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Department of Computer Science

**Software Documentation and Technical Writing**

**”Application : X ”**

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# chapter1

## **1 Introduction**

## 1.1 Abstract

In Summary, the Twitter application, now known as "X," is a fast and user-friendly social media platform that meets diverse user needs. It features a simple design and real-time updates, alongside tools like hashtags and interaction with public figures. Twitter is an ideal choice for those seeking instant information and opinions. Additionally, features such as direct messaging, media sharing, and analytics tools significantly enhance the user experience.

Twitter encourages community engagement and fosters a sense of belonging through public conversations. Its commitment to innovation and user satisfaction positions it strongly in the social media market, making it a valuable tool for anyone looking for effective communication and real-time news updates.

## 1.2 Introduction the Application (X)

Twitter, officially known as X since July 2023, is a social networking service. It is one of the world's largest social media websites and one of the most-visited platforms. Users can share short text messages, images, and videos in brief posts commonly referred to as "tweets" or "retweets" (officially "post" or "repost") and like content from other users. The platform also includes features such as direct messaging, video and audio calling, bookmarks, lists, communities, a chatbot (Grok), job search, and Spaces, a social audio feature. Users can vote on context added by approved users using the Community Notes feature. Twitter was created in March

2006 by Jack Dorsey, Noah Glass, Biz Stone, and Evan Williams, and launched in July of that year. The platform grew quickly; by 2012, more than 100 million users were producing 340 million tweets per day. Twitter, Inc. was based in San Francisco, California, and had over 25 offices worldwide. A signature characteristic of the service was that posts were required to be brief, initially limited to 140 characters, which was changed to 280 characters in 2017. This limitation was removed for subscribed accounts in 2023. The majority of tweets are produced by a minority of users. In 2020, it was estimated that approximately 48 million accounts (15percentage) were run by internet bots rather than humans. The service is owned

by the American company X Corp., established to succeed the prior owner Twitter, Inc., following the October 2022 acquisition of Twitter by Elon Musk for 44dollars billion. Musk stated that his goal with the acquisition was to promote free speech on the platform. Since the acquisition, the platform has faced criticism for enabling the increased spread of disinformation and hate speech. Linda Yaccarino succeeded Musk as CEO on June 5, 2023, with Musk remaining as the chairman and chief technology officer. In July 2023, Musk announced that Twitter would be rebranded

to "X" and that the bird logo would be retired, a process completed by May 2024. In December 2023, Fidelity estimated the company's value to be down 71.5percentage from its purchase price. Since Musk's takeover, data from app-tracking firms has shown that global usage of Twitter has declined by approximately 15percentage, compared to a decline of 5–10percentage in some other social media sites. The platform has disputed any claims of a usage drop, with Musk claiming that membership had grown to 600 million users as of a May 2024 tweet.

### 1.3 Similar Application(x):

There are many apps similar to app X, such as Threads and Facebook

Advantages	Disadvantages
Focus on Texts	Limited Features
Seamless Integration	Lack of Analytics
Media Sharing Capabilities	Privacy Issues
Rich Content	Social Pressure

### 1.4 our model Application (x)

1. Allows users to follow news and current events instantly, making it an ideal platform for quick communication
2. Allows the use of hashtags to categorize content, making it easier for users to discover trending topics and discussions.
3. Enables users to interact directly with celebrities and politicians, enhancing opportunities for direct communication.
4. Provides tools to analyze engagement with content, helping users understand the impact of their tweets.

### 1.5 Conclusion

In summary, Twitter is a fast and user-friendly social media platform that meets diverse user needs. With its simple design, real-time updates, and features such as hashtags and interaction with public figures, Twitter is an ideal choice for those seeking instant information and opinions. Moreover, features like direct messaging, media sharing, and analytics tools significantly enhance the user experience. Additionally, Twitter encourages community engagement and fosters a sense of belonging through public conversations. Twitter's commitment to innovation and user satisfaction places it in a strong position in the social media market, making it a valuable tool for anyone looking for effective communication and real-time news updates.

chapter2

## 2 Analysis



## 2.1 Functional Requirement for the (x) App

Functional requirements are a fundamental part of the development process for any application, as they define the functions and features that the application must provide to meet user needs. In the case of the Twitter application, it serves as a social platform that allows users to communicate and share ideas and information in the form of short tweets.

1. Login and Registration - Create a New Account: Allows users to create a new account using their email or phone number. - Login: Allows users to log into their accounts using their username and password.
2. Profile Management - Update Profile: Users can change their name, profile picture, and bio. - Edit Privacy Settings: Options to make the account private or public.
3. Tweets - Create Tweet: Allows users to write and tweet messages (up to a certain character limit). - Add Media: Users can add images, videos, and GIFs to their tweets. - Edit and Delete Tweets: Users can edit or delete a tweet after posting it.
4. Interacting with Tweets - Like: Users can like tweets. - Retweet: Users can retweet content from other users. - Comments: Users can add comments on tweets.
5. Following and Unfollowing - Follow Users: Users can follow other users to see their tweets on the main feed. - Unfollow: Users can unfollow other users.
6. Search - Search for Users: Users can search for other user accounts. - Search for Tweets: Users can search for tweets using keywords or hashtags.
7. Notifications - Alerts: Notifications about new interactions (likes, comments, follows). - Message Alerts: Notifications when receiving direct messages.
8. Direct Messages - Send and Receive Messages: Users can send and receive private messages between users.
9. User Interface - Responsive Design: An easy-to-use interface compatible with various devices. - Customize Interface: Options to change the app's appearance (e.g., dark mode).
10. Language Support - Multi-language Support: Support for multiple languages to increase accessibility for users in different countries.

## 2.2 Non-Functional Requirement for the (x) App

Non-functional requirements are a vital part of the application development process, as they define the characteristics and standards that the system must adhere to in order to deliver an exceptional user experience. Unlike functional requirements, which focus on features and functionalities, non-functional requirements pertain to aspects such as performance, security, usability, and compatibility.

1. The system shall be easy to use and understandable for users regardless of their technological experience.
2. The system shall protect the user's data
3. The system shall be Quick response.
4. The system shall be available 24 hours.
5. The system shall be compatible with various operating systems.
6. The system shall allow the customisation options such as language and others.

## 2.3 Conclusion

In conclusion, functional and non-functional requirements form the foundation for the development of the (X) application. Functional requirements ensure the provision of interactive features such as tweets, comments, and notifications, enhancing user experience and encouraging social interaction. On the other hand, non-functional requirements focus on vital aspects such as performance, security, and usability, ensuring that the application operates efficiently and provides a safe environment for users.

Together, these requirements contribute to improving the application's quality and user satisfaction, thereby enhancing (x) success as a global social network. By adhering to these standards, developers can ensure that (x) remains an innovative and appealing platform for users in an ever-changing world.

chapter3

## **3 DESIGN**

### 3.1 Introduction

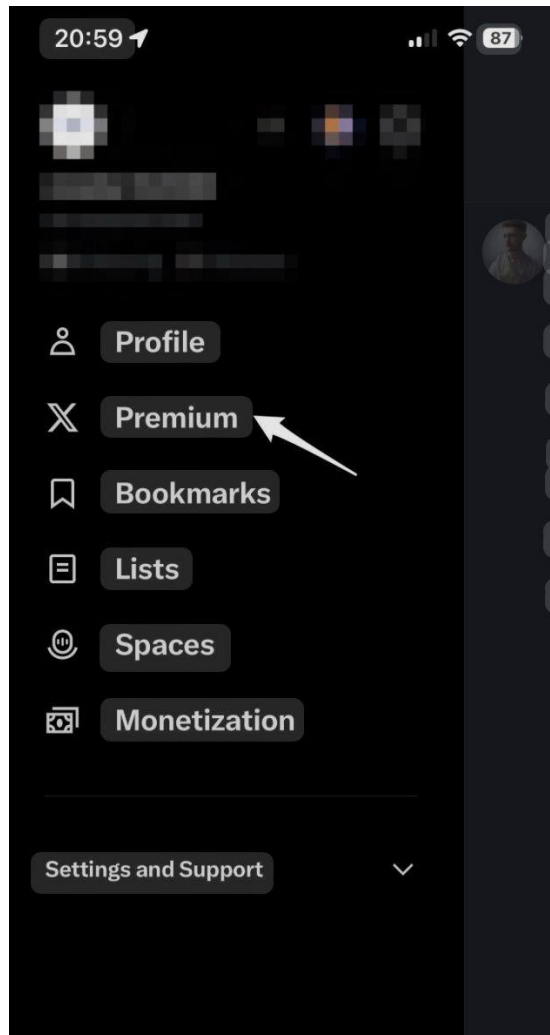
We will go over how to sketch activity diagrams and user interfaces in this stage. These are two crucial components of application and software design. Drawings will make it easier to comprehend requirements and enhance user experience by allowing us to imagine how users will interact with the system.

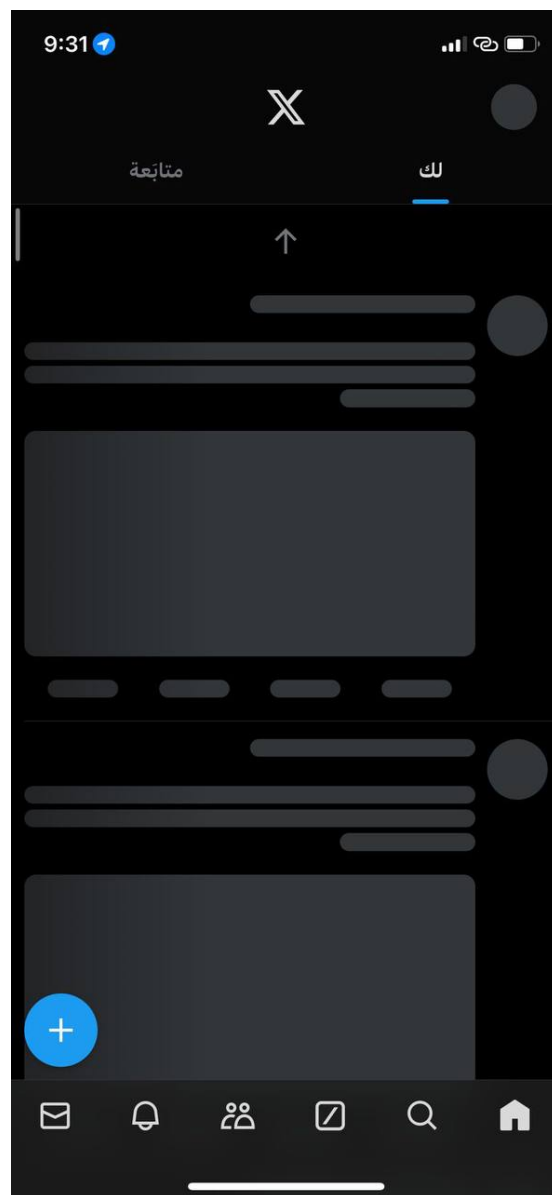
### 3.2 User Interfaces

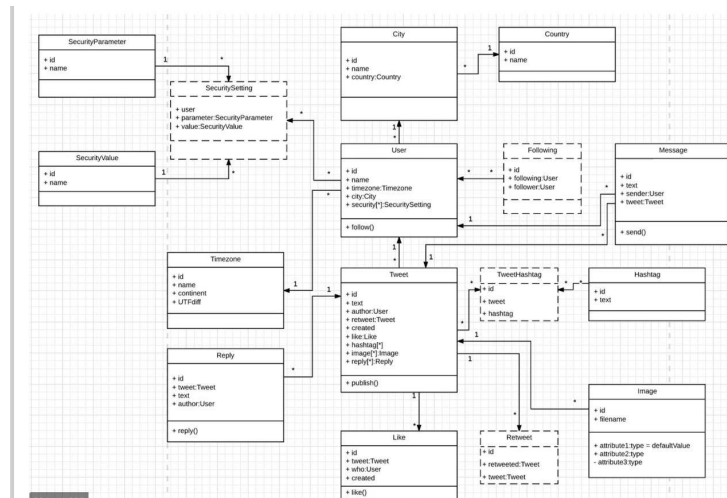
Based on the images provided, the application interface for "X" appears to have the following key features and functionality:

1. Main Menu: The main menu on the left side includes options such as Home, Explore, Notifications, Messages, Lists, Bookmarks, Communities, and Premium.
2. Profile: The user can access and manage their profile by selecting the "Profile" option from the main menu.
3. Premium: The "Premium" option in the main menu likely provides access to additional features or content available through a paid subscription.
4. Posting: The "+" button at the bottom of the screen suggests the ability to create and share new posts or content within the application.
5. Other Navigation: The bottom navigation bar includes icons for common app functions like email, notifications, search, and a home screen.

The overall interface appears to be a minimalist, text-based design with a focus on navigation and content sharing. The specific functionality and purpose of this "X" application cannot be determined from the provided images alone, but the menu structure and layout suggest it is likely a social media or messaging platform.







### 3.3 class diagrams

Description of the Diagram: SecurityParameter. Contains an identifier ('id') and a name ('name') for security parameters SecuritySetting. Linked to SecurityParameter and contains an identifier ('id') and a name ('name').

- City: Contains an identifier ('id') and the name of the city ('name'). Country : Contains an identifier ('id') and the name of the country ('country') and is linked to City.

- User : Includes an identifier ('id') and the user's name ('name'), with relationships to Following (who they follow) and Message (messages).

- Following. Represents the relationship between users, containing the user identifier ('User') and the identifiers of their followers.

- Message : Includes the message identifier ('id'), the sender of the message ('sender'), and the content ('content').

- TimeZonm Contains an identifier ('id'), the name of the time zone ('name'), and the UTC offset ('UTC offset')

### 3.4 database

Applications (X) typically utilizes advanced databases for storing and managing data. Common options include:

1. MySQL: - Used to store structured data such as accounts, tweets, and replies.
2. Redis: - Utilized as an in-memory database to store temporary data and information requiring quick access, such as sessions and temporary data.
3. Cassandra: - Employed for storing large volumes of unstructured data, suitable for Twitter's needs in handling massive amounts of data and fast writes.
4. Elasticsearch: - Used to enhance the search functionality for tweets and content, making it easier for users to find information quickly.

### 3.5 Server

The application (X) relies on several server options,

1. Node.js: Allows for building scalable network applications using JavaScript, making it suitable for real-time features like notifications and messaging.
2. Django (Python): A high-level framework that encourages rapid development and clean, pragmatic design, ideal for handling back-end logic.
3. Ruby on Rails: A full-stack framework that emphasizes convention over configuration, making it easy to develop and maintain applications.

### 3.6 programming Languages

The Application (x) may use several programming languages, including:

1. JavaScript: - Usage: Primarily for front-end development. Libraries and frameworks like React or Vue.js can be used to create dynamic, interactive user interfaces. - Benefits: Enables real-time updates and seamless user interactions.
2. Python: - Usage: Often used for back-end services, data analysis, and machine learning functionalities. - Benefits: Easy to read and write, making it suitable for rapid development and prototyping.
3. Ruby: - Usage: Commonly used with the Ruby on Rails framework for building web applications. - Benefits: Focuses on simplicity and productivity, allowing developers to create features quickly.
4. Java: - Usage: Used for building scalable and robust server-side applications. - Benefits: Strong performance, portability across platforms, and a rich ecosystem of libraries and frameworks.

### 3.7 Conclusion

We went over the significance of creating activity diagrams and user interfaces in application design at the conclusion of this step. We were able to see how users engage with the system and how its operations move by using drawings.



### 3.8 References

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