SOFTWARE REQUIREMENTS SPECIFICATION

for

Sunrise

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September 15, 2023

Contents

1. Introduction

1.1 Purpose

The purpose of this project is to design and build fully functional weather application. Sunrise's primary objectives is to provide weather forecast data to users based on geographic location in a simple and intuitive manner.

1.2 Project Scope

This web application is designed to provide users with real-time weather information, forecasts, and historical data. It will be accessible on various devices and browsers.

2. Application Description

2.1 Design and Implementation Constraints

Sunrise is constrained by the Weather API as it allows the application to retrieve updated weather forecast. Any changes to the Weather API will directly affect the capacity for Sunrise provide users with current forecast, weather in a positive or negative aspect. For example, Weather API currently allows 5,000,000Free calls per month, so any increase or decrease in that amount would affect all users.

The Weather API requires the use of an internet connection, making an internet connection necessary element for Sunrise to operate effectively. The speed and availability of a user's internet connection will affect how quickly Sunrise is able to make a call to the Weather API.

2.2 Assumption and Dependencies

Weather API will be a dependency for the project as Sunrise will pull weather data using this API. Requirements relating to the number of API calls are based on the assumption that constraints around the Weather API will not change. If the Weather API changes their limitations on the number of calls that can be made each day, this could affect these requirements.

2.3 User Characteristics

- Visitors : Users who visits the site without registering, seeking quick access to weather information.
- Registered Users : Users who create accounts to access additional features and customize their experience.

3. Requirements

3.1 Functional Requirements

3.1.1 Current Weather Display

Show the current weather conditions, including temperature, humidity, wind speed, and weather description.

3.1.2 Forecast Display

Provide a forecast for upcoming days, including predicted temperatures, weather conditions, and chance of precipitations.

3.1.3 Location-based Weather

Allow users to view weather information for their current location or search for weather in specific cities, regions, of countries.

3.1.4 Historical weather data

Provide access to past weather data for a specified period, allowing users to view weather trends and historical records.

3.1.5 Interactive Maps

Include interactive maps to visualize weather patterns, satellite imagery, or radar information.

3.1.6 Alerts and notifications

Display severe weather alerts or notifications for users based on their location or subscribed areas.

3.1.7 Multiple units and formats

Support different units of measurement for temperature, wind speed, and rainfall, and provide options to switch between metric and imperial system.

3.1.8 Responsive design

Ensure the web application is responsive and optimized for various devices, including desktops, tablets, and mobile phones.

3.2 Non-Functional Requirements

3.2.1 Sign In Feature

Sunrise will prompt registered users to sing in to access their accounts.

3.2.2 New Accounts

Users that do not have an account will directed to make an account and choose to become a Free User or a Premium User.

3.2.3 Availability and Reliability

- Uptime : Specify the expected uptime percentage, and define a plan for handling maintenance or unexpected downtime.
- Data Backup and Recovery : Describe the data backup and recovery procedures in case of data loss or system failures.
- Error Handling : Define how errors and exceptions will be handled to minimize user disruption.

3.2.4 Usability

- User Interface Consistency : Ensure that the user interface remains consistent across different sections of the application.

Project Gantt Chart	2023-September																
ACTIVITY	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Project Assigning																	
Requirement Analysis																	
Project Doc Preparing																	
Milestone 01																	
Research for inspiration																	
Wireframe Design																	
Design Assets & Prototype																	
Milestone 02																	
Coding HTML Structure																	
Adding Styles & Responsive																	
Coding JS Functions																	
Handling Errors & Fine-tune																	
Milestone 03																	
API Integration & Completing																	
Milestone 04 & Submission																	