

Software Requirements Specification (SRS) for Password Generator Web App

1. Introduction

1.1 Purpose The purpose of this document is to outline the requirements for the development of a Password Generator Web App. The app will allow users to create strong and secure passwords for their online accounts.

1.2 Scope The Password Generator Web App will be a client-side application, accessible through web browsers. It will not require user registration and will focus on providing a user-friendly interface for generating passwords based on user preferences.

2. Functional Requirements

2.1 Password Generation

2.1.1 The app shall generate strong and random passwords based on user-specified criteria. 2.1.2 Users shall be able to define password length using a slider or input field. 2.1.3 The app shall include options for including uppercase letters, lowercase letters, numbers, and special characters in the generated passwords.

2.2 Password Display and Copying

2.2.1 The generated password shall be displayed on the web page. 2.2.2 Users shall have the option to copy the generated password to the clipboard with a single click.

2.3 User Interface

2.3.1 The app shall have an intuitive and responsive user interface. 2.3.2 The user interface shall include clear labels and instructions for ease of use.

2.4 Password Strength Indicator

2.4.1 The app shall visually indicate the strength of the generated password based on complexity and length. 2.4.2 The strength indicator shall provide feedback to guide users in creating more secure passwords.

2.5 Security Measures

2.5.1 The app shall not transmit or store generated passwords on any external servers. 2.5.2 All password generation and processing shall be performed client-side to ensure user privacy.

3. Non-functional Requirements

3.1 Performance

3.1.1 The app shall generate passwords instantaneously, providing a seamless user experience.

3.2 Compatibility

3.2.1 The app shall be compatible with modern web browsers, including Chrome, Firefox, and Safari. 3.2.2 The user interface shall adapt to various screen sizes, providing a consistent experience on desktop and mobile devices.

3.3 Usability

3.3.1 The user interface shall be user-friendly and require minimal user input. 3.3.2 The app shall provide tooltips and guidance for users unfamiliar with password generation.

4. Constraints

4.1 The app relies on the user's browser for random number generation; hence, the quality of randomness is dependent on the browser's capabilities.

5. Assumptions and Dependencies

5.1 The Password Generator Web App assumes that users have JavaScript enabled in their web browsers.

5.2 The app depends on the availability of a modern web browser with support for HTML5 and CSS3 features.

6. Conclusion

This Software Requirements Specification serves as a guide for the development of the Password Generator Web App, outlining the key features and functionalities. Any updates or changes to the requirements will be documented and communicated during the development process.