**FUNCTIONAL REQUIREMENTS**

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to provide a detailed description of the functional requirements for the Twitter Clone system.

**1.2 Scope**

The Twitter Clone system is designed to replicate the core functionalities of the Twitter platform, allowing users to post tweets, follow other users, and engage in social interactions.

**1.3 Definitions, Acronyms, and Abbreviations**

- User: Any individual with a registered account on the Twitter Clone platform.

- Tweet: A short message posted by a user, limited to 280 characters.

- Follow: The action of subscribing to another user's tweets.

- Timeline: A chronological list of tweets posted by users that a particular user follows.

**2. System Overview**

**2.1 System Description**

The Twitter Clone system will provide users with the ability to create accounts, post tweets, follow other users, and engage in social interactions. The system will have a web-based interface accessible via standard web browsers.

**2.2 System Features**

1. User Registration and Authentication:

- Users can create an account with a unique username, email, and password.

- Authentication ensures secure access to user accounts.

2. User Profile Management:

- Users can create and edit their profiles, including profile pictures and bios.

3. Tweeting Functionality:

- Users can compose and post tweets, limited to 280 characters.

- Tweets may include text, images, and links.

4. Following and Followers:

- Users can follow and unfollow other users.

- Users can see a list of followers and users they are following.

5. Timeline and Feeds:

- Users have a personal timeline displaying tweets from users they follow.

- A global feed shows tweets from all users on the platform.

6. Interactions:

- Users can 'like' tweets.

- Users can reply to tweets.

- Users can retweet tweets to share with their followers.

7. Notifications:

- Users receive notifications for new followers, likes, replies, and retweets.

8. Search and Discovery:

- Users can search for other users, tweets, and trending topics.

- Recommendations for users to follow are provided based on interests.

9. Direct Messaging:

- Users can send direct messages to each other.

- Direct messages support text, images, and links.

10. Hashtags and Trends:

- Users can use hashtags in tweets.

- The system displays trending hashtags based on user activity.

11. Reporting and Blocking:

- Users can report inappropriate content or users.

- Users can block other users, restricting interactions.

**3. Specific Requirements**

3.1 User Interfaces

The system shall provide an intuitive and responsive web-based user interface compatible with major web browsers.

3.2 Performance Requirements

The system shall support at least 10,000 simultaneous users without degradation of performance.

3.3 Security Requirements

User authentication shall be securely managed, and data transmission shall be encrypted.