RAJALAKSHMI
ENGINEERING COLLEGE
An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai

CS19611 - MOBILE APPLICATION DEVELOPMENT PROJECT REPORT

CONTACT APP USING ANDROID STUDIO

Submitted by

LOKESHWAR S 220701146

in partial fulfilment for the course for the degree of

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In

COMPUTER SCIENCE AND ENGINEERING

RAJALAKSHMI ENGINEERING COLLEGE

RAJALAKSHMI NAGAR

THANDALAM

CHENNAI-602 105

MAY 2025

BONAFIDE CERTIFICATE

Certified that this project report titled **"CONTACT APP USING ANDROID STUDIO" is the bonafide work of LOKESHWAR S (220701146),** who carried out the work under my supervision. Certified further that to the best of my knowledge, the work reported herein does not form part of any other thesis or dissertation based on which a degree or award was conferred earlier.

SIGNATURE
DR.P KUMAR
HEAD OF THE DEPARTMENT
Computer Science and Engineering
Rajalakshmi Engineering College
Chennai – 602105

SIGNATURE
Dr. KARTHICK
ASSISOCIATE PROFESSOR
Rajalakshmi Engineering College
Chennai - 602105

Submitted to Project and Viva Voce Examination for the subject

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Internal Examiner

External Examiner

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LOKESHWAR S 220701146

TABLE OF CONTENT

CHAPTER 1

ABSTRACT

The **Android Contact Manager App** is a mobile application designed to allow users to efficiently manage their personal and professional contacts on Android devices. Built using Android Studio and Java/Kotlin, this application provides a user-friendly interface for creating, viewing, editing, and deleting contact information, including names, phone numbers, and email addresses. It utilizes SQLite or Room Database for secure local data storage, ensuring that user data is preserved even when offline.

The app is designed following modern Android development practices, using XML for layout design and adhering to the Model-View-Controller (MVC) or MVVM architecture. Features include real-time search, contact sorting, and the ability to call or email a contact directly from the app. Integration with Android's native permissions and lifecycle management ensures both performance and data safety.

This project serves as a practical demonstration of Android app development from scratch, including UI design, database integration, and deployment to real devices. It is ideal for students and developers aiming to learn mobile app development with real-world utility.

CHAPTER 2

INTRODUCTION

2.1 GENERAL

With the rise of smartphones, contact management has become a daily necessity. Users often struggle to manage hundreds of contacts efficiently using the default apps provided by device manufacturers. This project aims to develop a user-friendly Android application that allows users to manage, store, and interact with their contacts with ease. The Contact Manager App includes features such as adding, editing, deleting, and calling contacts, providing an all-in-one solution for personal or business use.

2.2 OBJECTIVES:

- To design a simple and intuitive interface for managing contacts.
- To implement CRUD (Create, Read, Update, Delete) operations for contact entries.
- To integrate calling and emailing functionality directly from the app.
- To use SQLite or Room database for persistent local storage.
- To provide real-time search and sorting functionalities.

2.3 EXISTING SYSTEM

Most Android smartphones come with a pre-installed contacts app that offers basic features. However, these apps often lack customization, advanced filtering, or user-specific features. Some third-party apps provide additional functionality but may come with ads, lack data privacy, or require internet access.

CHAPTER 3

LITERATURE SURVEY

Numerous studies and applications in mobile development emphasize the importance of user-friendly interfaces and efficient data handling. Key takeaways from existing applications and research include:

- **Efficient local data storage** using SQLite or Room.
- **Minimalist UI/UX design** to reduce user learning curves.
- **Security practices** to ensure user data privacy.
- Google's official documentation and developer community forums provided technical guidance for integrating native Android components.

CHAPTER 4

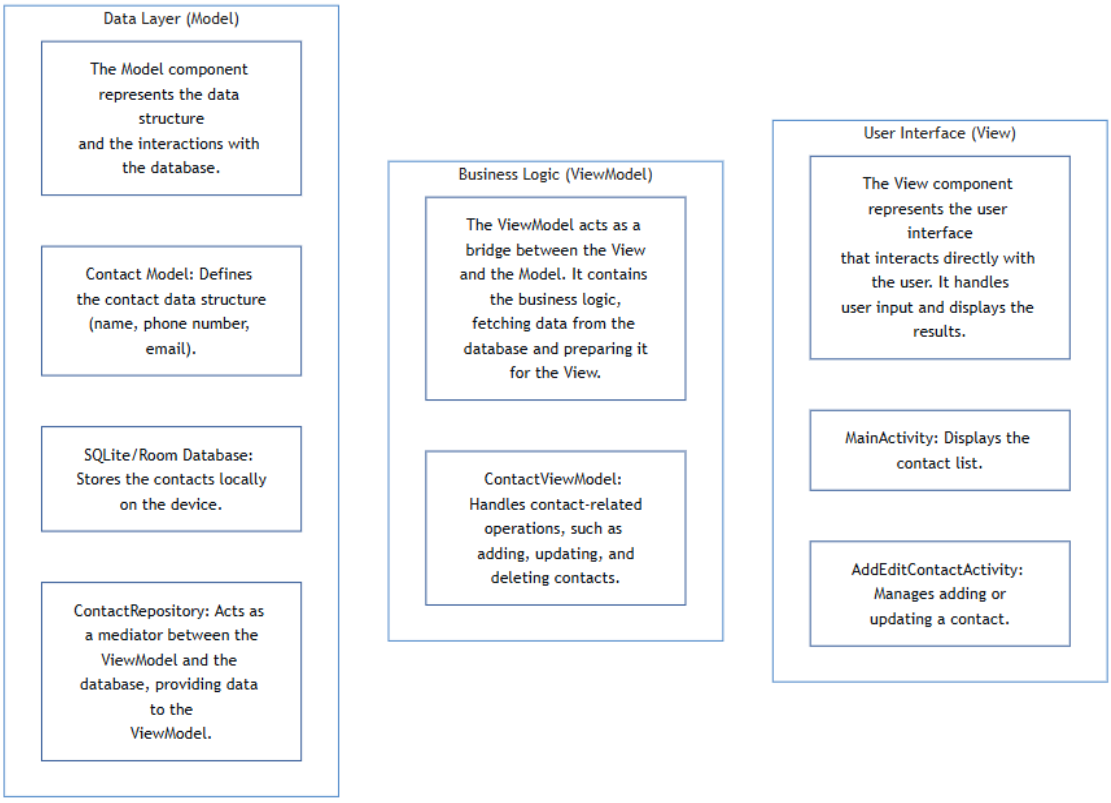
PROPOSED SYSTEM

4.1 SYSTEM OVERVIEW

The system is a standalone Android application built using Android Studio. The architecture follows the MVVM (Model-View-ViewModel) pattern. The main components of the app include:

- **MainActivity** – Displays the contact list.
- **AddEditContactActivity** – Used for adding or updating contacts.
- **Contact Model** – Represents the contact structure.
- **SQLite/Room Database** – Stores contacts locally on the device.

4.2 SYSTEM ARCHITECTURE



(Fig 3.1 System Architecture)

CHAPTER 5

MODULE DESCRIPTION

5.1 MODULES

- **User Interface (UI) Module**: Displays contacts, allows adding, editing, and deleting contacts.
- **Database Module**: Uses Room for local storage of contacts.
- **Data Handling (Repository) Module**: Mediates between ViewModel and database for data access.
- **Business Logic Module (ViewModel)**: Manages and formats data for the UI.
- **Permission Handling Module**: Requests permissions to read/write contacts.
- **Utility Modules**: Includes search, sorting, and notifications.
- **External Libraries and Dependencies**: Uses libraries like Room, RecyclerView, and Glide.
- **Networking Module (Optional)**: Syncs contacts to the cloud via Firebase or Retrofit (future feature).

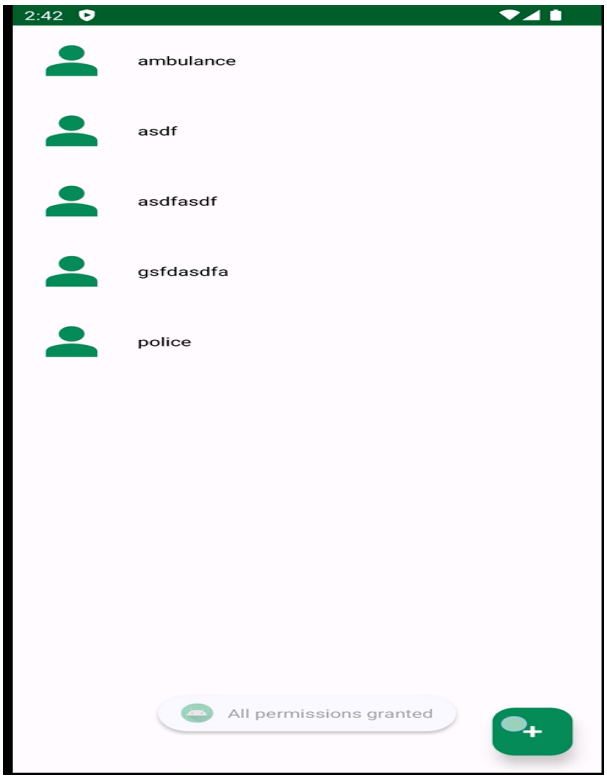
CHAPTER 6

IMPLEMENTAION AND RESULTS

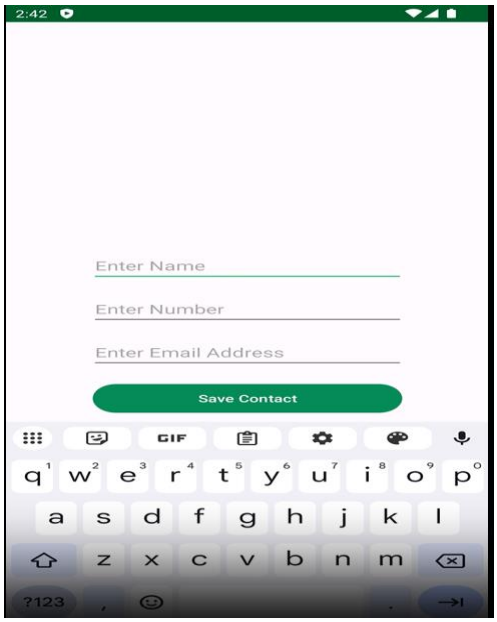
6.1 TOOLS USED

- Android Studio
- Java
- XML for UI
- SQLite (for storing custom Truths/Dares)
- GRADLE (DEPENDENCY DEVELOPMENT)
- EMULATOR FOR TESTING AND DEBUGGING

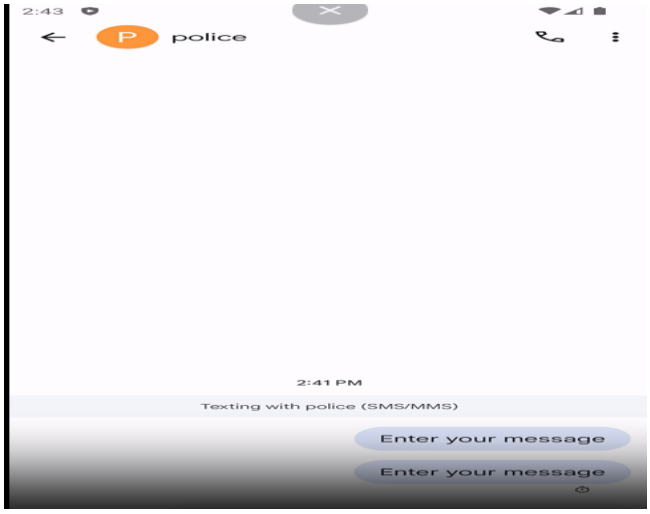
6.2 OUTPUT SCREENSHOTS



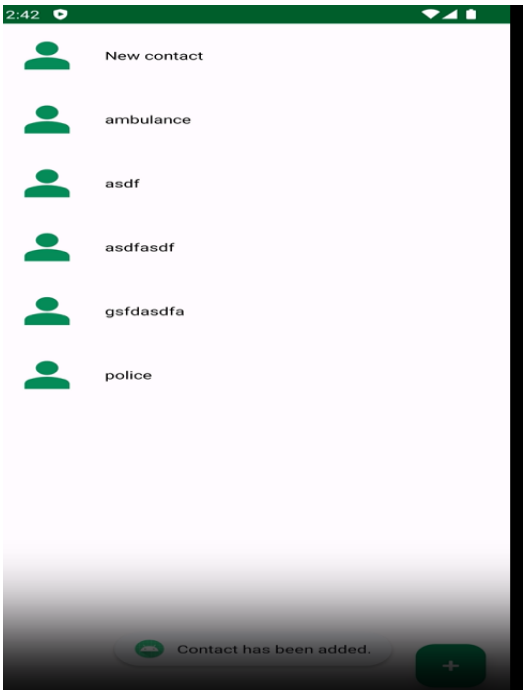
CONTACTS LIST



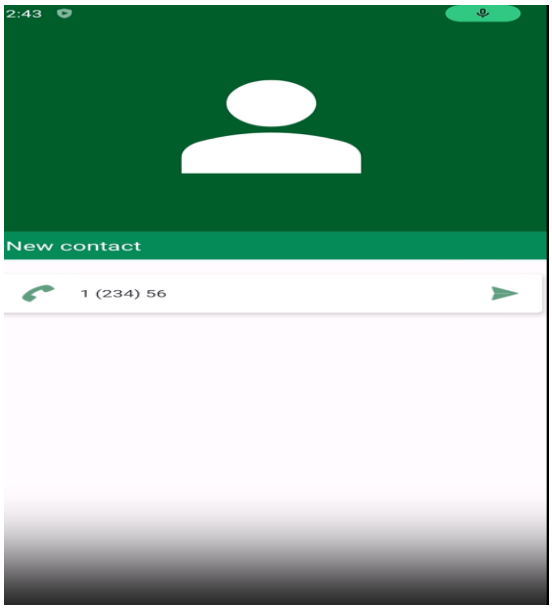
SAVING CONTACTS FEATURE



MESSAGING FEATURE



VIEW FEATURE OF SAVED CONTACTS



DISPLAY OF NEW CONTACT CREATED

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

7.1 CONCLUSION

The Contact Manager App successfully provides an intuitive, responsive, and feature-rich solution for managing contacts on Android devices. It addresses limitations in many default apps and third-party solutions by offering a clean UI, offline access, and direct communication features while ensuring privacy through local data storage.

7.2 FUTURE ENHANCEMENT

- **Cloud Backup & Sync**: Enable Google Drive or Firebase integration for contact backup.
- **Contact Grouping**: Allow users to organize contacts into custom groups.
- **Profile Pictures**: Add support for uploading and displaying contact images.
- **Dark Mode**: Improve UI with a theme switcher.
- **Voice Commands**: Integrate voice control to add or call contacts.
- **Import/Export**: Allow users to import or export contacts in VCF format,

REFERENCS

1. Android Developer Documentation
2. Mobile UI/UX Best Practices (2024)
3. Firebase Documentation for Android