SMART WEATHER APP DEVELOPMENT (WITH JIRA)

Contents

Company Profile:

GTM systems is a large IT company with offices all around the world. The company delivers software products and services to corporate clients. One of the reasons for its enduring success and consistent performance over the years is the ability to leverage technology and find innovative applications for it.

Problem Statement:

With climate change increasing the unpredictability of local weather conditions, there has been great demand for technology that can provide reliable weather information. Weather conditions impact several organizations and businesses – ranging from agriculture, outdoor event management, hospitality, travel and tourism, and healthcare.

Solution:

The main system will comprise a web portal and a set of "apps" available on the popular mobile operating systems. Apart from this, clients can ask for specific services or apps based on the insights that the analytics can generate.

Main objective:

It proposes to aggregate weather data from multiple providers and uses analytics to correlate it with meaningful conclusions for businesses.

Project scope:

Scope should cover the following requirements.

- Enable registration for free and paid users.
- Build integrations with public weather services around the world.
- Detect locations based on GPS (if on a device) or IP.
- Create a schema and a database for storing weather data based on location.
- Build logic to reconcile and aggregate data from multiple service providers.
- Access control for paid services.
- Provide severe weather advisory to registered users on the portal.
- Have provisions for advertisements on the portal and apps.
- Show current weather at a location.
- Show forecasts for five, ten, and fifteen days at a location.
- Provide seasonal forecasts like seasonal precipitation and temperatures.
- Show satellite images.
- Show time-lapse videos of satellite forecasts.
- Make a responsive design for the portal (usable for different devices and form factors).
- Publish API or Services for client apps.
- Create apps for iOS and Android phones.

PERSONA

PERSONA-1

Persona: Sarah the Event Manager

Name: Sarah Thompson

Role: Event Manager

Goals: Sarah is responsible for the organization of outdoor events, such as music festivals and open-air concerts. Her main goal is to ensure the success of these events by attracting a large number of attendees and providing a memorable experience. She wants to use weather data to make informed decisions about scheduling and event preparation.

Typical system usage: Sarag would be the portal to check the current weather conditions and forecasts for the event location. She would also utilize the severe weather advisory feature to stay informed about any potential disruptions or safety concerns.

Preferences: Sarah prefers a user -friendly interface that provides clear and concise weather information. She values real-time updates and accurate forecasts to plan her events effectively.

PERSONA-2

Persona: David the Tourist

Name: David Johnson

Role: Tourist

Goals: David loves travelling and exploring unfamiliar places. His goal is to have a smooth and enjoyable travel experience. He wants to be aware of the weather conditions at his travel destination to pack appropriately, plan outdoor activities, and make the most of the trip.

Typical system usage: David would use the portal to search for his travel destination and check the current weather conditions, forecasts, and seasonal trends. He would also be interested in satellite images and time-lapse videos to get a visual representation of the weather patterns.

Preferences: David prefers a mobile-friendly app that provides a seamless experience on his smartphone. He values a visually appealing interface with intuitive navigation and personalized recommendations for activities based on the weather.

PERSONA-3

Persona: Lisa the Business Owner

Name: Lisa Miller

Role: Business Owner

Goals: Lisa owns a chain of cafes and restaurants. Her goal is to optimize her business operations based on the weather conditions. She wants to leverage weather data to make decision on inventory management, Menu offerings, and marketing strategies tailored to different weather scenarios.

Typical system usage: Lis would use the portal to access weather data relevant to her business locations. She would be interested in the current weather, forecast, and seasonal trends to determine the demand for hot or cold beverages, adjust staffing levels, and plan promotional campaigns.

Preferences: Lisa Prefers a web portal with a comprehensive set of weather-related features and data visualization capabilities. She values the ability to customize and filter the data based on her business needs.

EPICS & USER STORIES

Epic 1: User Registration and Authentication

User Story 1: As a new user, I want to create an account on the portal using my email and password, so that I can access personalized weather information.

User Story 2: As a registered user, I want to log in to the portal using my credentials so that I can access my saved preferences and settings.

User Story 3: Create a page for users to become paid members and complete the payment option.

Epic 2: Weather data Integration, Aggregation, Storage
and Analytics

User Story 4: As a developer, I want to design a database schema and set up a weather data storage system, so that we can store and retrieve weather data efficiently based on the location.

User Story 5: As a user, I want the mobile apps to provide push notifications for severe weather alerts, so that I can receive timely updates.

User Story 6: As a developer, I want to provide time-lapse videos of satellite forecasts for registered users based on their preferences.

Epic 3: Portal Features

User Story 6: As a user, I want to receive severe weather advisories and alerts, so that I can stay informed and take necessary precautions.

User Story 7: As a developer, I want to detect locations based on GPS (if on a device) or IP.

User Story 8: As a developer, I want to provide seasonal forecasts like seasonal precipitation and temperatures.

User Story 9: As a user, I want to have the facility to show satellite images and time-lapsed videos based on location and preferences.

As a developer, build logic to reconcile and aggregate data from multiple service providers and display the result to the user based on his preference.

As a user, I want to view forecasts for five, ten, and fifteen days at a location, so that I can plan my long-term activities and travel plans.

As a user, I want to view current weather conditions at specific locations, so that I can plan my activities accordingly.

As a developer, I want to publish API or Services for client apps.

As a developer, I want to design portals which should have a have provisions for advertisements on the portal and apps.

Epic 4: User Experience and Interface Design

User Story 10: As a User, I want the portal to load quickly and provide a smooth user experience, so that I can access weather information without delays.

User Story 11: As a user, I want the portal to have a visually appealing interface with intuitive navigation, so that I can easily find the information I need.

User Story 12: As a user, I want portal to have a responsive design, so that I can access it from different devices and form factors.

Epic 5: Mobile Apps Development

User Story 16: As a system administrator, I want to integrate with multiple public weather services, so that we can collect comprehensive weather data from various sources.

User Story 17: As a mobile user, I want to download and install the android app, so that I can access weather information on my android phone.

User Story 18: As a mobile user, I want to download and install the iOS app, so that I can access weather information on my iPhone.

MINIMAL VIABLE PRODUCT (MVP)

The MVP for Smart Weather could consist of the following features:

a) Display current weather conditions for a location.
b) Provide five, ten & fifteen-days forecasts for a location.
c) Responsive design for the web portal
d) Should load quickly and provide a smooth user experience without any delay.
e) Should have a visually appealing interface with intuitive navigation.
f) User Registration and Authentication.
g) Registration of paid members.

SCALING MODEL

Given the various teams involved in the development, interface, integrations, bespoke apps, maintenance, and support, a scaling model could be:

Development Team: It is responsible for building and enhancing the main system, including the web portal and mobile apps. This team focuses on feature development and ensures the timely delivery of the user stories.

Integration Team: Dedicated to integrating the system with public weather services, ensuring data accuracy and consistency. They work closely with the development team to align the integration process with the overall project timeline.

Bespoke App Team: Manages the development of specific service or app based on analytics insights. They collaborate closely with clients to understand their requirements and develop tailored solutions.

Maintenance and Support Team: Responsible for ongoing maintenance, bug fixes, and support for the system, ensuring its smooth operations and addressing user feedback and issues.

The scaling model would involve cross-team collaborations, regular communication, and synchronization to ensure efficient development, deployment, and support of the Smart weather product.

THANK YOU