

# Functional Requirements Specification for OpenWeatherMap.org



OpenWeather

**Document Title: OpenWeatherMap.org Functional Requirements Specification**  
**Version: 1.0**  
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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

**Search text box:** Search weather for any city and display it.

**Weather in Your City:** Display current weather conditions for London.

**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.

OpenWeather

Weather in your city

Guide API Dashboard Marketplace Pricing Maps Our Initiatives Partners Blog **For Business** Sign in Support

# OpenWeather

Weather forecasts, nowcasts and history in a fast and elegant way

Search city

⌵ Different Weather?  Metric: °C, m/s  Imperial: °F, mph

Dec 1, 04:11pm  
**London, GB**

**-1°C**

Feels like: -3°C. Clear sky. Light air  
 ↗ 1.5km/h NW Ⓞ 1025hPa  
 Humidity: 91% Dew point: -2°C  
 Visibility: 10.0km

**Hourly forecast**

Time	Temp	Wind	Humidity	Cloud	Precip
04:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
05:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
06:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
07:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
08:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
09:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
10:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
11:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
12:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
13:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
14:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
15:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
16:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
17:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
18:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
19:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
20:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
21:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
22:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
23:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
00:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
01:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
02:00	-1°C	1.5 km/h NW	91%	0%	0.0mm
03:00	-1°C	1.5 km/h NW	91%	0%	0.0mm

**8-day forecast**

Day	Temp	Weather
Fri, Dec 01	5 / -1°C	clear sky
Sat, Dec 02	4 / 0°C	clear sky
Sun, Dec 03	5 / 1°C	overcast clouds
Mon, Dec 04	6 / 4°C	light rain
Tue, Dec 05	5 / 4°C	light rain
Wed, Dec 06	10 / 4°C	moderate rain
Thu, Dec 07	11 / 8°C	moderate rain
Fri, Dec 08	10 / 7°C	light rain

enture **BARNES & NOBLE**

Leaving everything behind, people are fleeing conflict in Ukraine. They need shelter, food, and water. When you subscribe to our service, you can join us to help with donation of just of \$20. Openweather will add \$40 to each donation and send it to [Disasters Emergency Committee \(DEC\)](#) Ukrainian Humanitarian Appeal.

**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 forecast	40+ years back - 4 days ahead
National weather alerts	All available data
Daily aggregation	40+ years back - 15 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

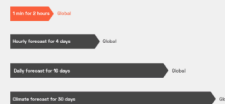
**Historical data**  
with 40-year archive for any coordinates

**Weather for any geographic coordinates on the globe**



40 years Up to 30 days

**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)

**Historical weather data**



**Product Collections**

Current and Forecast APIs  
Historical Weather Data  
Weather Maps  
Weather Dashboard  
Widgets

**Technologies**

Our technology  
Accuracy and quality of weather data  
Connect your weather station

**Subscription**

How to start  
Pricing  
Subscribe for free  
FAQ

**Terms & Conditions**

Terms and conditions of sale  
Privacy Policy  
Website terms and conditions

**Company**

OpenWeather is a team of IT experts and data scientists that has been practicing deep weather data science. For each point on the globe, OpenWeather provides historical, current and forecasted weather data via light speed APIs. Headquarters in London, UK.

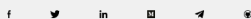
**About us**

Blog  
OpenWeather for Business  
Ask a question

Download OpenWeather app



Supplier of Achilles UNICE community  
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## 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, valid email, and password.

Privacy notice and consent for information use.

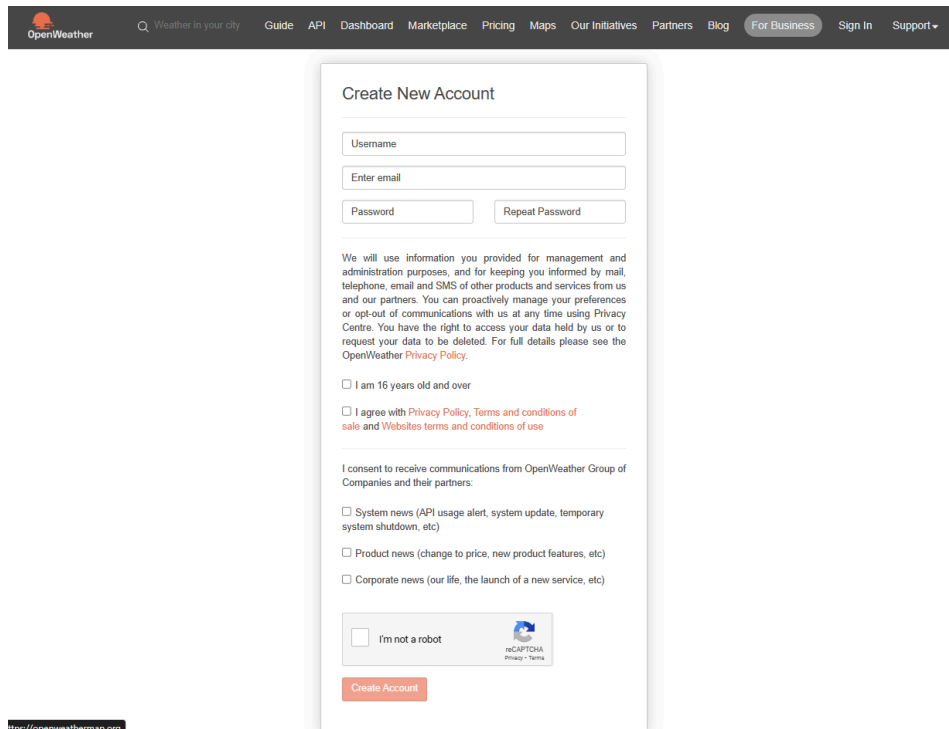
Checkbox for user agreement with Privacy Policy, Terms and Conditions of Sale, and Website Terms and Conditions of Use.

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.



The screenshot shows the 'Create New Account' form on the OpenWeatherMap website. The form includes the following elements:

- Navigation Bar:** OpenWeather logo, search bar with 'Weather in your city', and menu items: Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, Sign In, Support.
- Form Fields:** Username, Enter email, Password, and Repeat Password.
- Privacy Notice:** A paragraph explaining that user information is used for management, administration, and communication purposes, with a link to the OpenWeather Privacy Policy.
- Age Verification:** A checkbox labeled 'I am 16 years old and over'.
- Terms Agreement:** A checkbox labeled 'I agree with Privacy Policy, Terms and conditions of sale and Websites terms and conditions of use'.
- Consent:** A section titled 'I consent to receive communications from OpenWeather Group of Companies and their partners:' with three checkboxes: System news (API usage alert, system update, temporary system shutdown, etc), Product news (change to price, new product features, etc), and Corporate news (our life, the launch of a new service, etc).
- Security:** A checkbox labeled 'I'm not a robot' next to a reCAPTCHA widget.
- Submit Button:** A red 'Create Account' button.

<https://openweathermap.org>

## 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.

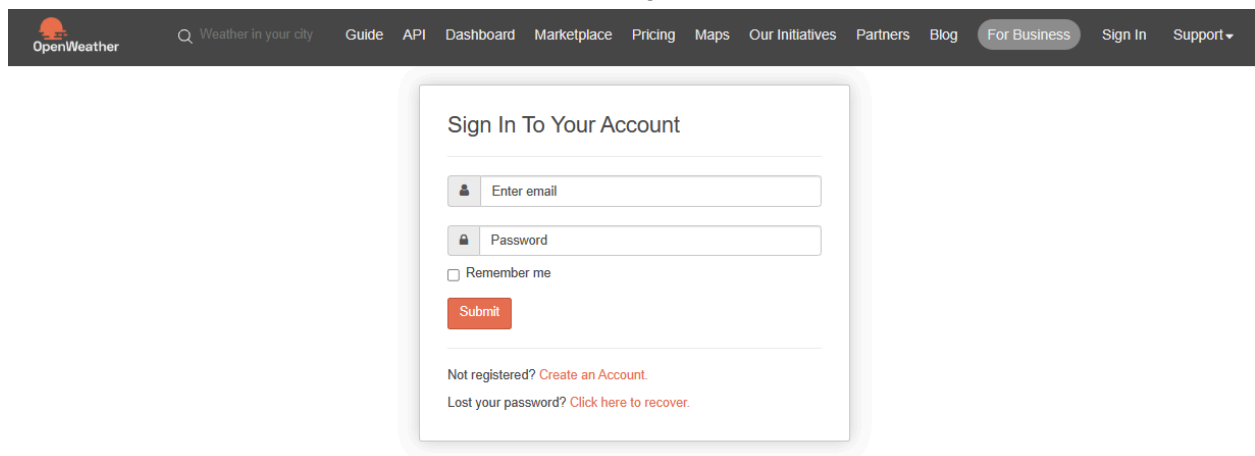
"Remember me" checkbox for persistent login.

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.



The image shows a screenshot of the OpenWeatherMap website's login form. At the top, there is a dark navigation bar with the OpenWeather logo on the left and a search bar followed by links for Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, Sign In, and Support. The main content area features a white box with a light gray border and a drop shadow. The box is titled "Sign In To Your Account" and contains the following elements: a search bar, an "Enter email" input field with a person icon, a "Password" input field with a lock icon, a "Remember me" checkbox, a red "Submit" button, and two links at the bottom: "Not registered? [Create an Account.](#)" and "Lost your password? [Click here to recover.](#)".

#### Product Collections

Current and Forecast APIs  
Historical Weather Data  
Weather Maps  
Weather Dashboard  
Widgets

#### Subscription

How to start  
Pricing  
Subscribe for free  
FAQ

#### Company

OpenWeather is a team of IT experts and data scientists that has been practising deep weather data science since 2014. For each point on the globe, OpenWeather provides historical, current and forecasted weather data via light-speed APIs. Headquarters in London, UK.



## 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.