RV Institute of Technology

Chebrolu, Andhra Pradesh-590018

PROJECT REPORT
ON

"REAL ESTATE APP"

Submitted In the Partial Fulfillment of the Requirements for the Award Of the "PROJECT" 3-1 Semester

BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE AND ENGINEERING

Submitted by

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2025-2026

RV Institute of Technology

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CERTIFICATE

Certified that the Project report on **"REAL ESTATE APP"** is a bonafied work carried out by **SHAIK MOHAMMAD ZAID** bearing **23HU1A05C4 ,DUMMUGUDUPU HEMANTH KUMAR** bearing **23HU1A0531, KOLUSU SIVA NAGA MANIKANTA** bearing **23HU1A0572**and **GUDETI VISHAL SAMRAT** bearing **24HU5A0524a AND YEMINENI. SAMPATH KUMAR** bearing **24HU5A0524 3-1 semester student of RV Institute of Technology** in partial fulfillment for the award of degree of **Bachelor of Engineering in Computer Science and Engineering** during the year 2025-2026. It is certified that all corrections / suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Project Report has been approved as it satisfies the academic requirements in respect to project work prescribed for the degree of Bachelor of Engineering.

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1. _____

2.

ACKNOWLEDGMENT

I would like to convey my hearty thanks to **RV Institute of Technology** for giving me the right platform for our engineering studies and help us complete our Project.

I am thankful to our Principal **Dr. principal name,** RVIT, Chebrolu, for giving us the necessary encouragement and guidance.

I express my deep sense of gratitude to **Dr. G.BHARATHI**, H.O.D, Department of Computer Science and Engineering, RVIT, Chebrolu, for providing me with the motivation, confidence and support required for completing this Project.

I express my sincere thanks to **Mr. Ashoka M,** for helping me to finalize the nature and site for his valuable guidance, constant encouragement, support and suggestions for improvement.

I express my deep and sincere gratitude to **Department of Computer Science and Engineering**, which provided us an opportunity in fulfilling our most, cherished desire of reaching our goals.

I am also thankful to all the members both teaching and non-teaching staff of **Department of Computer Science and Engineering**.

I take this opportunity to extend my full-hearted thanks, gratitude and respect to **my parents**, all **my friends** and **well-wishers,** for giving us their valuable advice and support at all times and in all possible ways, and without whom it would not have been possible to successfully complete our Project.

DECLARATION

We are **SHAIK MOHAMMAD ZAID, DUMMUGUDUPU HEMANTH KUMAR, name 3** and **name 4**, student of 3-1 semester Bachelor of Engineering, **RV Institute of Technology**, hereby declare that the Project Work entitled **"Project Name"** submitted to the **College,** during the academic year 2025-2026, is a record of an original work done by me under the guidance of **Mr. Ashoka M,** Trainer, Department of Computer Science and Engineering.

This Project report is submitted in partial fulfillment of the requirements for the award of the Bachelor of Engineering. The results embodied in this report have not been submitted to any other university or institute for the award of any degree.

Date:

Place: Chebrolu

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ABSTRACT

The Real Estate App is a mobile-based application built using Flutter and Dart, designed to provide users with an easy and interactive way to view, search, and explore real estate properties such as houses, apartments, and commercial spaces.

The project focuses on simplicity, user experience, and cross-platform compatibility, allowing users to access the same interface on both Android and iOS devices.

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🏠 REAL ESTATE APP — PROJECT DOCUMENTATION

CHAPTER 1: INTRODUCTION

1.1 Introduction

The Real Estate App provides a platform for users to browse available properties for sale or rent. It includes features like location-based search using **Google Maps**, property details, and image previews. The project was developed using **Flutter**, which enables a single codebase for multiple platforms.

1.2 Problem Statement

In today's world, users face difficulties finding verified and nearby real estate properties efficiently. Traditional methods are time-consuming and lack accuracy. This app bridges that gap with digital property listings and location-based discovery.

1.3 Scope of the Project

- To help users view nearby properties on a map.
- To display property details such as price, size, and location.
- To allow scalability for future features like booking, chat, and reviews.

1.4 Objectives

- To design a user-friendly real estate browsing interface.
- To integrate **Google Maps** for property location.
- To maintain clean state management using **Provider** package.
- To ensure smooth navigation between app screens.

1.5 Literature Review

Existing apps like MagicBricks and 99Acres inspired the project. However, many lack open-source solutions for beginners. This project aims to simplify and demonstrate a **real estate UI with backend scalability** potential.

1.6 Summary

This chapter introduced the concept, goals, and motivations behind developing the Real Estate App.

CHAPTER 2: SYSTEM REQUIREMENT SPECIFICATIONS

2.1 Specific Requirements

- Cross-platform app using Flutter.
- Location-based property display.
- Provider for state management.
- Responsive UI.

2.2 Hardware Requirements

- Processor: Intel i5 or higher
- RAM: Minimum 8 GB
- Storage: 5 GB free space
- Android Emulator or Android Phone

2.3 Software Requirements

- **Flutter SDK**
- **Android Studio / VS Code**
- **Dart Language**
- **Google Maps API Key**
- **Emulator or physical device**

2.4 Summary

The system requirements were clearly defined for smooth implementation and testing.

CHAPTER 3: TECHNOLOGIES

3.1 Dart

Dart is a client-optimized programming language developed by Google. It is used to build fast apps for multiple platforms from a single codebase.

3.2 Flutter

Flutter is an open-source UI toolkit by Google that allows building **beautiful, natively compiled applications** for mobile, web, and desktop from a single codebase.

3.3 Flutter Dependencies

The project uses the following dependencies:

provider: ^6.0.5

google_maps_flutter: ^2.3.0

cupertino_icons: ^1.0.8

3.4 Summary

Flutter and Dart together provide a powerful framework for cross-platform development.

CHAPTER 4: DETAILED DESIGN

4.1 Structural Design

The app follows the **MVC structure** (Model-View-Controller) using Providers for data management.

- **Models**: Property details.
- **Views**: Screens like Home, Splash, and Property Detail.
- **Controller (Provider)**: Manages app data and state.

4.2 Detailed Description using Flowchart

Flowchart:

Start → Splash Screen → Home Screen → Property List → Property Detail → Exit

4.3 Summary

This chapter described the overall system design and app flow.

CHAPTER 5: IMPLEMENTATION

5.1 Implementation Requirements

A properly configured Flutter environment with Google Maps API key.

5.2 Programming Language Used

Dart is the core programming language used for this app.

5.2.1 Key Features of Flutter

- Hot Reload
- Cross-platform support
- Rich widget library
- Smooth animations

5.2.2 Flutter GUI

The app's interface is designed using widgets like **Scaffold**, **ListView**, **Card**, and **GoogleMap**.

5.4 Summary

The implementation phase involved coding, debugging, and connecting all screens.

CHAPTER 6: WIDGET TESTING

6.1 Widget Testing

Widget testing ensures that each UI component (like buttons, cards, maps) works as expected without crashing.

6.2 Summary

Testing confirmed that app screens function properly and are responsive.

CHAPTER 7: CODE SNAPSHOT DESCRIPTION

7.1 Code

Includes implementation for:

- Splash Screen code :

```
import 'package:flutter/material.dart';

class SplashScreen extends StatefulWidget {
  @override
  _SplashScreenState createState() => _SplashScreenState();
}

class _SplashScreenState extends State<SplashScreen> {
  @override
  void initState() {
    super.initState();
    Future.delayed(Duration(seconds: 2), () {
      Navigator.pushReplacementNamed(context, '/login');
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.blue[100],
      body: Center(
        child: Text("🏠 Real Estate App", style: TextStyle(fontSize:
26, fontWeight: FontWeight.bold)),
      ),
    );
  }

```

Provider for managing property data :

```
class Property {
  final String title;
  final int price;
  final String location;

  Property({required this.title, required this.price, required this.location});
}
```

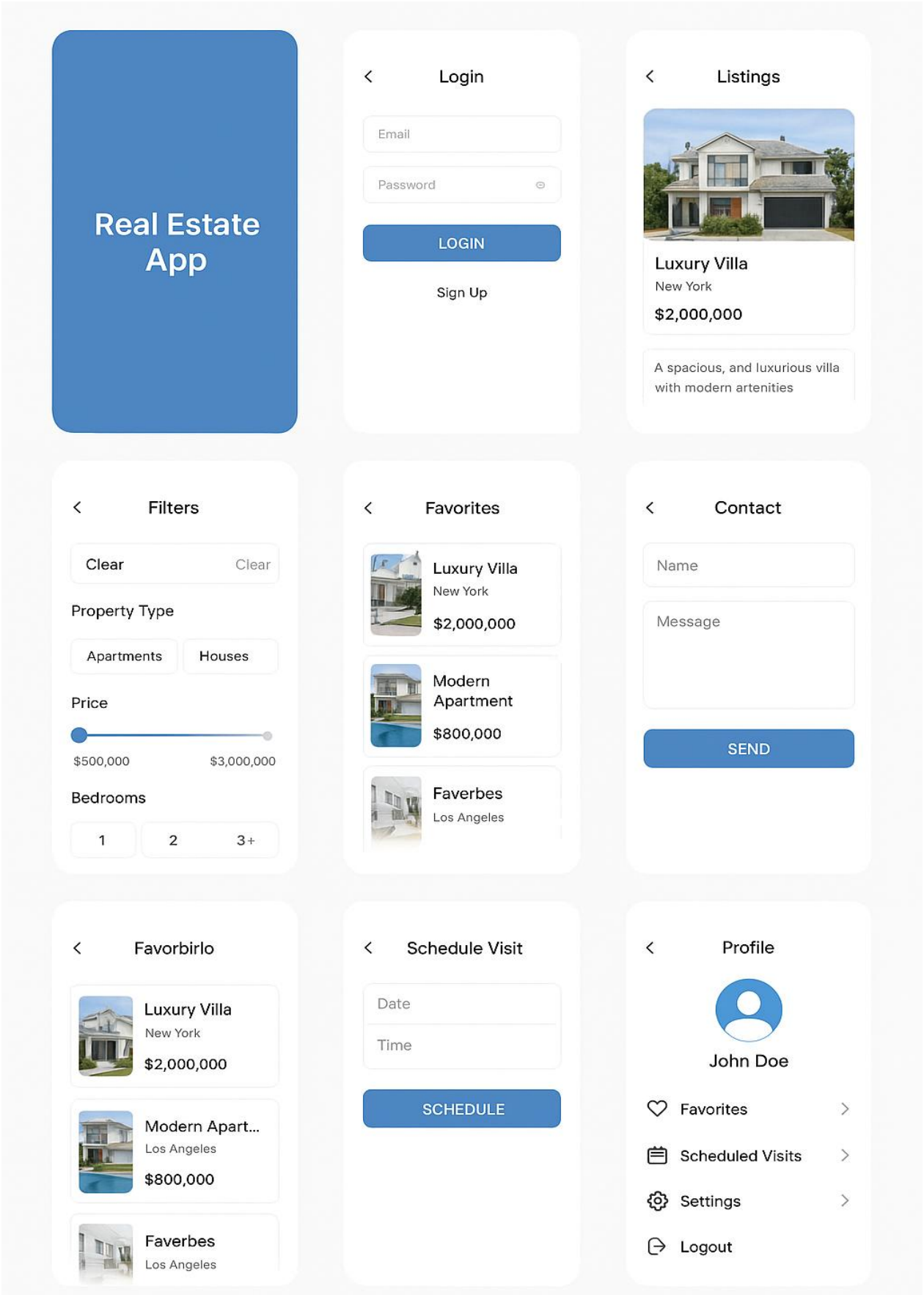
Home Screen code :

```dart
import 'package:flutter/material.dart';
import '../models/property_model.dart';
import '../widgets/property_card.dart';

class HomeScreen extends StatelessWidget {
  final List<Property> properties = [
    Property(title: "Modern Apartment", price: 120000, location: "Mumbai"),
    Property(title: "Cozy Villa", price: 250000, location: "Hyderabad"),
    Property(title: "Luxury Flat", price: 180000, location: "Delhi"),
  ];

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text("Properties"),
        actions: [
          IconButton(icon: Icon(Icons.filter_alt), onPressed: () => Navigator.pushNamed(context, '/filters')),
          IconButton(icon: Icon(Icons.person), onPressed: () => Navigator.pushNamed(context, '/profile')),
        ],
      ),
      body: ListView.builder(
        itemCount: properties.length,
        itemBuilder: (context, index) {
          return GestureDetector(
            onTap: () => Navigator.pushNamed(context, '/details', arguments: properties[index]),
            child: PropertyCard(property: properties[index]),
          );
        },
      ),
      floatingActionButton: FloatingActionButton(
        child: Icon(Icons.map),
        onPressed: () => Navigator.pushNamed(context, '/map'),
      ),
    );
  }
}
```

7.2 Snapshots

7.2.1 Home Page: Displays property listings and map view.

7.2.2 Profile Page: Displays user-related information (optional/future).



CHAPTER 8: CONCLUSION AND FUTURE ENHANCEMENT

8.1 Conclusion

The Real Estate App successfully demonstrates a simple yet powerful real estate listing UI using Flutter. It showcases how to integrate Google Maps, manage state with Provider, and create a visually appealing mobile app.

8.2 Future Scope

- Add user authentication (login/signup)
- Add property posting feature for sellers
- Implement chat between buyers and sellers
- Connect with real database (Firebase or Supabase)

References

1. Flutter Official Documentation – https://flutter.dev
2. Dart Language – https://dart.dev
3. Google Maps Flutter Plugin – https://pub.dev/packages/google_maps_flutter

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