# **Software Requirements Specification (SRS) for WeatherWise**

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to define the functional requirements of the WeatherWise weather forecasting application. WeatherWise is designed to provide users with accurate and up-to-date weather information for their chosen locations. This document outlines the specific features and functions of the WeatherWise application.

1.2 **Scope**

The WeatherWise application will include features for searching for weather data for a specific city, displaying the current weather conditions, and providing a 5-day weather forecast.

2. **Functional Requirements**

2.1 User Registration and Authentication

2.1.1 User Registration

The system shall allow users to register for an account by providing their email address and password.

User registration must include a verification step via email.

2.1.2 User Login

Registered users shall be able to log in to their accounts using their email and password.

2.2 City Search

2.2.1 Search for a City

Users shall be able to enter the name of a city in a search box.

The system shall allow users to submit the search by pressing "Enter" or by clicking a search button.

2.3 Current Weather

2.3.1 Display Current Weather

After a successful city search, the system shall display the current weather information for the specified city.

Information shall include temperature, humidity, wind speed, and UV index.

2.4 5-Day Weather Forecast

2.4.1 Display 5-Day Forecast

The system shall provide a 5-day weather forecast for the specified city.

Each day's forecast shall include date, weather conditions, temperature, and humidity.

2.5 History

2.5.1 Search History

The system shall maintain a search history for each user, listing their past city searches.

2.5.2 Clear Search History

Users shall have the option to clear their search history.

2.6 Dark Mode

2.6.1 Dark Mode Toggle

The application shall include a dark mode feature that allows users to switch between light and dark themes.

3. **Non-Functional Requirements**

3.1 Performance

3.1.1 Response Time

The system shall provide weather information within 2 seconds of a user's request.

3.2 Security

3.2.1 Data Encryption

User data, including login credentials, shall be encrypted during transmission.

3.2.2 Authentication

The system shall implement secure authentication mechanisms.

3.3 Usability

3.3.1 User-Friendly Interface

The user interface shall be intuitive and user-friendly.

3.4 Reliability

3.4.1 Uptime

The system shall aim for 99% uptime.

4. **Constraints**

4.1 Data Sources

Weather data shall be obtained from reputable weather APIs and sources.