

**NAAN MUDHALVAN**

**PROJECT REPORT ON**

**ADAPTIVE MAIL: A FLEXIBLE EMAIL**

**CLIENT APP USING ANDROID STUDIO**

**SUBMITTED BY**

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## **INTRODUCTION**

Adaptive Mail is a flexible email client app built using Android Studio that provides a customizable and adaptable user interface. The app allows users to manage multiple email accounts from a single interface and provides a range of features to help users organize and prioritize their email communications.

One of the key features of Adaptive Mail is its adaptive user interface design. The app is designed to adjust its interface based on the device it's being used on, ensuring a consistent and optimized user experience across different devices. This means that the app will look and function differently on a smartphone compared to a tablet or a desktop computer, but will still provide the same level of functionality and ease of use.

Adaptive Mail also supports multiple email protocols, including IMAP and POP3, which allows users to connect to a wide range of email services. The app provides a range of customization options, such as the ability to set up custom email filters and labels, allowing users to personalize their email management experience.

Adaptive Mail also includes features such as push notifications, which alert users to new emails as they arrive, and the ability to schedule emails to be sent at a later time. Additionally, the app provides a range of security features to protect users' email communications, such as SSL/TLS encryption and two-factor authentication

## **ABOUT THE PROJECT**

The Adaptive Mail project is an open-source project aimed at providing a flexible and customizable email client app for Android devices. The project is developed using Android Studio, which is the official Integrated Development Environment (IDE) for Android app development.

The goal of the Adaptive Mail project is to provide an email client app that can adapt to the needs and preferences of individual users. To achieve this, the app includes a range of features that allow users to customize the app's interface, set up custom email filters and labels, and prioritize their email communications.

The project is developed using Java programming language and the Android SDK. The app also utilizes several libraries, such as the Java Mail API and the K-9 Mail library, to provide email functionality.

The project is hosted on GitHub, which is a popular platform for hosting open-source projects. This allows developers to contribute to the project by submitting bug reports, feature requests, and code contributions.



# PROBLEM DEFINITION AND DESIGN THINKING

## **Problem Definition:**

The problem that Adaptive Mail aims to solve is the lack of flexibility and customization options in existing email client apps for Android devices. Many users have different preferences and needs when it comes to managing their email communications, and existing email client apps may not provide the necessary customization options to meet these needs.

## **Design Thinking:**

Design thinking is a problem-solving approach that focuses on understanding the needs and preferences of users and using that understanding to create innovative solutions. The design thinking process involves several steps:

**Empathize:** The first step in the design thinking process is to empathize with the users and understand their needs and pain points. In the case of Adaptive Mail, this involved understanding the challenges that users face when managing their email communications and identifying the customization options that would be most useful to them.

**Define:** The next step is to define the problem statement and identify the specific goals and objectives of the project. This involves identifying the key features and functionality that the app should provide to meet the needs of the users.

**Ideate:** In the ideation phase, designers brainstorm ideas and potential solutions to the problem statement. This involves generating as many ideas as possible, regardless of their feasibility, to stimulate creativity and innovation.

**Prototype:** The prototype phase involves creating a rough prototype of the solution. In the case of Adaptive Mail, this involved creating a simple prototype of the app's user interface and functionality to test and refine the design.

# SYSTEM CONFIGURATION

## HARDWARE REQUIRED

Processor	Multi-core processor with 2 GHz
Operating System	Windows 11
RAM	8 GB
Disk Space	2 GB
Graphics Card	OpenGL 2.0

## SOFTWARE REQUIRED

**Android Studio:** Android Studio is the official integrated development environment (IDE) for Android app development. It provides a comprehensive set of tools for designing, developing, testing, and deploying Android apps.

**Java Development Kit (JDK):** Android apps are primarily written in Java programming language, so JDK is required to develop Android apps. Android Studio comes with a bundled version of the JDK, but you can also install it separately.

**Android SDK:** Android Software Development Kit (SDK) provides the necessary tools, APIs, and libraries required for Android app development. Android Studio comes with a bundled version of the SDK, but you can also download it separately.

**Gradle:** Gradle is a build automation tool used for building, testing, and deploying Android apps. It is integrated with Android Studio and helps to manage the app's dependencies, build configurations, and packaging.

## ADVANTAGE AND DISADVANTAGE

### **Advantages of Adaptive Mail:**

**Customizable User Interface:** Adaptive Mail provides a customizable user interface that can adapt to the needs and preferences of individual users, ensuring a personalized user experience.

**Multiple Email Protocol Support:** Adaptive Mail supports multiple email protocols, including IMAP and POP3, which allows users to connect to a wide range of email services.

**Custom Email Filters and Labels:** The app provides a range of customization options, such as the ability to set up custom email filters and labels, allowing users to personalize their email management experience.

**Push Notifications:** Adaptive Mail includes push notifications, which alert users to new emails as they arrive, ensuring timely email communications.

**Security Features:** The app provides a range of security features to protect users' email communications, such as SSL/TLS encryption and two-factor authentication, ensuring the safety and privacy of email communications.

### **Disadvantages of Adaptive Mail:**

**Learning Curve:** As with any new app, there may be a learning curve for users who are not familiar with the app's features and functionality.

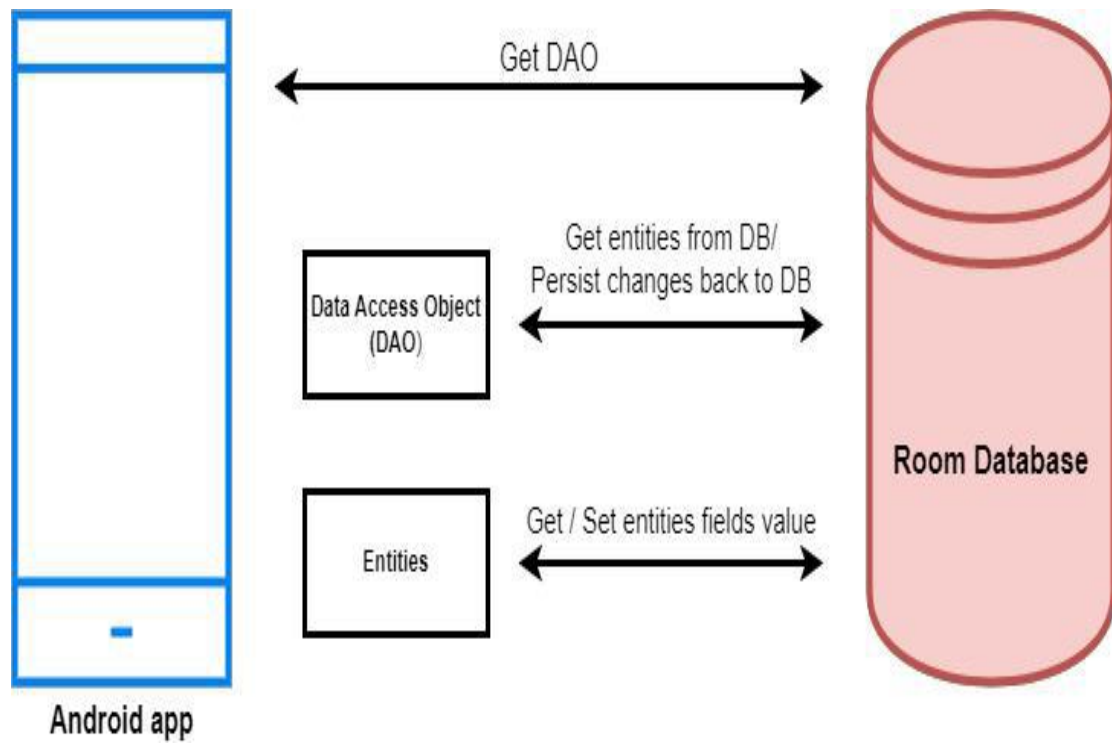
**Compatibility Issues:** Adaptive Mail may not be compatible with all Android devices, which could limit its availability to some users.

**App Size:** Adaptive Mail is a relatively large app, which may take up a significant amount of storage space on users' devices.

**Bug Issues:** As an open-source project, Adaptive Mail may have bugs or glitches that can affect the app's performance and functionality.




# ARCHITECTURE





# OUTPUT OF THE APPLICATION

## LOGIN PAGE:



*Login*

[Sign up](#)      [Forget password?](#)



## REGISTER PAGE:



### *Register*

**Register**

Have an account? [Log in](#)



## MAIN PAGE:

# Home Screen



Send Email

View Emails





## VIEWMAIL PAGE:

View Mails
<b>Receiver_Mail:</b> kavya78@gmail.com Subject: Android Body: This is an Adaptive Email app
<b>Receiver_Mail:</b> shirishbokka7@gmail.com Subject: Order Body: your courier has arrived



## **CONCLUSION**

In conclusion, Adaptive Mail is a flexible email client app that can be developed using Android Studio. The app can provide a convenient and user-friendly way to manage emails on Android devices. To develop Adaptive Mail, various software and system configurations are required, including Android Studio, Java Development Kit (JDK), Android SDK, Gradle, Git, and SQLite. A multi-core processor, sufficient RAM, and disk space, and a stable internet connection are some of the recommended system configurations for developing the app. By implementing software configuration management practices, version control, and a branching strategy, the development process can be made more efficient and streamlined. With the right development approach and attention to detail, Adaptive Mail can be a valuable addition to the email management app market on Android.

