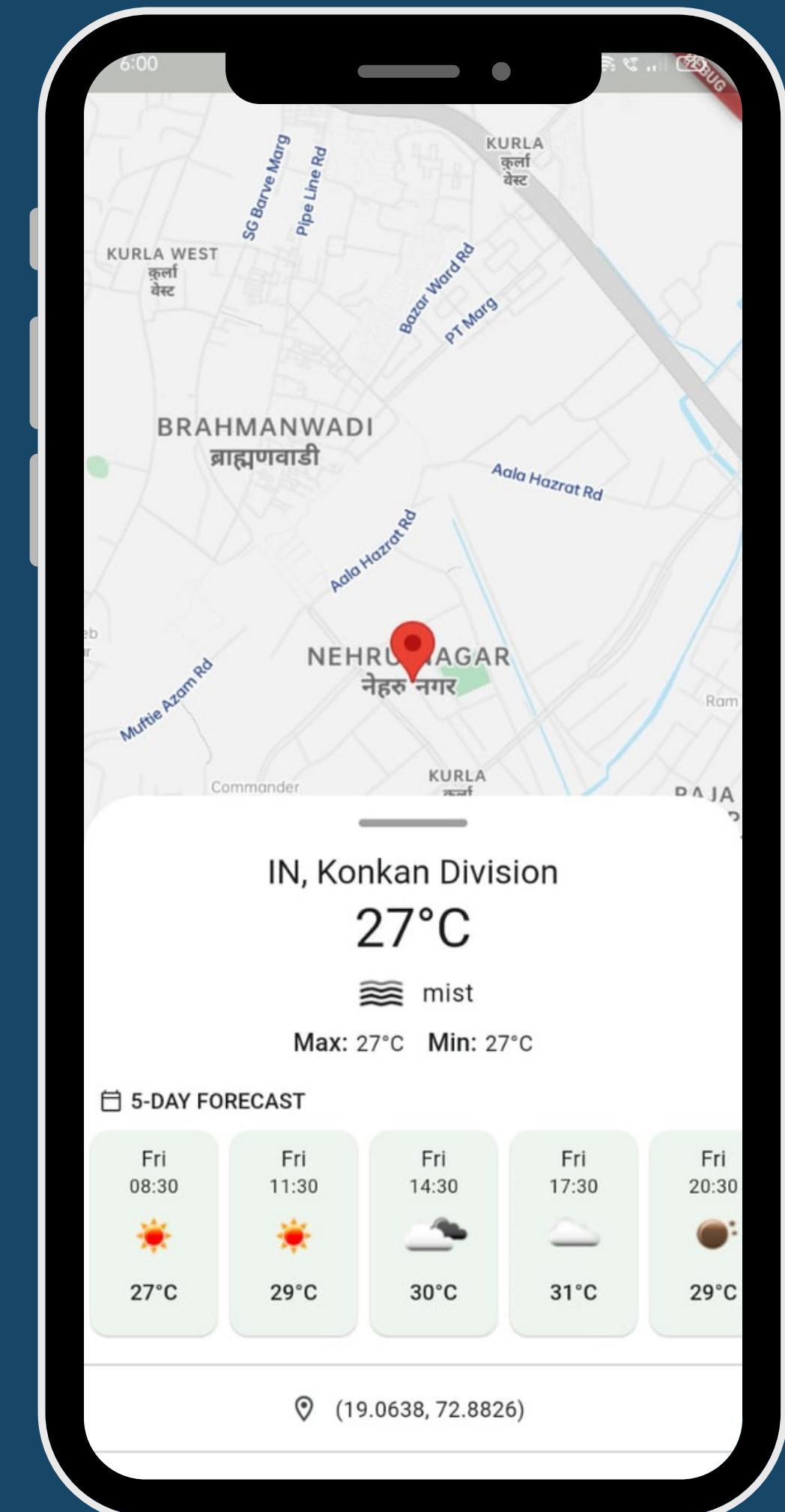


GOOGLE MAPS WEATHER APP

FLUTTER PROJECT

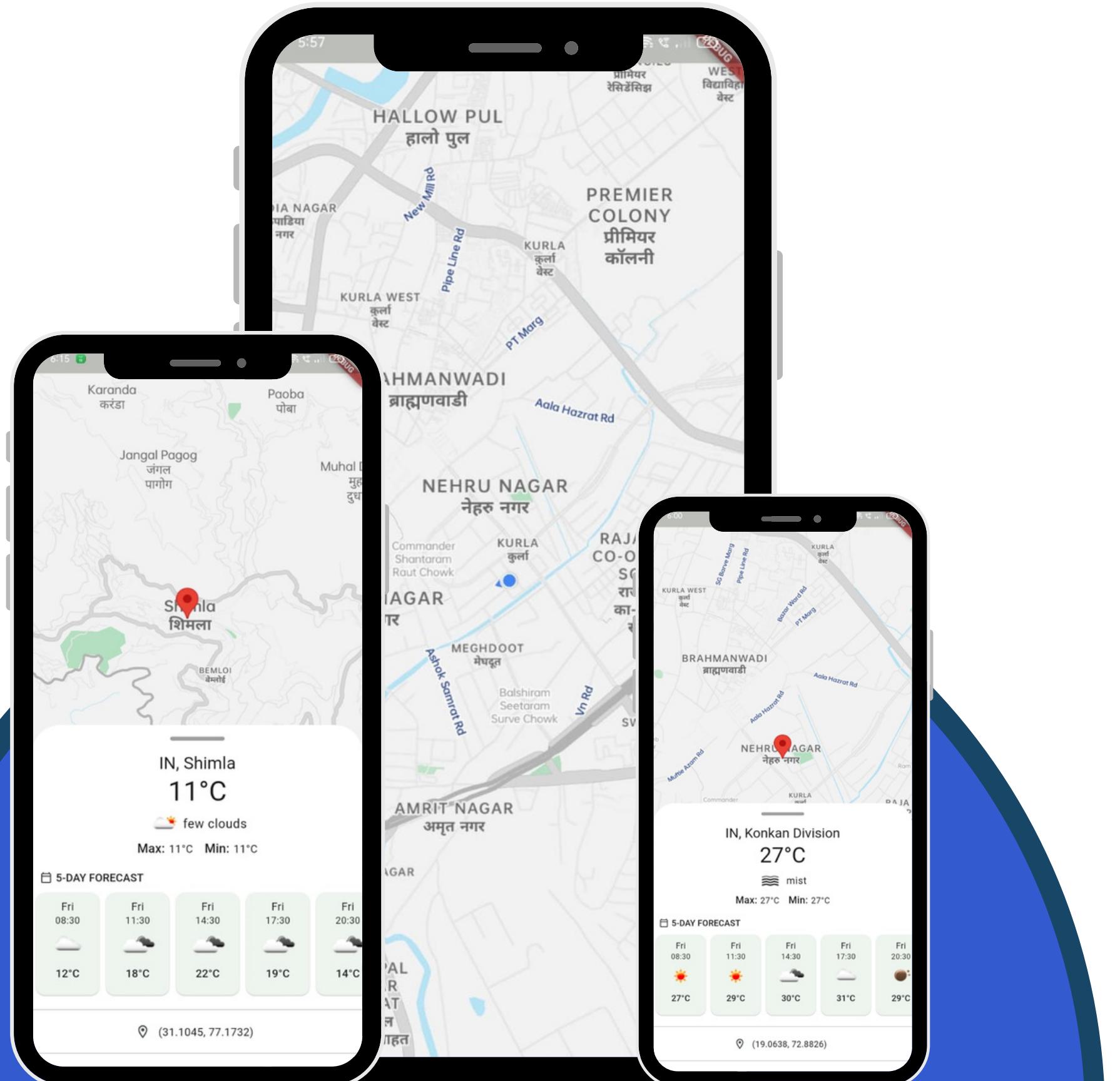
Aaqueeb Pinjari (56)



Overview

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3. LITERATURE SURVEY
4. PROPOSED SOLUTION
5. IMPLEMENTATION (FLUTTER)
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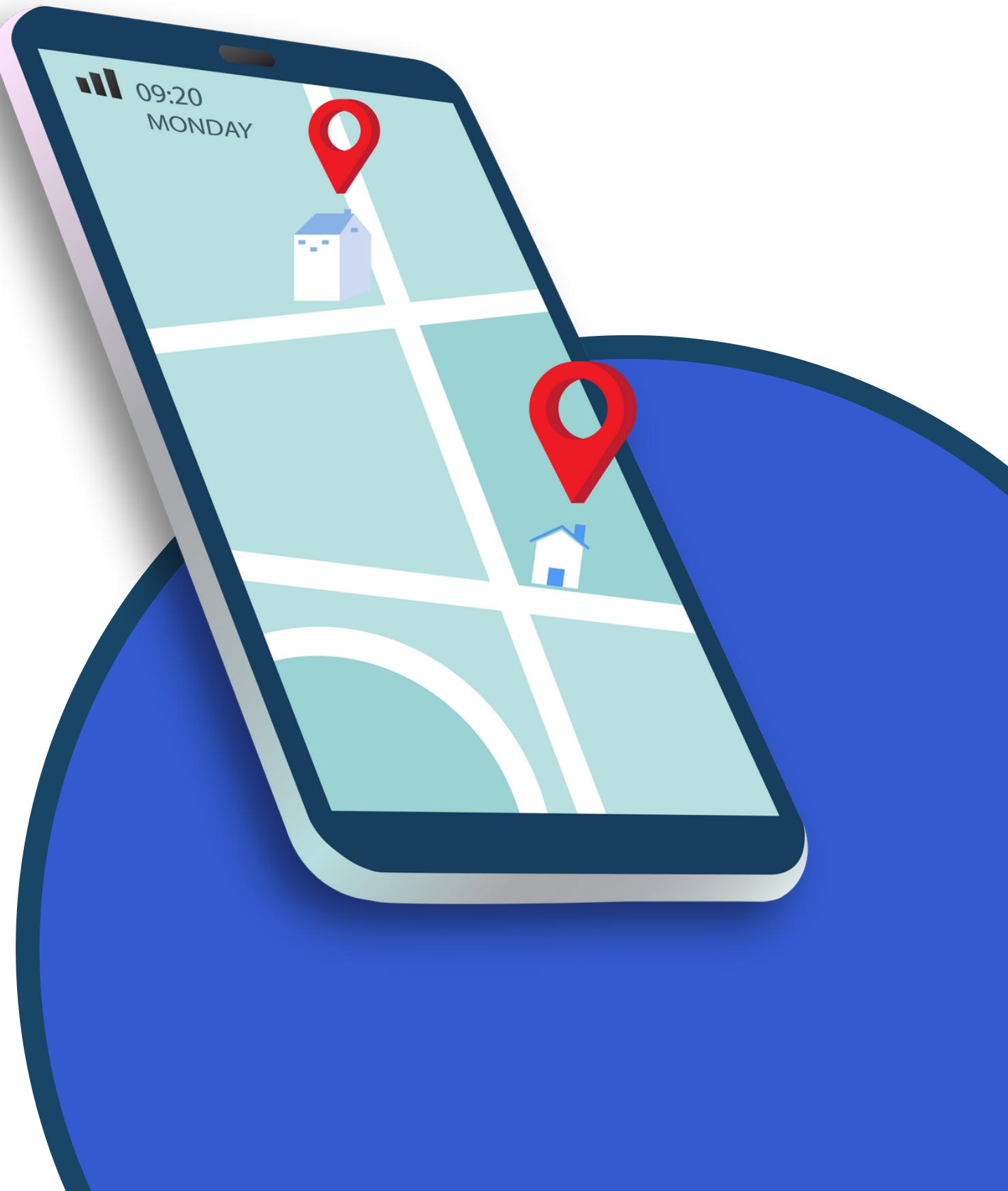


Introduction

In today's digital age, where information is key, our project aims to provide users with a seamless experience of accessing both location and weather data in one integrated platform. Leveraging the power of Flutter, Google Maps API, and Weather API, our application allows users to explore any location on the map while simultaneously fetching real-time weather details and forecasts. Join us as we take you through the journey of building and implementing this innovative solution that bridges the gap between navigation and weather information.

Problem Statement

In today's fast-paced world, individuals often find themselves in need of reliable and up-to-date information about both their current location and the weather conditions. However, accessing these two sets of data often requires navigating through separate applications or websites, leading to inconvenience and inefficiency. Furthermore, integrating location-based services with weather forecasts seamlessly within a single platform presents technical challenges, including API integration and user interface design complexities. Therefore, there is a clear need for a solution that combines the power of navigation and weather information, providing users with a holistic view of their surroundings while empowering them to make informed decisions about their activities and travel plans.



Literature Survey

Sr. No.	Title	Description	Drawbacks
1	Weather Forecast Prediction	Weather forecasting is indispensable for daily routines and business decisions, evolving with technological advancements and the realization of increasing data volumes.	Only does weather prediction
2.	A Big Data Prediction Framework for Weather Forecast Using MapReduce Algorithm	The proposed framework employs MapReduce Algorithm to analyze large weather datasets, offering efficient processing and various analytic capabilities.	Lack of Specificity to Mobile Applications, Limited Discussion on Real-time Data Updates
3.	Mobile weather apps or the illusion of certainty	This paper serves as a guideline for researchers and practitioners, providing insights into analyzing weather data using big data techniques.	Focus on General Weather Communication, Not App-specific Features, no weather prediction

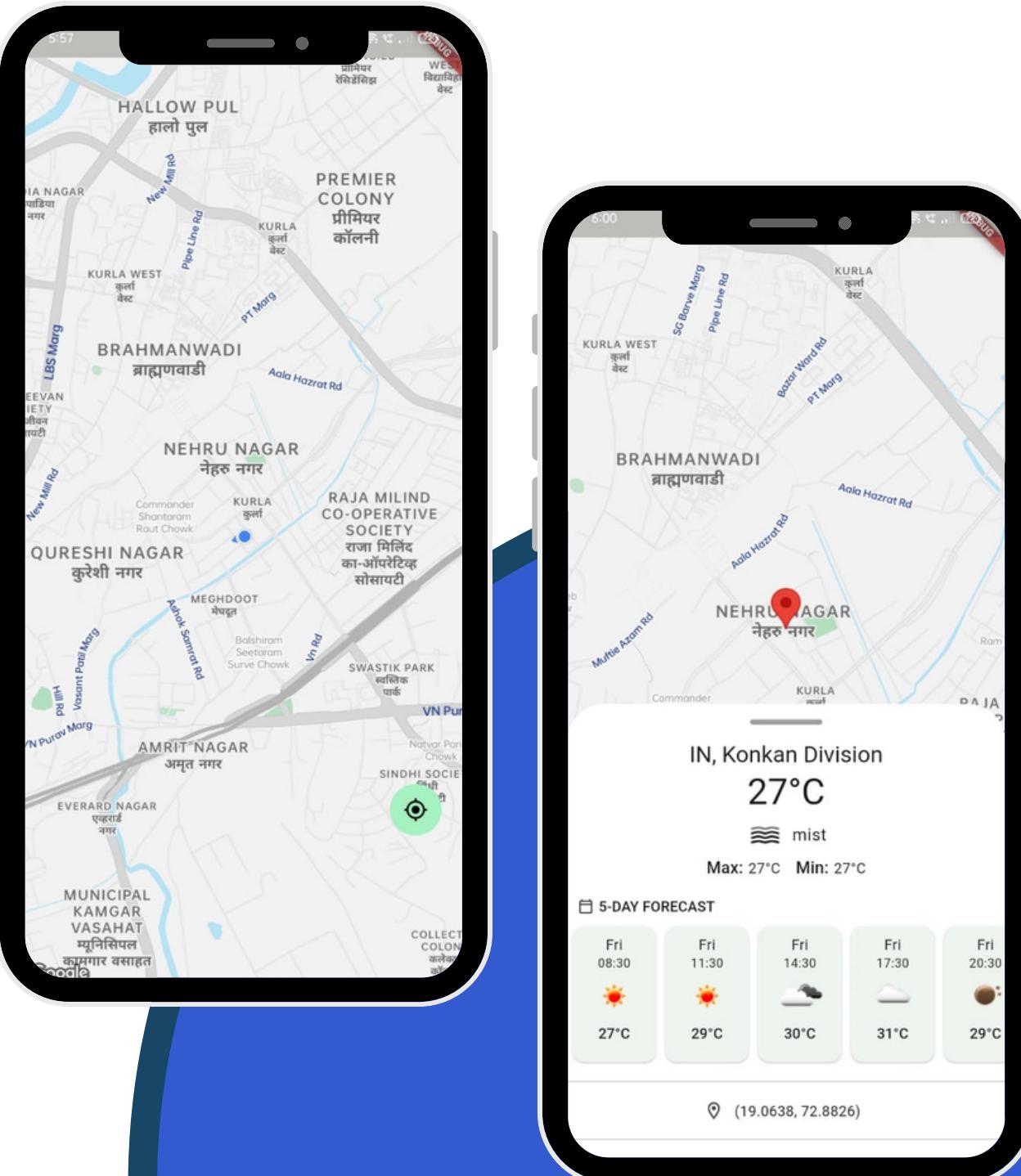
Proposed Solution

01

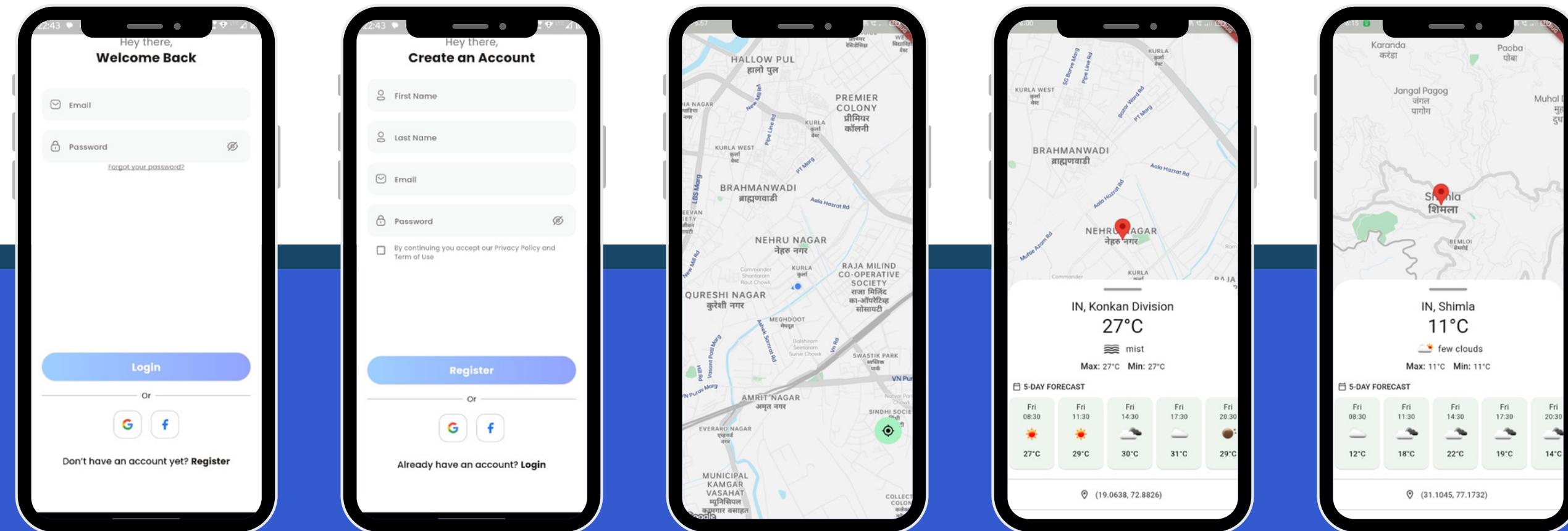
Design an intuitive user interface that seamlessly integrates Google Maps functionality with weather data display. Utilize interactive maps to allow users to explore weather conditions in different locations by simply interacting with the map interface. Implement features such as draggable markers for selecting specific locations and overlays to display weather information directly on the map, providing users with a visual representation of current and forecasted weather conditions.

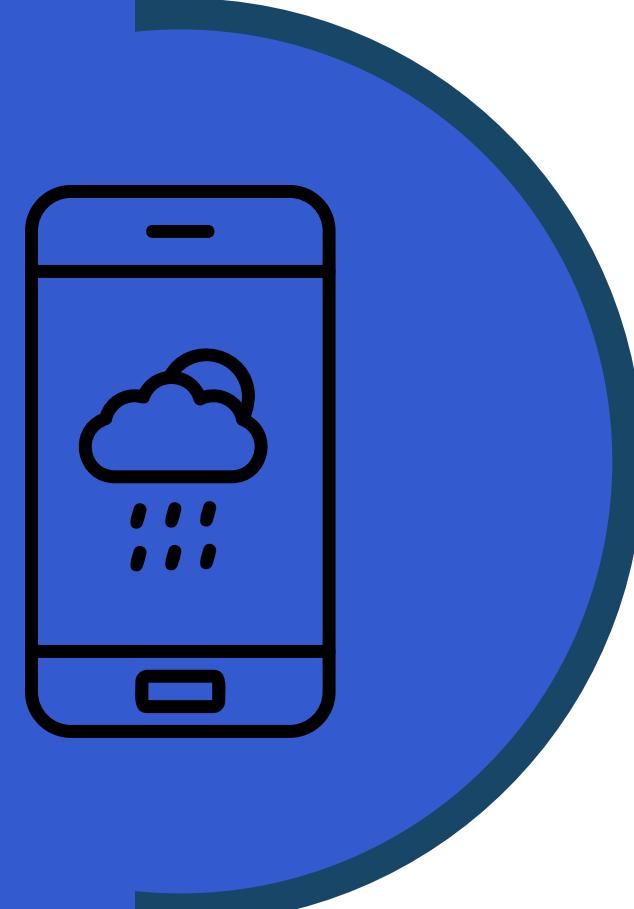
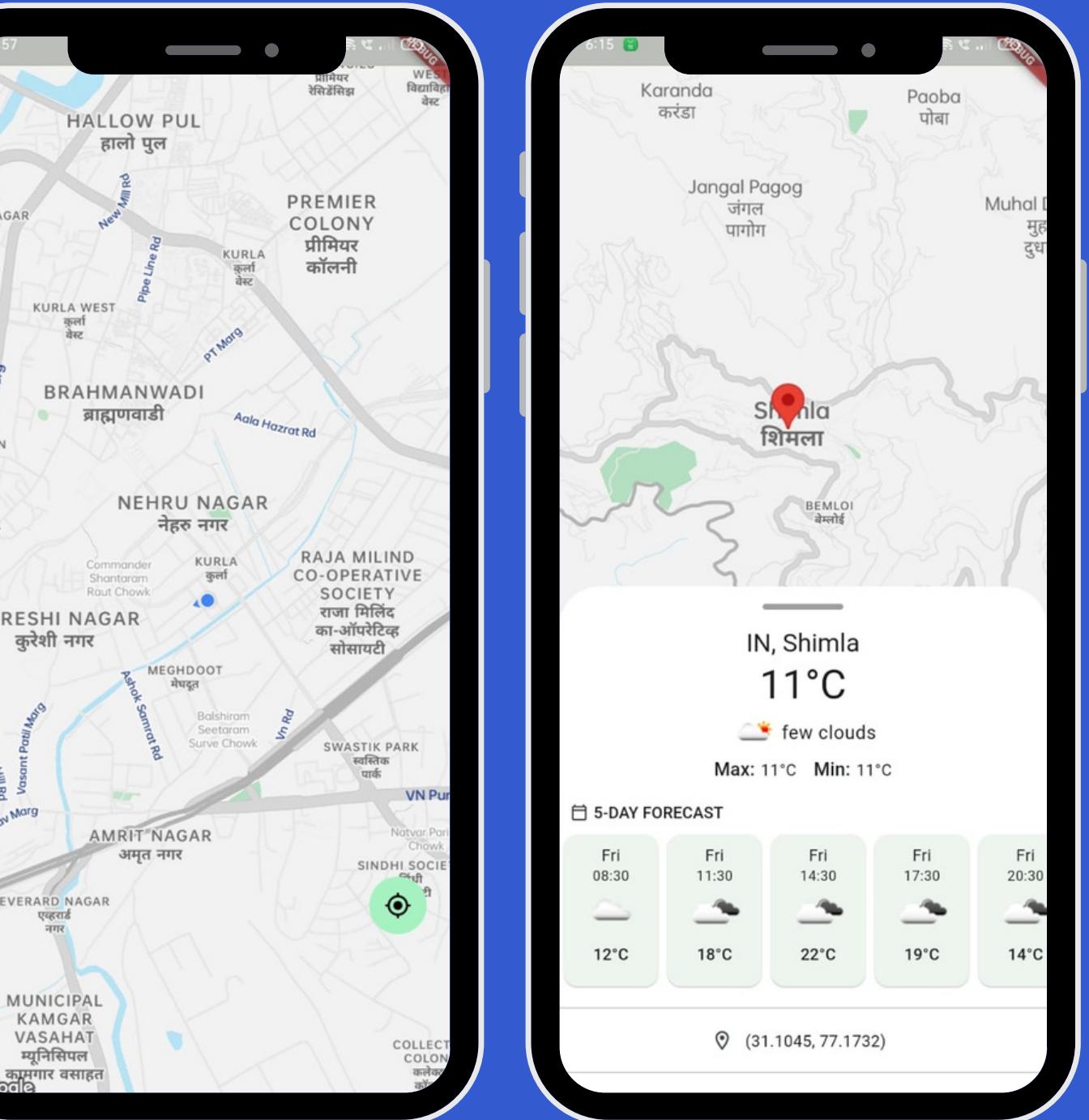
02

Enable users to contribute their own weather observations and data through the app, creating a community-driven platform for sharing real-time weather information. Implement features that allow users to submit weather reports, photos, and observations directly from their mobile devices, which can be aggregated and displayed alongside official weather data. Leverage user-generated data to enhance weather forecasting accuracy, improve localized predictions, and provide users with a more comprehensive understanding of current weather conditions in their area.



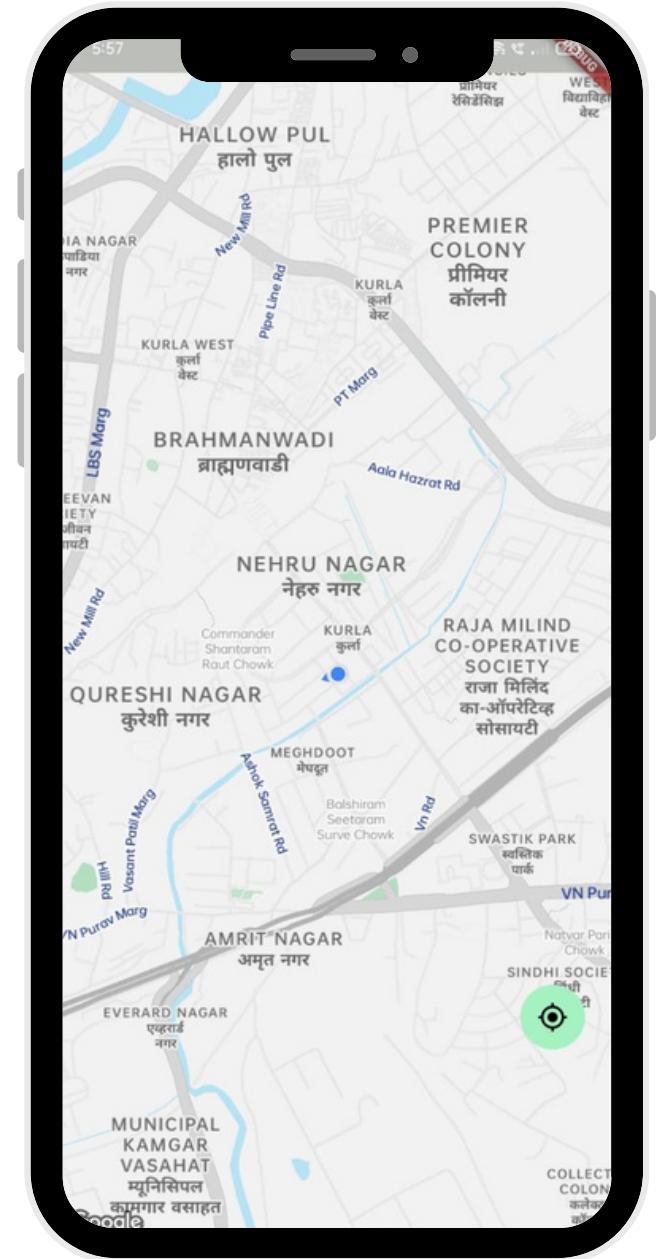
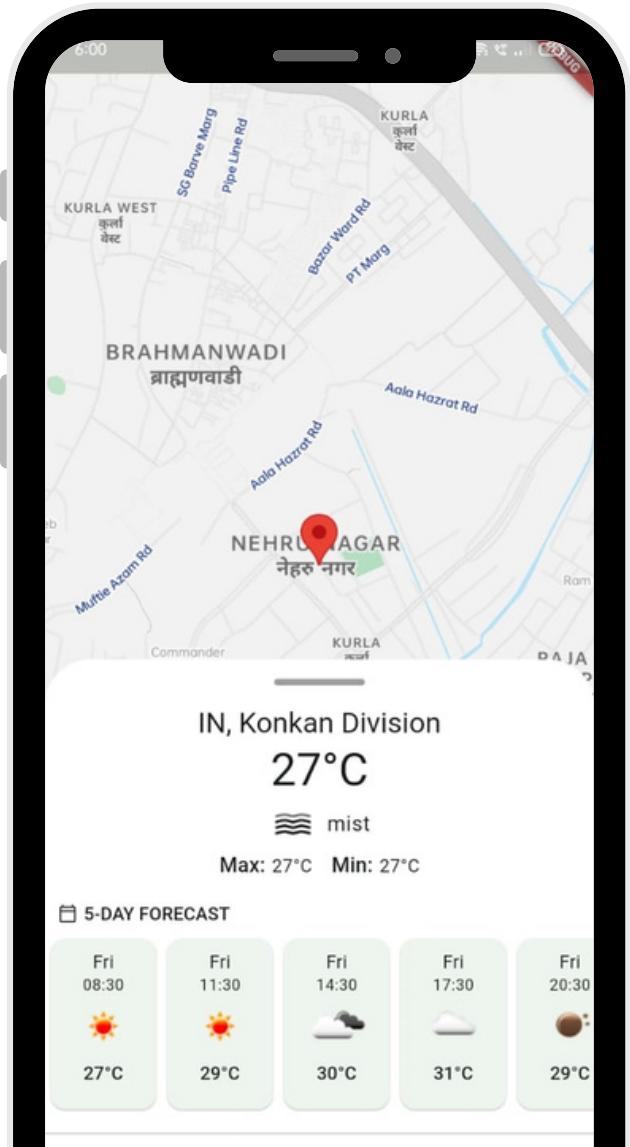
Application





Application Features

- 01** Five-day weather forecast display integrated with interactive map navigation.
- 02** Seamless integration of Google Maps functionality for intuitive location selection.
- 03** Interactive map overlays for visual representation of weather conditions.
- 04** Offline access to cached weather data for uninterrupted usage.



Major Displays

01



02



Future Scope



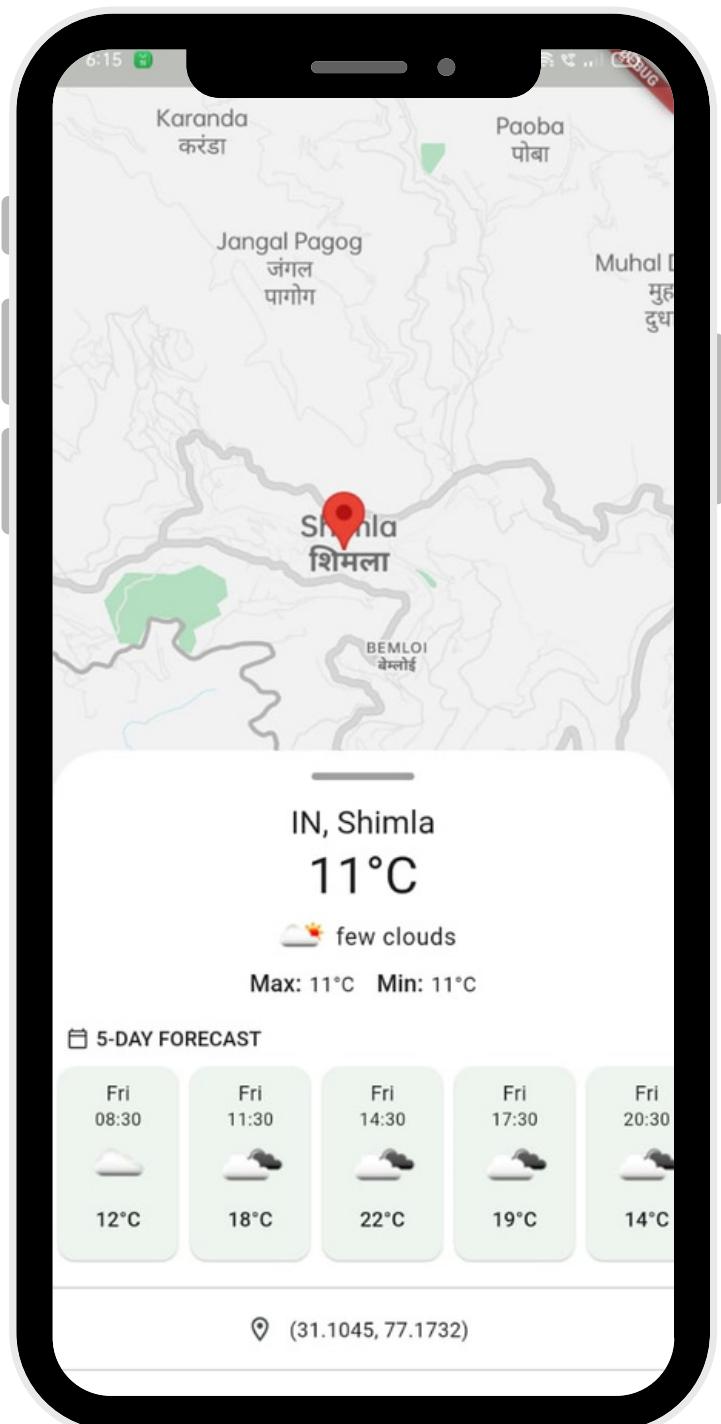
Routings



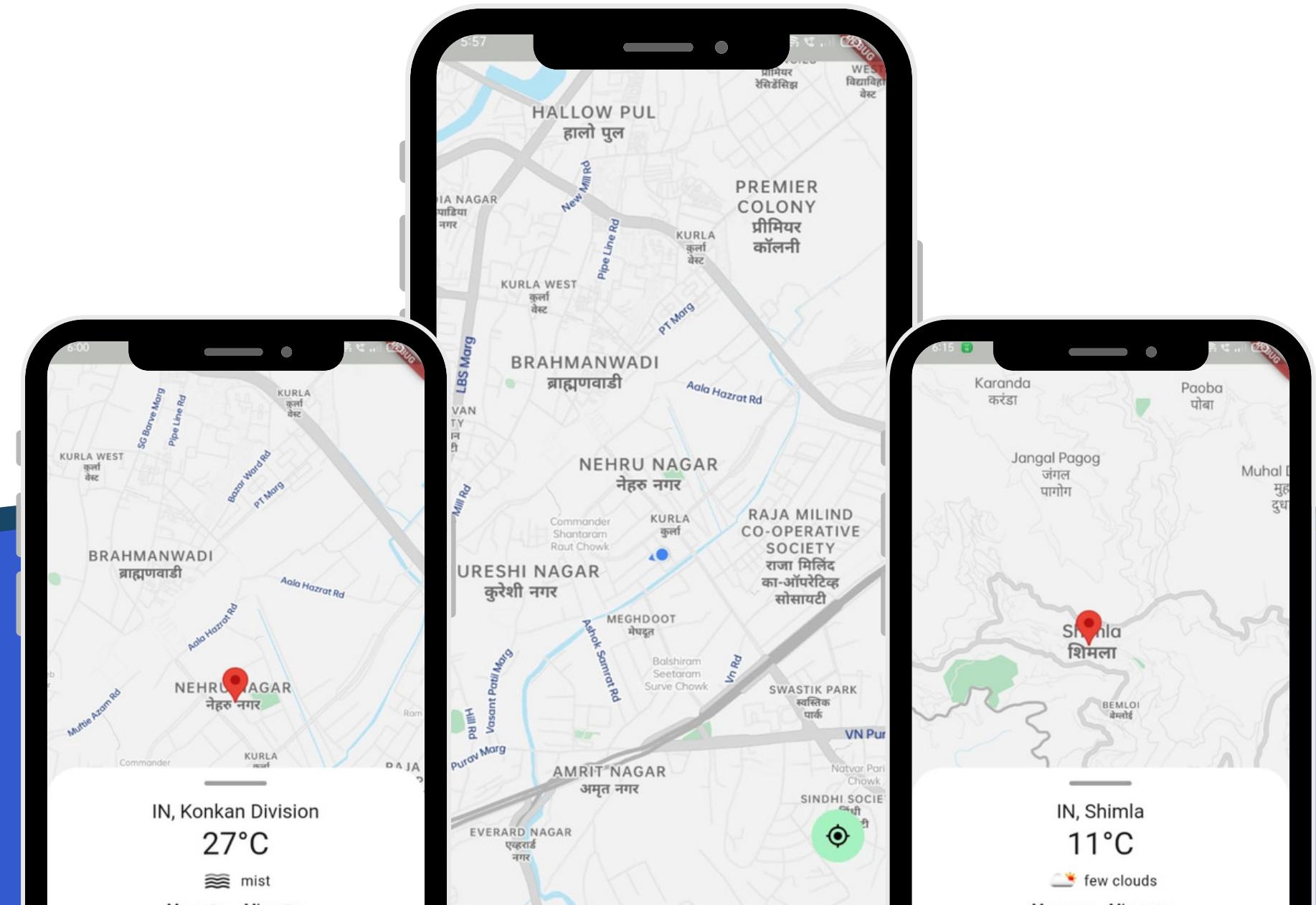
Alert messaging



More precise weather prediction and parameters



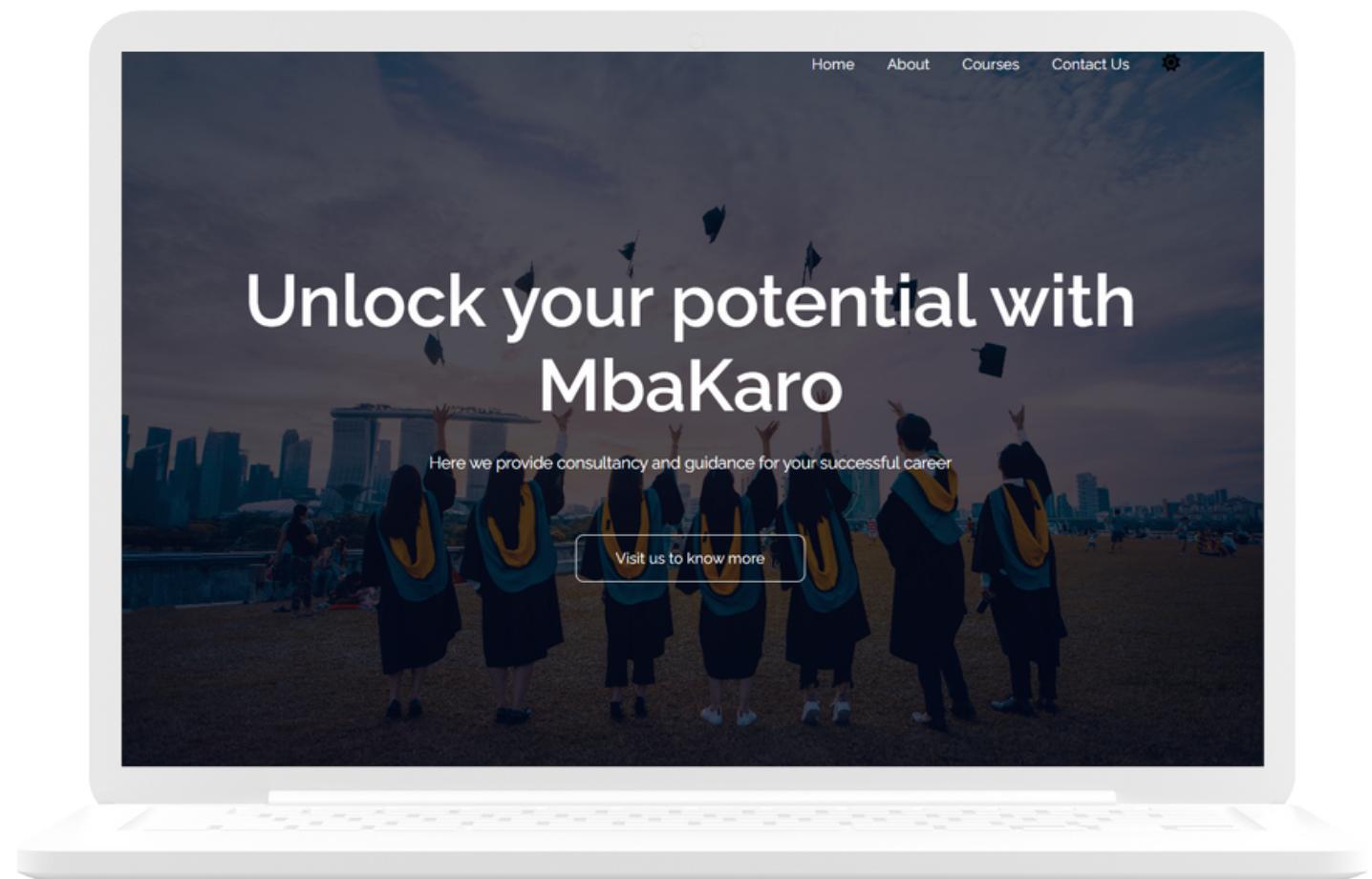
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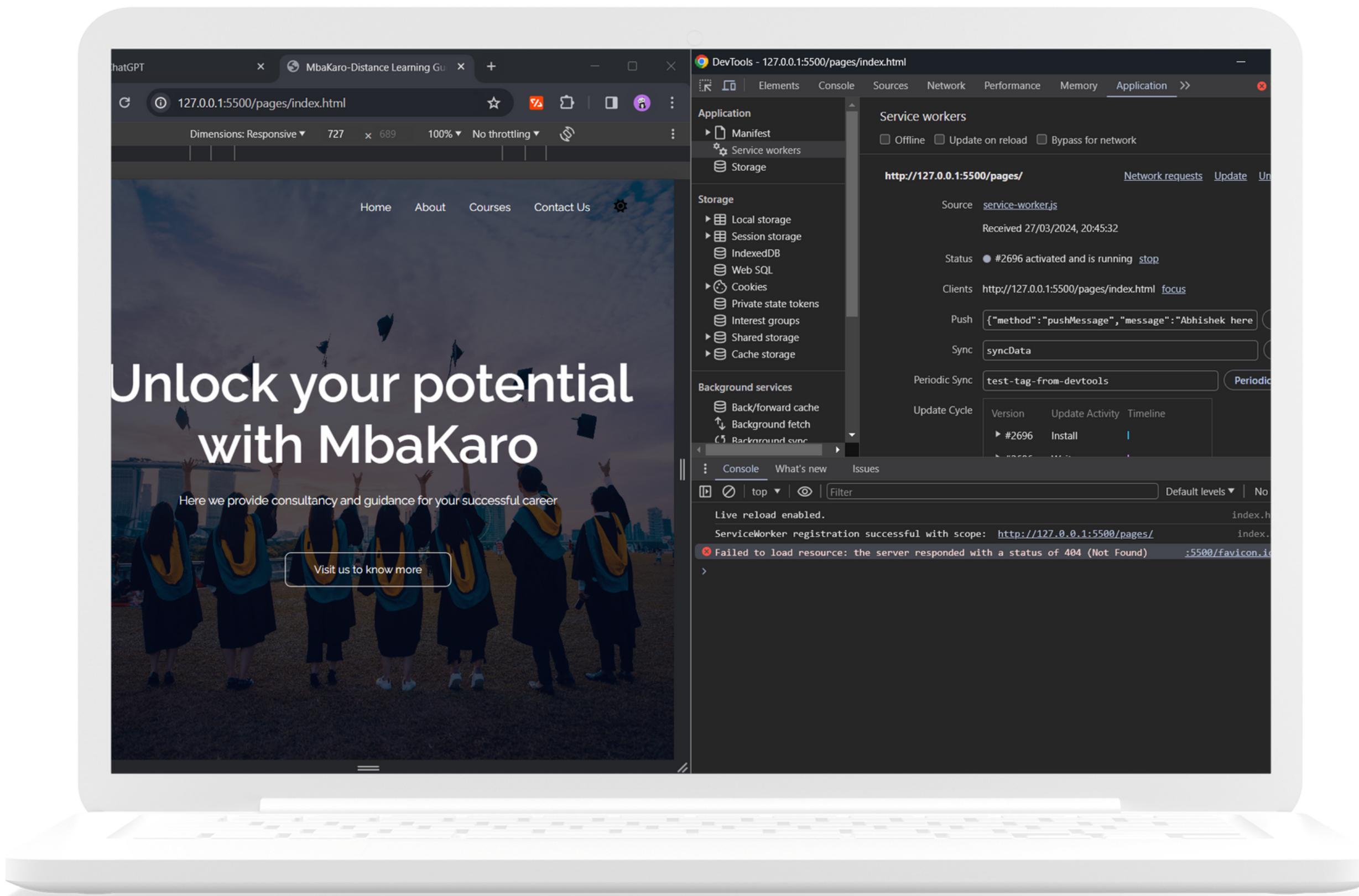
E-commerce Website

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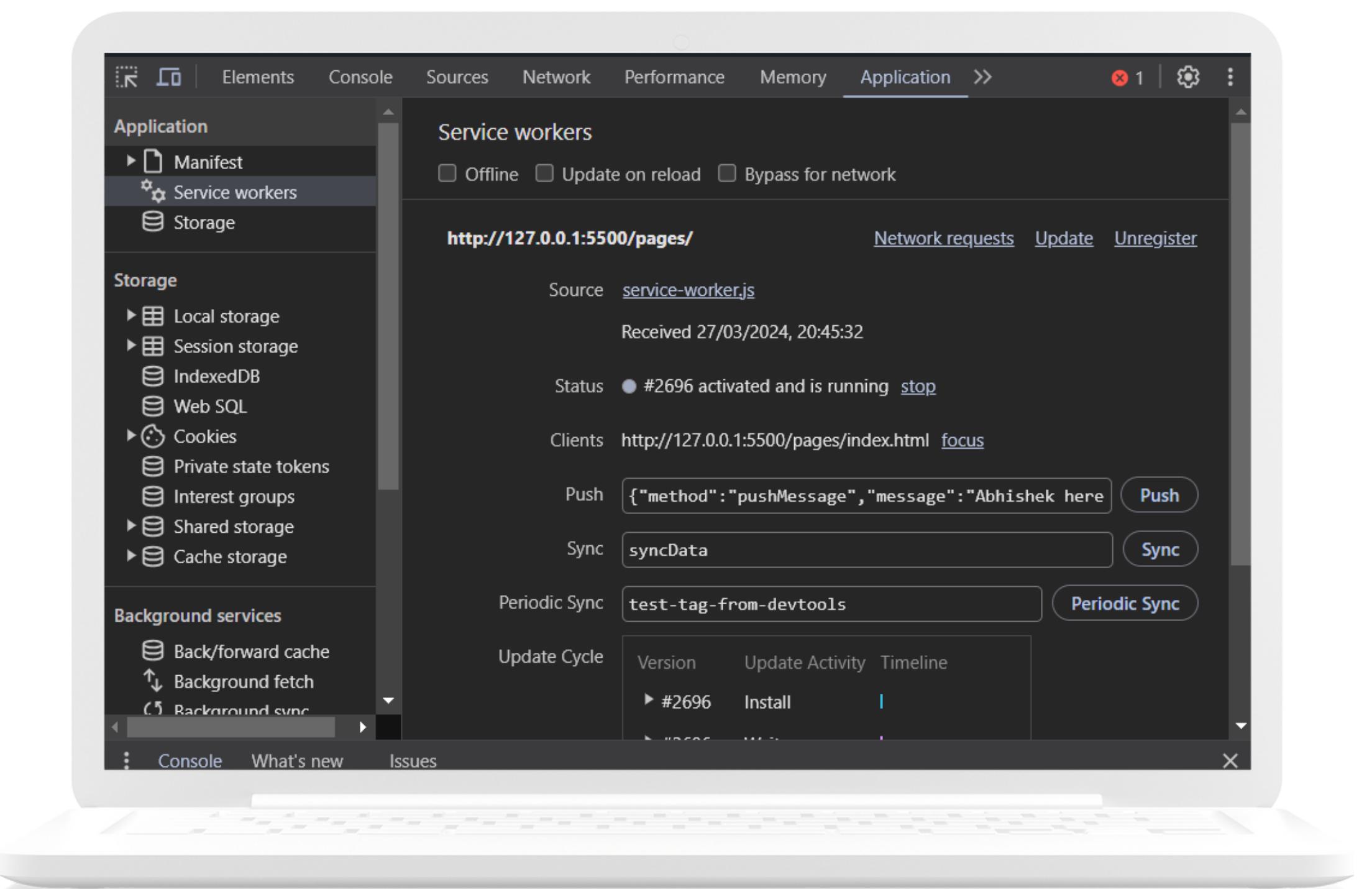


PWA



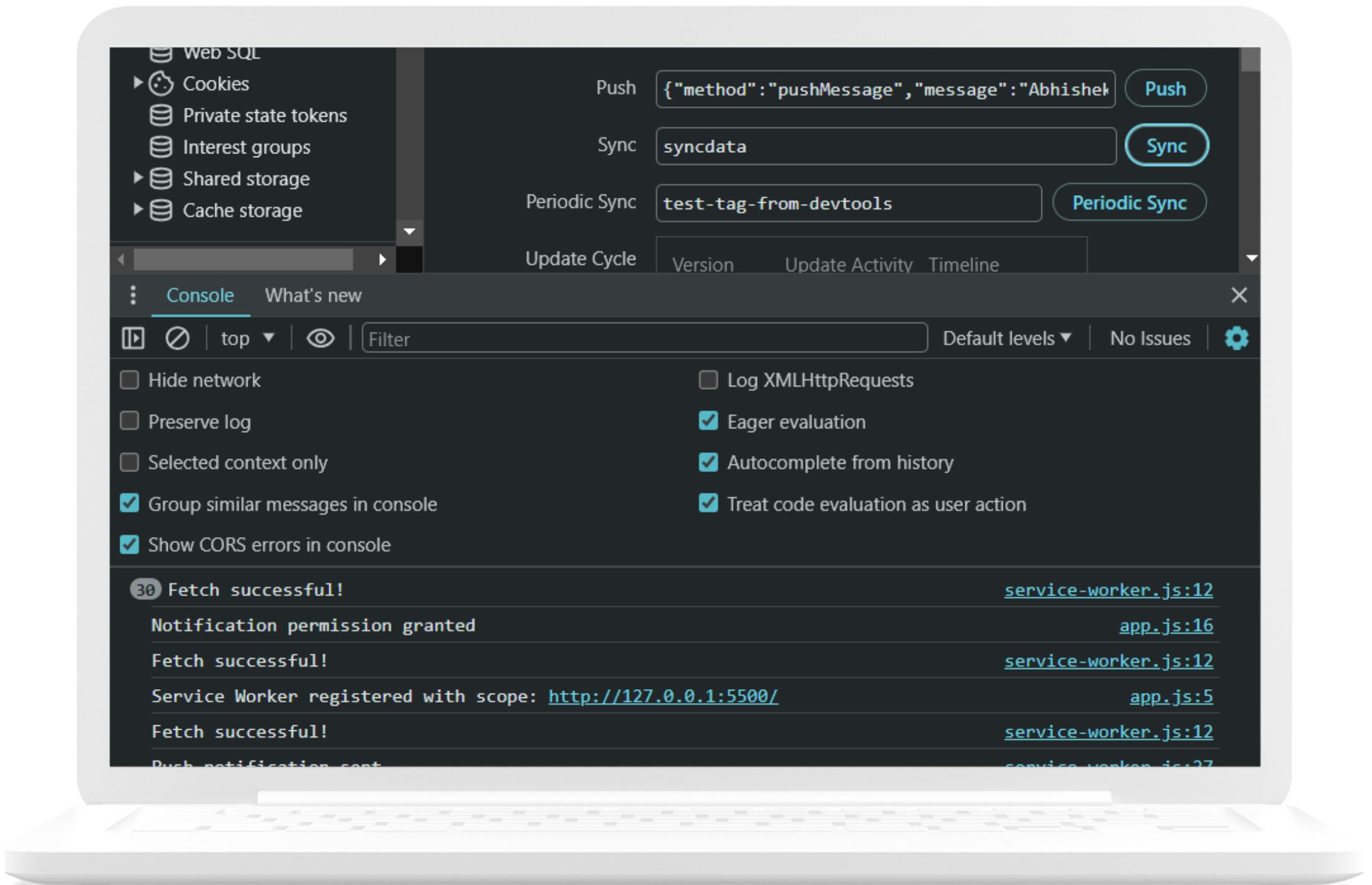
Service Worker

A service worker is a script that runs in the background of a Progressive Web App (PWA), separate from the main web page. It enables features like offline functionality, push notifications, and background synchronization. Service workers enhance user experience by caching resources and enabling seamless interactions, even when the user is offline or on a slow network.



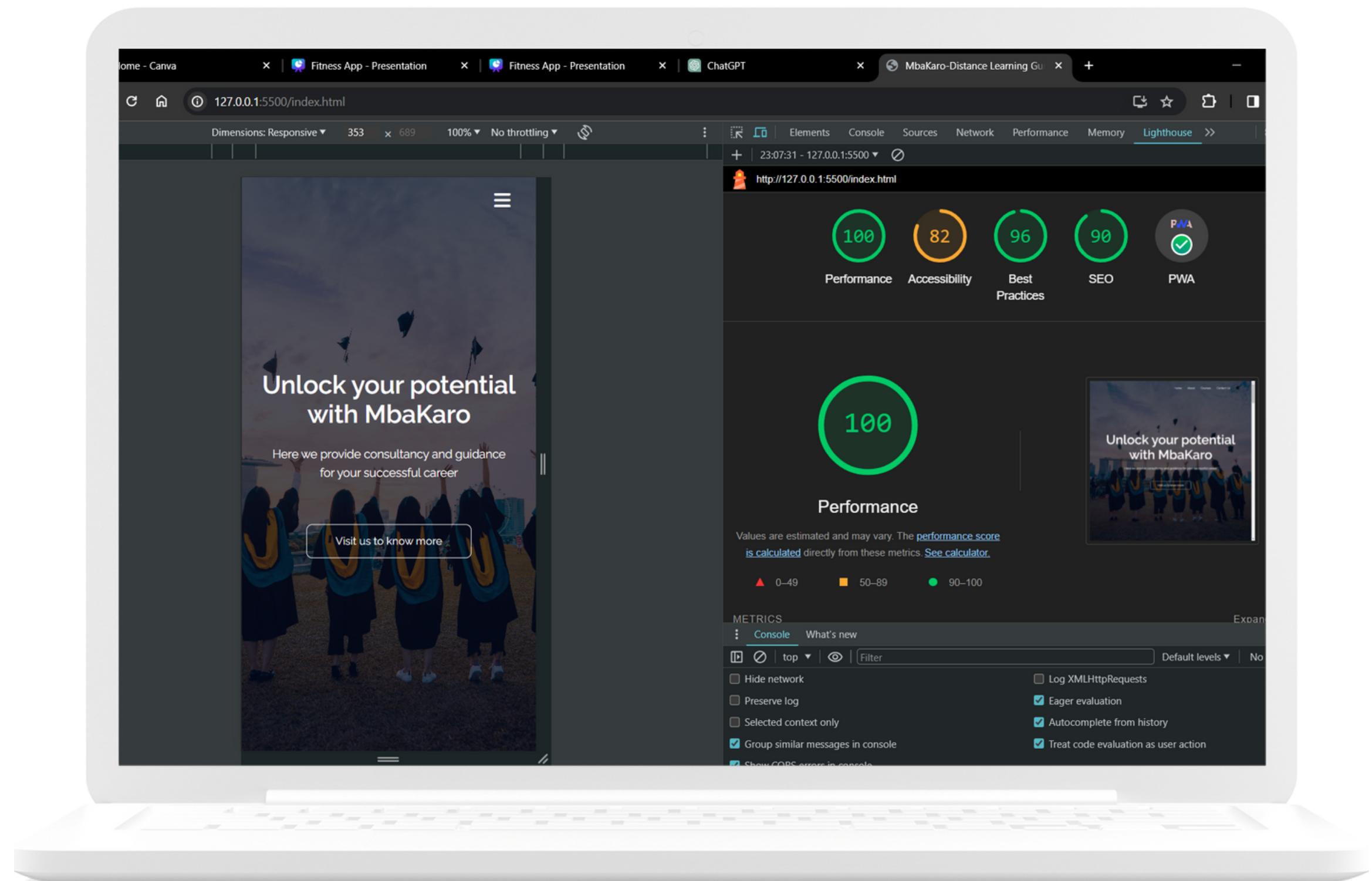
Push , Sync and Fetch

`serviceworker.js` is a key script in PWAs, enabling offline functionality and improving performance by caching resources and intercepting network requests in the background.



Lighthouse

Lighthouse is an open-source tool by Google that audits and provides feedback on web app performance, accessibility, and best practices, helping developers optimize their websites for better user experiences and search engine rankings.



Conclusion

To sum up, the Progressive Web App (PWA) for e-commerce and the Flutter project for health and wellness applications both serve distinct purposes, yet share common goals of enhancing user experience and improving outcomes.

The PWA for e-commerce streamlines online shopping experiences by offering cross-device accessibility and efficient performance. On the other hand, the Flutter project for health and wellness delivers personalized fitness plans, nutritional guidance, and sleep tracking functionalities, catering to users' holistic well-being needs.

In the future, ongoing refinement of both projects can ensure seamless user interactions and broader accessibility, ultimately fostering convenience and better outcomes for users in their respective domains.

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