**Project Proposal**

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**1. Project Overview**

The **On-Demand Service Booking App** is a mobile application built using Flutter, designed to connect users with nearby service providers such as electricians, cleaners, plumbers, and others. The app will leverage Google Maps for location-based searches, allowing users to find the closest professionals, chat with them, and book their services seamlessly.

**Problem Statement**

Inconsistent service quality.

Lack of trust in service providers.

Inefficient booking and communication processes.

Limited options for urgent repairs or specialized services.

The proposed app will address these issues by offering a reliable and transparent solution for users and service providers.

**2. Objectives**

* Provide users with a convenient way to search and connect with service providers nearby.
* Enable real-time chat for users to discuss details with service providers.
* Simplify service booking with an intuitive and user-friendly interface.

**3. Core Features**

**For Users**

* Profile creation and login.
* Google Maps integration to display nearby service providers.
* Search functionality with filters (e.g., rating, service type, proximity).
* Chat feature for discussing service details and availability.
* Booking system for scheduling services.
* Notifications for updates (e.g., booking confirmation).

**4. For Service Providers**

* Profile setup (name, skills, contact, service area).
* Availability management (e.g., online/offline status).
* Chat functionality to communicate with users.
* Booking acceptance and scheduling.
* Plumbing services (leak repairs, pipe installation, and maintenance).
* Electrical repairs (wiring issues, lighting, and power-related tasks).
* AC repair and servicing.
* Appliance repair (washing machines, refrigerators, and microwaves).
* Office Maintenance:
* IT support (network issues, hardware repairs).
* Printer and copier servicing.
* Electrical troubleshooting for office equipment.

**5. Admin Panel**

* Managing users and service providers.
* Monitoring transactions and app activity.
* Reports and analytics for app performance.

**6. Technical Specifications**

* **Frontend Framework**: Flutter
* **Backend**: Firebase (authentication, real-time database, and cloud functions)
* **Maps API**: Google Maps API for location tracking and display
* **Database**: Firestore for real-time and scalable data storage
* **Authentication**: Firebase Authentication (email, phone, or social accounts)
* **Notifications**: Firebase Cloud Messaging (FCM) for booking updates

**7. Tools and Technologies**

* **Programming Languages**: Dart, Firebase SDK
* **Maps Integration**: Google Maps API
* **Design Tools**: Figma/Adobe XD
* **Development Tools**: Android Studio, Visual Studio Code
* **Testing Tools**: Flutter Test, Firebase Test Lab

**8. Deliverables**

* Cross-platform mobile application (Android and iOS).
* Google Maps integration with location-based search.
* Real-time chat and booking features.
* Admin dashboard for app management.
* Source code and deployment documentation.

The main groups of users for this app include:

1. **Elderly and Disabled People**: Those who find it difficult to seek out or arrange maintenance and home services, needing an easy-to-use platform to ensure their home stays functional.
2. **Homeowners and Renters**: Individuals who need on-demand service providers for home repairs, cleaning, and maintenance. They prefer using their phones to quickly search and book trusted professionals in their area.
3. **Service Providers**: Electricians, cleaners, plumbers, and other professionals who need a platform to list their services, manage bookings, and connect with potential clients.
4. **Property Managers**: Individuals managing multiple properties who need regular maintenance services, cleanings, and repairs handled quickly and efficiently.