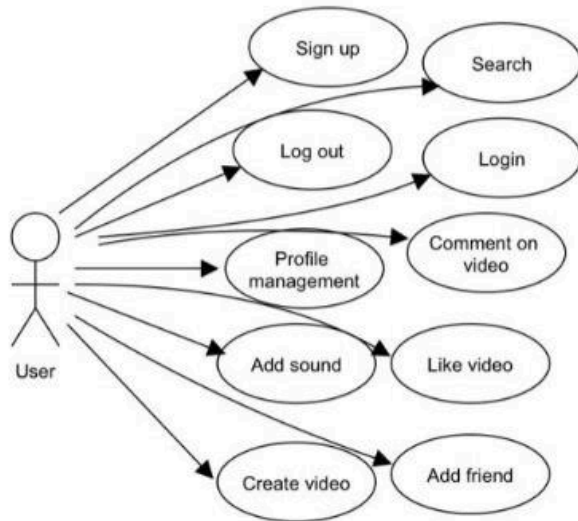
The activity diagram visually presents a series of actions or flow of control in a system. And below is an activity diagram for our app:



➤ Use case:

Use cases helped us to describe the functional requirements by illustrating actors and their roles, it classified and organised the system as a whole, and we have three actors as shown below:

Actors	Roles
Guest	-watch video -watch comments -search
User	-sign up -login -logout -profile management -add friend -add sound -create video -comment on video -like video
Admin	-sign up -Login -logout -handling user reports -content curation -user verification -policy updates



➤ Use case descriptions:

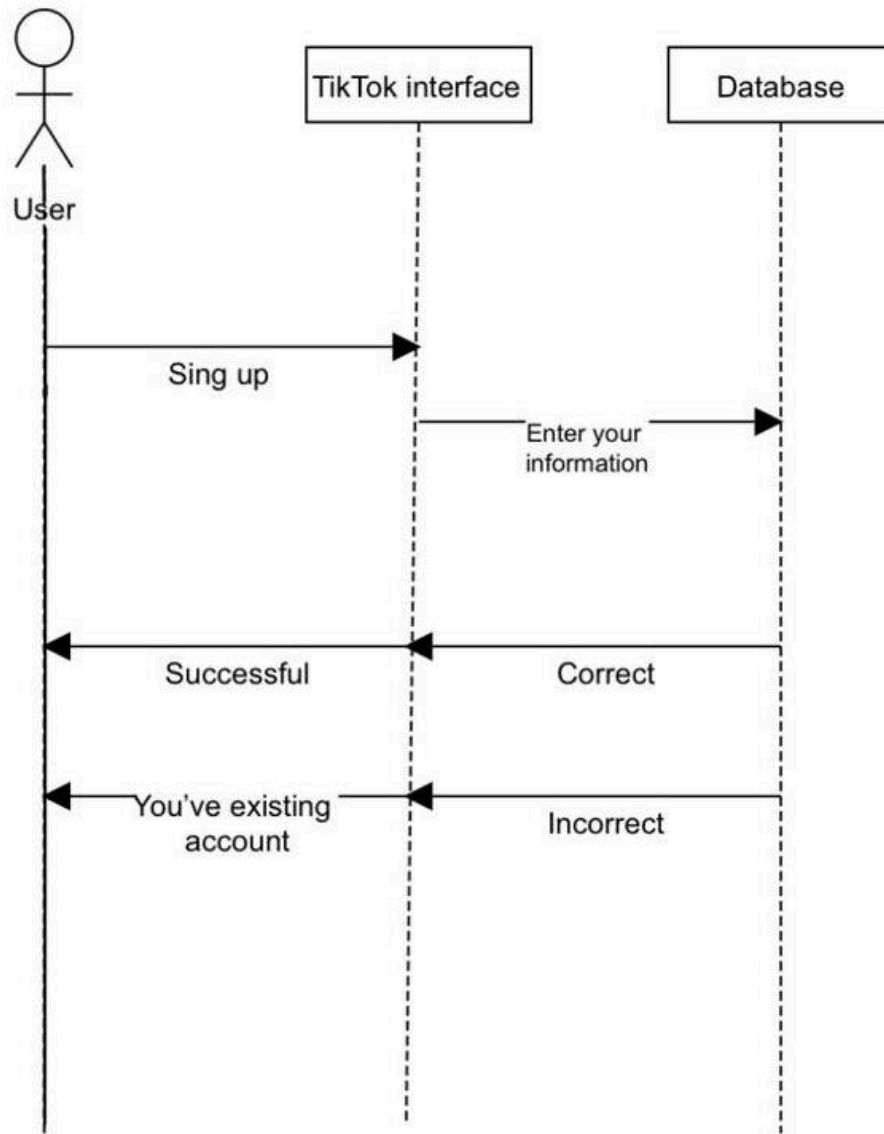
Use case name	Login
Actors	User, Admin
Description	The user can log Into the system by entering their email or phone number or social media account such as Facebook, Twitter, and password if they already have an existing account, otherwise the user will register as a new account.
Data	Email, phone number, any social media account, password.
Stimulus	To let the user Logs into his account and does any activity he wants.
Response	Confirmation of successful login.
Comments	The user must login only once unless he logout, then he should login again.



Use case name	Search
Actors	Guest, user
Description	The user can search for any sound, video he wants via a search bar.
Data	User input: keywords entered by the user.
Stimulus	To let the user search for a friend to add or search for a sound to make video of it.
Response	Search results appear immediately after pressing the search tab.
Comments	The system must have a search index to store the last thing the user searched for.

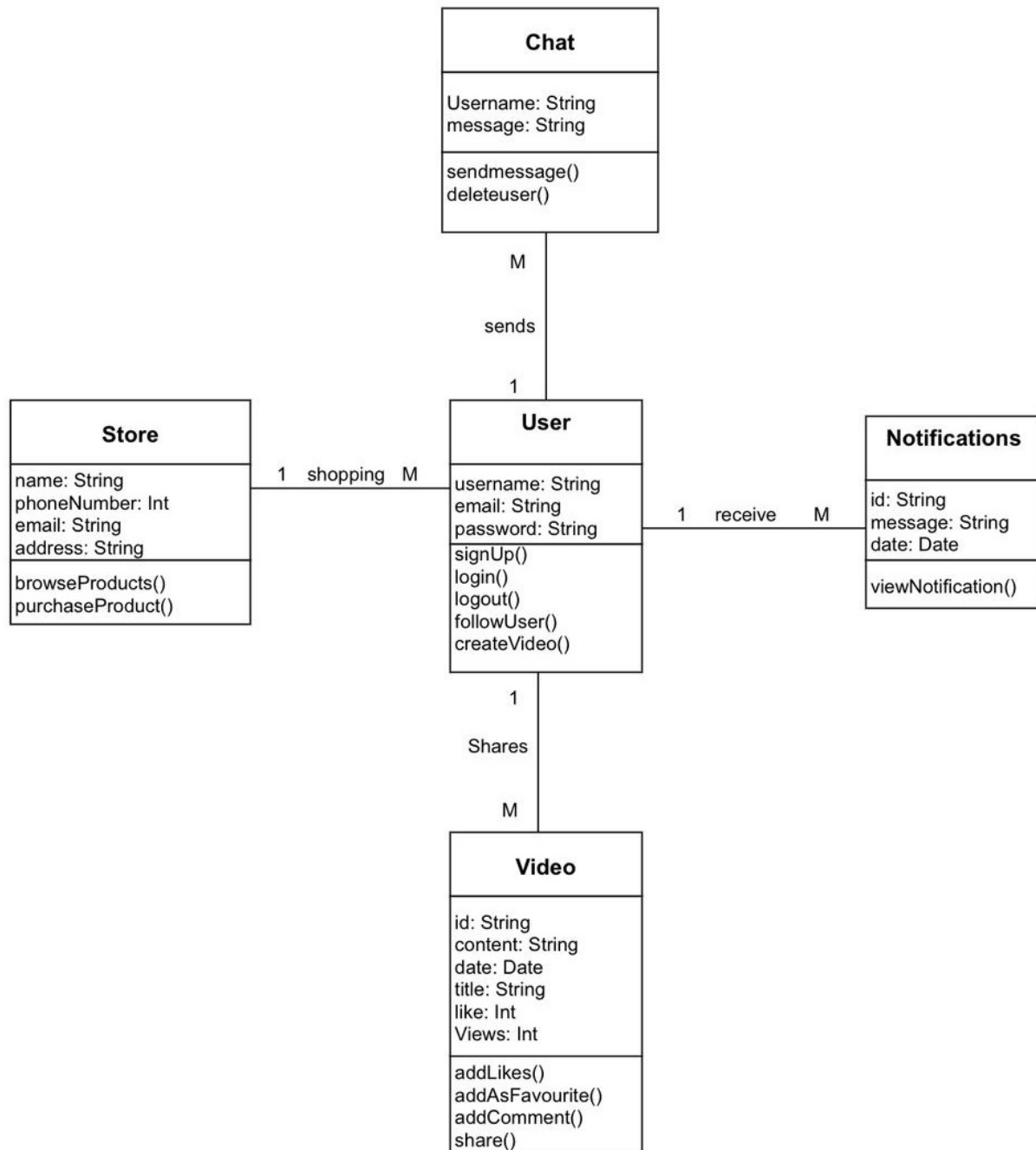
### ➤ Sequence diagram:

A sequence diagram shows process interaction arranged in a time sequence, and it's depicts the processes and objects involved and the sequence of messages exchanged as needed to implement the function, and here we have a sequence diagram for a login in TikTok:



### ➤ Class diagram:

A class diagram will represent the classes, attributes and methods that appear in a system, as well as the relations between classes, and we've here five classes as shown below:



## Conclusion

TikTok has given people a platform to express themselves, connect with others, and enjoy countless hours of entertainment. It has influenced marketing strategies and influenced music and popular culture. As it continues to grow, TikTok is set to remain a major player in the digital world. And this is the reason why we chose this application as our project idea.

at the end... the Tik Tok application is a large and huge application that requires a lot of requirements and complex work, but in this report we only showed you the big idea.