Functional Requirements Specification for OpenWeatherMap.org

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1. Introduction

1.1 Purpose

The purpose of this document is to outline the functional requirements for OpenWeatherMap.org, a platform providing users with comprehensive weather information and personalized services.

1.2 Scope

OpenWeatherMap.org provides users with personalized weather information and a range of services. This document outlines specific features related to the homepage, user registration, and login.

1.3 Document Conventions

Bold Text: Represents section headings.
Monospace Text: Indicates code snippets or examples.

1.4 Intended Audience

This document is intended for developers, testers, project managers, and other stakeholders involved in the development and enhancement of OpenWeatherMap.org.

2. System Overview

2.1 System Description

OpenWeatherMap.org is a web-based platform that provides real-time weather information, forecasts, and personalized services based on user preferences.

2.2 System Architecture

The architecture follows a client-server model, where the client interacts with the server to request and receive weather information. The server processes user requests and retrieves data from external weather sources.

3. Functional Requirements

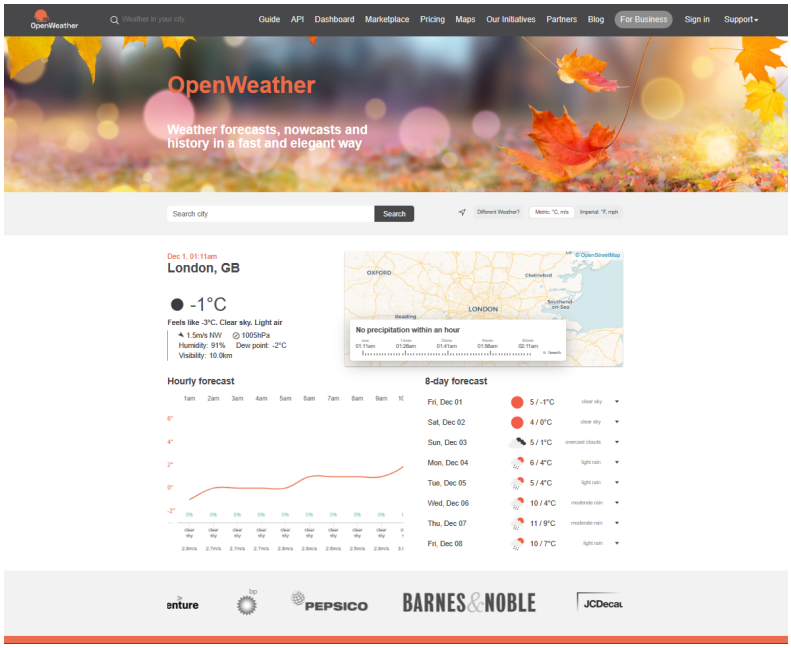
3.1 Homepage

3.1.1 Description

The homepage should provide users with easy access to key features and navigation options.

3.1.2 Features

Weather in Your City: Display current weather conditions for the user's default location.
Guide: Provide helpful guides for users to understand and utilize OpenWeatherMap services.
API: Direct access to information about available APIs and subscription plans.
Dashboard: A personalized weather dashboard for registered users.
Marketplace: Access to a marketplace offering additional data sets and products.
Pricing: Clear and transparent pricing information for subscription plans.
Maps: Interactive weather maps for visualizing weather conditions globally.
Our Initiatives: Information about OpenWeatherMap's social and environmental initiatives.
Partners: Showcase partnerships and collaborations with other organizations.
Blog: Latest updates, articles, and insights about weather and technology.
For Business: Information and services tailored for business users.
Sign In: Access to user accounts for registered users.
Support: Customer support and assistance.



APIs

One Call API 3.0

Choose the subscription plan **"One Call by Call"** and get access to the various data for any coordinates **with One Call API 3.0.** 1,000 API calls per day for free! Pay as you call.

Included data	Time
Current weather	Now
Minute forecast	Next hour
Hourly forecast	Next 48 hours
Daily forecast	Next 8 days
Weather data by any timestamp	40+ years back - 4 days ahead forecast
National weather alerts	All available data
Daily aggregation	40+ years back - 1.5 years ahead forecast

Use our Professional collections to get extended weather data for any coordinates on the globe

For professionals and specialists with middle and large sized project, we recommend our Professional collections. They include either an extended data sets, or various tools for receiving and displaying data, etc.

- current weather (current)
- hourly forecast (4 days)
- daily forecast (16 days)
- climatic forecast (30 days)
- historical weather (40+ years back)

Called by:
geographic coordinates, zip/post code, city name, city ID, number of cities (only in current weather and forecast APIs)

Learn more

For each point on the globe, we provide historical, current and forecasted weather data via light-speed APIs.

Minute-by-minute forecast

Other forecasts:
hourly (4-day), daily (16-day), 30-day climate forecast

Historical data
with 40-year archive for any coordinates

Weather data

Weather for any geographic coordinates on the globe

Weather data

Forecasted weather data

Detailed forecasts available by city name, city ID, geographic coordinates or postal/ZIP code.

How to obtain

API
Bulks

A variety of subscriptions with various limits on calls/min, data availability, and service

Our technology **Time Machine**, has allowed us to enhance data in the Historical Weather Collection: historical weather data is now available for any coordinates and the depth of historical data has been extended to 40 years.

How to obtain

Marketplace of prepared data sets
(cities, zip codes, grids)

On-the-fly bulks
for customized lists of coordinates

APIs (city-based, up to 1 year back; subscriptions with various limits on calls/min, data availability, and service)

Weather data

Historical weather data

3.2 User Registration

3.2.1 Description

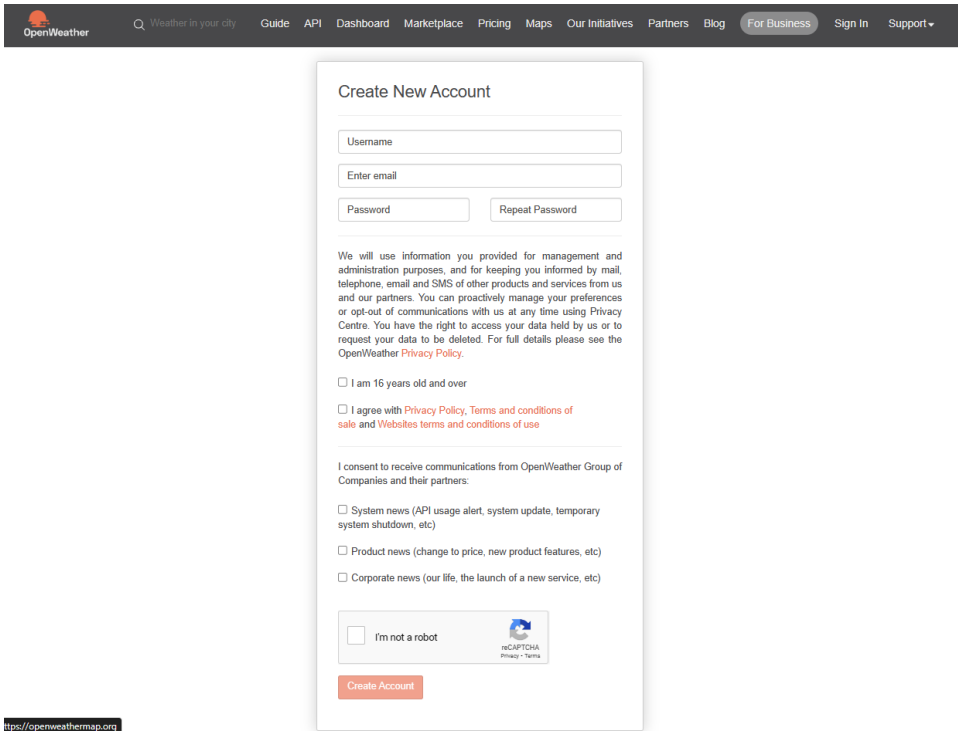
Users should be able to create accounts on OpenWeatherMap.org to access personalized weather features.

3.2.2 Features

Registration Form:
Fields for username, email, and password.
Privacy notice and consent for information use.
Checkbox for user agreement with Privacy Policy, Terms and Conditions of Sale, and Website Terms and Conditions of Use.
Age verification statement: "I am 16 years old and over."

3.2.3 Acceptance Criteria

Users can successfully register with required information.
Age verification is mandatory for users.



3.3 User Login

3.3.1 Description

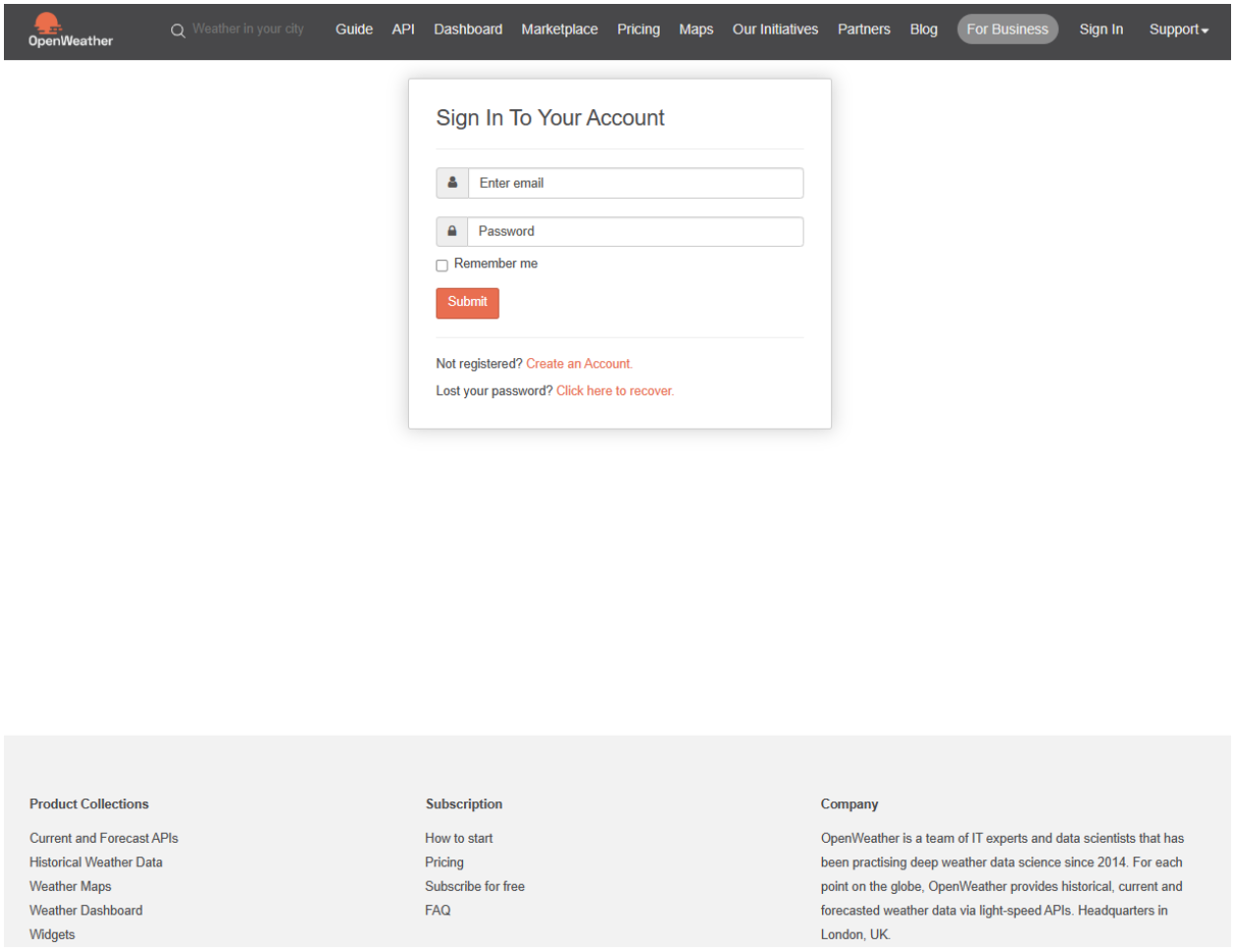
Registered users should be able to log in to OpenWeatherMap.org to access their personalized weather dashboard.

3.3.2 Features

Login Form:
Fields for email and password.
"Remember me" checkbox for persistent login.
Links for users not registered and password recovery.

3.3.3 Acceptance Criteria

Users can log in using their email and password.
Users can choose to be remembered for future logins.



Conclusion

This Functional Requirements Specification provides a comprehensive overview of the features and functionalities expected in OpenWeatherMap.org. It serves as a foundation for development, testing, and ongoing system maintenance. Stakeholders are encouraged to refer to this document throughout the project lifecycle to ensure alignment with the intended goals and objectives.