Software Requirements Specifications

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Software requirements specifications (SRS) represents a description for how a software system is intended to behave. This document serves as a foundation for product development, by providing substantial information, such as the product end goal, detailing the requirements and summarizing the implementation process.

The SRS document should be consistent with all the requirements set for a project, to help the project management and engineering team have a clear understanding of what challenges to be aware of before starting work on the software system. Such a document should be a living and briefing file that gets updated by the PM, while having a continuous communication with the client. This approach guarantees that the requirements do not become obsolete, and therefore the team knows how to plan and strategize ahead of time, should there be items that need more in depth research.

1. Introduction

This document details the development plan for the “Cryma” application.

The plan will include a summary of:

- System functionalities;
- Project scope from a development perspective;
- Tech stack used for the application development;
- Overall project description.

Traders manifest interest for investing in cryptocurrencies. That said, our purpose is to provide them with a consistent and informative output such as statistics and graphs with the progress of the exchange rates over time. These visual

representations can help cryptocurrency investors get a clearer idea over investing decisions to be taken.

2. Customers

The application customers are cryptocurrency enthusiasts and newcomers alike (e.g. traders, business owners, students, etc).

3. Functional requirements

- Tracking and checking a multitude of cryptocurrencies from a visual dialog;
- Analyzing the progress of each currency throughout the prism of a time chart;
- Multiple ways of visualization: charts, statistics;
- Favorite coins functionality: gives the user the chance to save their favorite coins, so that the next time they access the app, they have a special place designated for accessing it right away;
- Users can select the currency in which they will be shown the results: 3 different currency options (dollar, euro, yen).

4. Platform

The application will be developed using React 17 for the frontend side of the application and a Node server using the Express framework for the backend side. On the frontend, there will be used different coding styles, such as Directory Layout, CSS in js and Function as children architectures. The backend will act as a buffer/intermediary for information received from an outside API. The backend will be structured in a multitiered architecture, having controller, service and repository layers.

5. Development Responsibilities

From the beginning, the developers of “Cryma” have the duty of sketching out and thinking through the application architecture. They will be responsible for writing application related code and managing different release versions. Another task that falls under their responsibility is creating, updating, maintaining and migrating the database (if needed).

6. User Class and Characteristics

Users will have to be logged in to access all the functionalities the app can offer. On the other side, users who do not possess an account, will only have access to a limited version of the app.

7. User Interfaces

- JSX;
- Styled Components;
- JavaScript ES6+;

- React-query;
- Chart.js.

8. Hardware Interfaces

- Operating systems: Windows and Mac;
- Non-Functional Requirements
    - **Concurrency/scaling**
        - It is a platform-type application which in the future will require the use of microservices in order to scale, but at the moment a more simple application should suffice;
    - **Device requirements**
        - The MVP does not require to be used on mobile devices. However, there is interest in developing a mobile version, in a later stage of the application development;
    - **Security requirements**
        - The main goal is to have a fast sign up in the alpha version of the app. For an MVP stage, the authentication will be through email and password only;
        - The app will be secured via https, meaning the data communication will be encrypted;
        - There are no user roles, everyone has access to the same data.
    - **Browser requirements**
        - The application is not supported by Internet Explorer because Internet Explorer will be discontinued at the end of August, 2021.[1]
    - **Performance requirements**
        - The user should have access to the application almost instantly, loading the app page within 3 seconds;
        - On user interaction with different states, the application interface should render information on the page within 2-3 seconds.

9. Software Quality Attributes

- Availability: we tend to deliver to the user a 100% available app, since the application data must provide almost instant, up-to-date information to the user;
- Correctness: the user must be provided with accurate data about the cryptocurrency status;
- Maintainability: the app will function under a CI/CD manner. The development and integration of the app will be performed concurrently, so that the new implementations can be directly tested on production by other

[1] T. Warren, retrieved from: https://www.theverge.com/2020/8/17/21372487/microsoft-internet-explorer-11-support-end-365-legacy-edge, 2020, accessed on November 16th, 2020

users, bugs signaled, fixed and deployed, without creating too much friction between the time of the bug being reported and the time it has been fixed. The goal is to reduce the downtime and provide the final user with a ready-to-use, well-functioning, stable interface;

- Usability: the app should be intuitive for the user and not create confusion.

10. Biography

1. G. Bochmann, retrieved from: https://www.site.uottawa.ca/~bochmann/SEG3101/Notes/SEG3101-ch3-2%20-%20Requirements%20documentation%20standards%20-%20IEEE830.pdf , 2010, accessed on November 16th, 2020
2. T. Warren, retrieved from: https://www.theverge.com/2020/8/17/21372487/microsoft-internet-explorer-11-support-end-365-legacy-edge, 2020, accessed on November 16th, 2020