

High Level Design (HLD)

Website Clone (Twitter)

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Document Version Control

Date Issued	Version	Description	Author
29/01/2023	1.0	Study of Twitter official website	Pushpal Hedau
1/02/2023	1.1	Chose tools and Languages	Pushpal Hedau
5/02/2023	1.2	Created wireframes and mockups	Pushpal Hedau
7/02/2023	1.3	Setting up environment using localhost	Pushpal Hedau
9/02/2023	1.4	Started implementation of project	Pushpal Hedau
23/02/2023	1.5	Checked errors and fixed	Pushpal Hedau
25/02/2023	2.0	Conclusion with updated results	Pushpal Hedau

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Abstract

A website called a "Twitter clone" is made to mimic the key functions of the well-known social networking site Twitter. To give users another venue for exchanging quick messages, photographs, and links while connecting with others in real-time, a Twitter clone was developed. Users can often create a profile, follow other users, make tweets, retweet them, like them, and reply to them using the application.

Modern online technologies like HTML, CSS, JavaScript are used in the creation of Twitter clones. To give user same experience as official Twitter website.

Since the main domain was front-end development so no backend language is used to obtain the result and project is totally made using front-end development languages.

Introduction

1. Why this High-Level Design Document?

The goal of this High-Level Design (HLD) Document is to provide the current project description with the additional depth needed to describe an appropriate model for coding. This paper can be used as a reference guide for how the modules work at a high level and is also meant to assist find conflicts before coding.

The HLD will:

- Describe each design element in detail and present it.
- Explain the user interface being used.
- Explain the hardware and software interfaces.
- Specify the performance requirements.
- Incorporate design elements and the project's architecture.

2. Scope

The HLD documentation outlines the system's architecture, including the technology architecture, application architecture (layers), application flow, and database architecture. The HLD employs words that should be clear to the system administrators that range from non-technical to mildly technical.

3. Definition

The webpages that are cloned in the project are:

- Twitter Explore page
- Twitter Settings page
- Twitter Home page
- Twitter Messages page
- And many more...

General Description

1. Product Perspective

For ambitious web developers, building a Twitter clone may be a useful teaching experience. It offers a chance to practise front-end programming and ui/ux designing abilities related to web application development. A profession in web development requires knowledge of software architecture, API development, and user interface design, all of which learners may master. Also, developing a Twitter clone might be an opportunity to test out new features and design concepts. Learners may obtain real-world experience and construct a portfolio of work to present prospective employers by creating a Twitter clone. In general, a Twitter clone is a great learning resource for anyone who want to work in web development.

2. Problem Statement

Create clones of famous websites such as Netflix, YouTube, Twitter, Amazon, Flipkart, Swiggy, Zomato, IRCTC, etc. The website you are making a clone of should be reputed and not a dull one. It should contain challenging design to get your project approved.

3. Problem Solution

Initially Twitter has a simple, contemporary design that is not too difficult to imitate. As a result, rather than having to struggle with challenging design features, learners may concentrate on honing their front-end development abilities. Second, Twitter offers an easy-to-use design that enables seamless interaction between users and the service. Students may obtain practical experience in developing user-friendly interfaces by imitating this style. In conclusion, creating a replica of the Twitter website may be a great method for learners to improve their front-end programming abilities while working on a practical project with wide appeal.

4. Further Improvement

Adding new features: While the essential characteristics of Twitter may be imitated, additional features can be added to increase user appeal. The clone

may, for instance, incorporate a chatbot or a social media analytics tool that offers information on user involvement.

Though Twitter has a simple, contemporary design, there is always opportunity for advancement. To provide a distinctive appearance and feel, the clone might try with fresh colour palettes, typeface, or layout ideas.

User experience improvement: By being more intuitive and user-friendly, the clone might enhance the user experience. For instance, the clone may include an onboarding procedure that walks new users through the site or more in-depth user profiles that let users interact with one other.

5. Data Required

As it is a front-end clone of Twitter, the ui/ux design was taken into account and attempted to be exact. Every webpage that is cloned as part of the project is carefully designed, and the code is done to be simple to comprehend and update as needed.

6. Tools Used

- For front-end programming languages utilised are Javascript, HTML, and CSS.
- Visual Studio Code is used as IDE.
- Xampp Server is used as a localhost.

7. Constraints

The webpage for the Twitter clone should be simple to use. The addition of new features will improve the user experience.

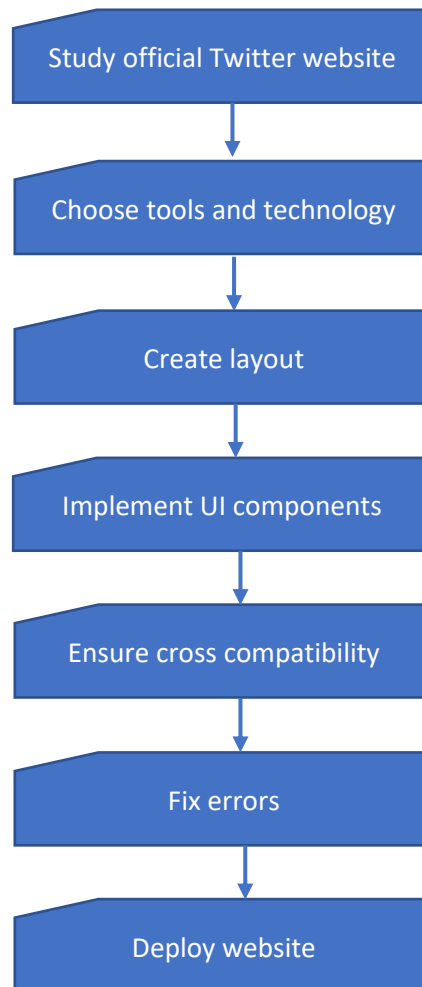
8. Assumptions

To construct a platform with similar functionality and features to the original Twitter platform is the major goal of Twitter cloning. Developers may practise web application development and user interface design by copying Twitter. Cloning Twitter also provides a chance to test out novel features and various design paradigms. Ultimately, the major goal of replicating Twitter is to offer a practical project that enables programmers to polish their abilities and build a platform that could eventually succeed as a social media network on its own.

Design Details

1. Process Workflow

Below is the basic architecture for frontend Twitter website cloning:



2. Error Handling

As it is a large website with a complicated design that was created by experts, I initially ran into difficulties when copying. But over time, I was able to work out issues and complete the job with the greatest results I was able to obtain.

Performance

1. Reusability

My project also includes reusability, which will allow me to add new features, boost compactibility, and improve user experience. My entire project is employing Twitter designs and functionality to practise and grow front-end skills.

2. Application compatibility

Since I have used front-end languages like HTML, CSS and Javascript and it is compatible with any browser, we follow Application compatibility.

3. Resource utilization

The front-end of Twitter is replicated while taking resource use into account. The integration of several resources, including as HTML, CSS, JavaScript, pictures, and other media files, is necessary for front-end development. To make sure that the website operates well and offers a smooth user experience, it is crucial to optimise the usage of these resources.

4. Deployment

The code is deployed in GitHub. The whole project is not hosted online to avoid copyright issue. But the output can be seen and examined offline in personal computers and also in the recorded video provided.

Conclusion

In conclusion, copying the front-end of Twitter is a fantastic project for web developers to improve their abilities and obtain real-world experience in developing online applications. Developers may learn how to incorporate a number of front-end capabilities, including as user authentication, real-time updates, and dynamic content presentation, by cloning Twitter. They may also experiment with novel features and design concepts, giving the platform a chance to stand apart from the original. Developers must take into account user experience, resource use, error handling, and other aspects in order to properly copy Twitter's front end. Ultimately, a well-designed and optimized Twitter clone can provide a unique platform for niche markets and potentially generate revenue through advertising or subscriptions.

References

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