# Software Requirements Specification
for
## Twitter Clone

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# Chapter 1

# Introduction

## 1.1  Purpose

Twitter is an online social networking service where users post and read messages called "tweets".
Registered users can post and read tweets, but those who are not registered can only read them.
Users can access Twitter through their website interface or as mobile app.
Twitter has grown exponentially fast in the past years and its purpose is to spread information fast. This Twitter-clone exists for educational purposes - So that i can learn about the fundamentals of Systems Design and to challenge my programmatic capabilities.

## 1.2  Intended Audience

This document does not have a particular audience in mind. Ideally this document should address fellow software engineers that have experience in reading/writing Software Requirements Specifications (SRS). This product should interest Web-developers that operate on the entire stack.

## 1.3  Product Scope

The purpose of this clone is to provide the essential functionalities of twitter and above all to provide a similar user experience using this software.

## 1.4  Product Features

# Chapter 2

# Overall Description

## 2.1 User Classes and Characteristics

Different Users of the system should be able to have different permissions to access all functionality of the app, including:

- Deleting Users and Tweets
- Verifying Users

Standard users will have access to all functionality of the app except those listed above.

## 2.2 Operating Environment

Operating Environment for the Twitter-clone is as listed below.

- distributed Database
- operating System:Windows.
- database: Mysql database
- platform: Laravel/PHP/Vue.js

## 2.3 Constraints

Since this clone will only have a web-interface appropriate Web-Browsers like Firefox, Chrome, Edge should be used in their latest stable version.

# Chapter 3

# System Features and Requirements

## 3.1 Functional Requirements

1. Users should be able to post new tweets

2. A user should be able to follow other users

3. Users should be able to mark tweets as favorites

4. The service should be able to create and display a user's timeline consistring of top tweets from all the people the user follows

5. Tweets can contain photos and videos

## 3.2 Non Functional Requirements

### 3.2.1 Performance Requirements

1. The service needs to be highly available

2. Acceptable latency to generate the timeline is 200ms

### 3.2.2 Database Requirements

The underlying database needs to be normalized to reduce the risk of redundancy to cause anomalies. Modification anomalies arise when data is added to, changed or deleted from a database table.
Normalization is the process of breaking down a table into smaller tables, so that each table deals with a single team.
The database should at least reach the third normal form (3NF) to be sufficient for most practical purposes.

### 3.2.3 Safety Requirements

- Backups of the databases should be done daily and be kept for a week.

### 3.2.4 Software Quality Attributes

- Availability: The Tweets should be available to be seen at an instance when they have been created

- Correctness: The application should not allow anyone to manage tweets of other users other than ones of themselves

- Maintainability: The application should use continuous integration so that features and bug fixes can be deployed quickly without downtime

- Usability: The interface should be easy to learn without a tutorial and allow users to accomplish their goals without errors.

## 3.3 Extended Requirements

1. Searching for tweets

2. Replying to a tweet

3. Trending Topics

4. Tagging other users

5. Tweet Notification

6. Follow suggestions

7. Twitter spaces

## 3.4 External Interface Requirements

### 3.4.1 User Interfaces

- front-end software: Tailwindcss, Vue.js

- back-end software: MySQL, PHP

### 3.4.2 Hardware Interfaces

- Windows

- A browser which supports HTML and JavaScript

# Appendices

# Appendix A

# Appendix: Issues List

### A.0.1  External Interface Issues