1. INTRODUCTION

OVERVIEW

Adaptive Mail app is a sample project that demonstrates how to use the Android Compose UI toolkit to build a conversational UI. The app simulates a messaging interface, allowing the user to send and receive messages, and view a history of previous messages. It showcases some of the key features of the Compose UI toolkit, data management, and user interactions.

That can manage your email and connections. They can manage a single email address or combine multiple email addresses into a single inbox for easy access. Desktop email clients are typically more responsive, as they do not route their connection through the browser's server. Most applications also have a mobile counterpart, allowing you access to the most recent information while away from your desk anytime.

PURPOSE

Email client is a software program that you download and install on your computer (or mobile device) to send and receive emails directly on your desktop. Your email client downloads messages you’ve received from the email server at a pre-defined time as per your wishes or manually if you’d like. Your mail client will download your emails from the server to your computer’s hard drive. Also, it uploads messages you want to be sent to the email server.

Thus, to send an email, your computer must have an internet connection for your email client to access your service providers email server. Once the emails are downloaded to your computer, you can access your emails at any time you want, with or without an internet connection. Additionally, with an email client, you can configure multiple email addresses that you own from different email service providers, free or premium.

2 PROBLEM DEFINITION AND DESIGN THINKING

Empathy map

I was expecting something different

What do you think?

Where should i start?

I want something reliable

What else am i missing?

Why is this so hard?

Wasting too much time?

Maybe this isn't the best

SAYS

THINKS

DOES

FEELS

Check the app

Make all decision

More research

Ask friends

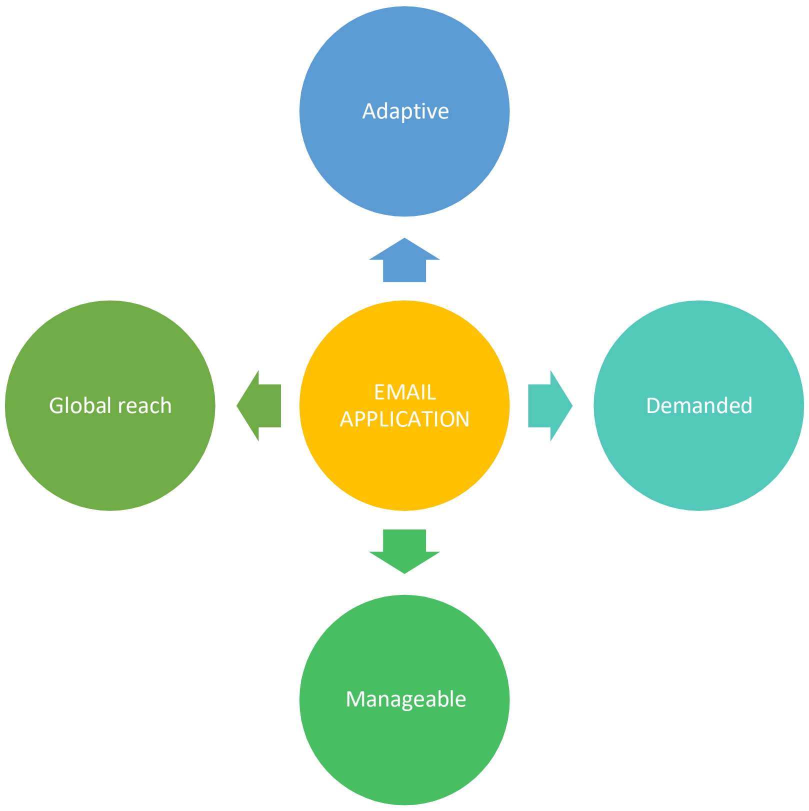
Excited

Anxious

Over whelmed

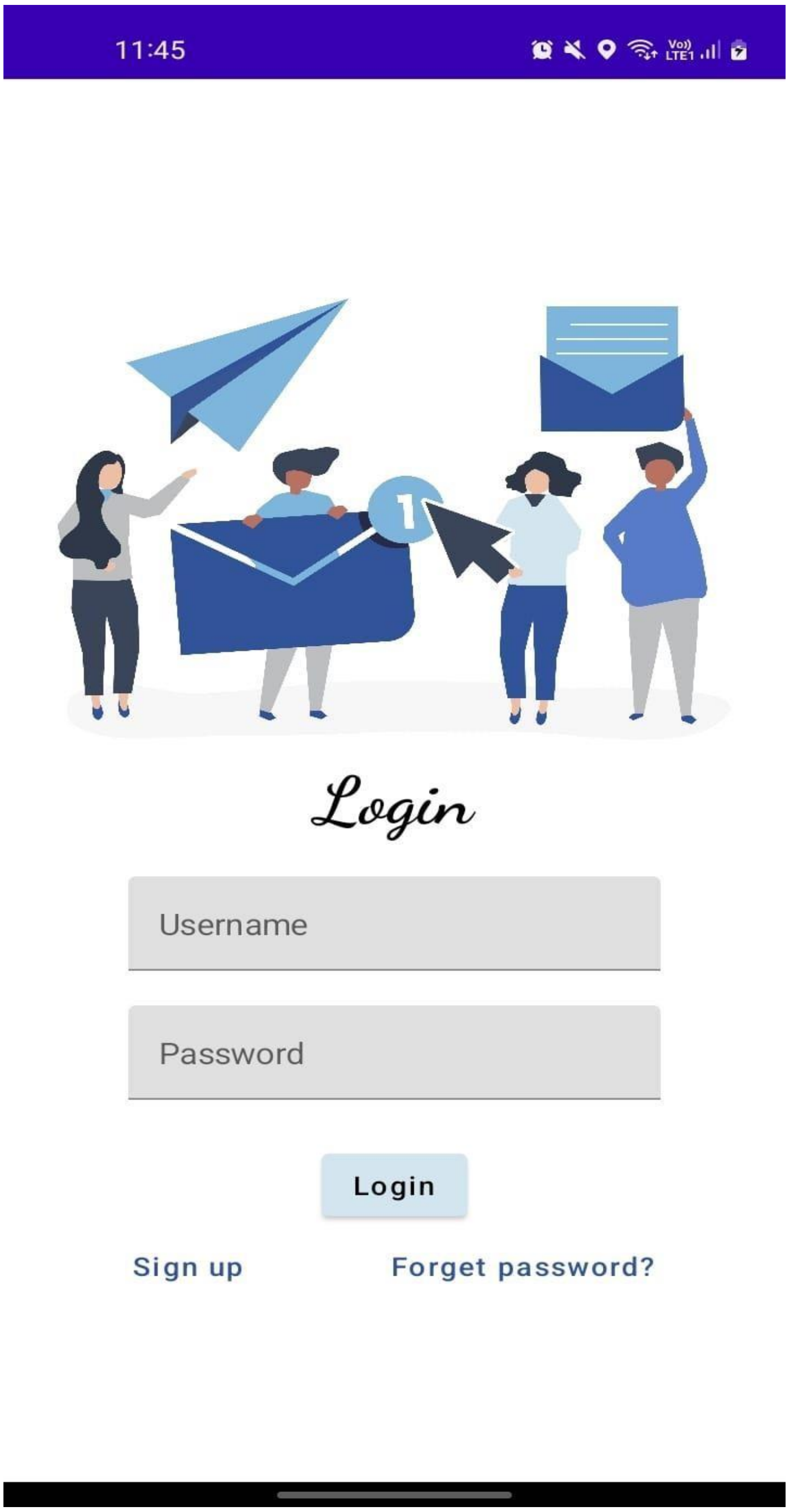
Inadequate

Ideation and brainstorming map

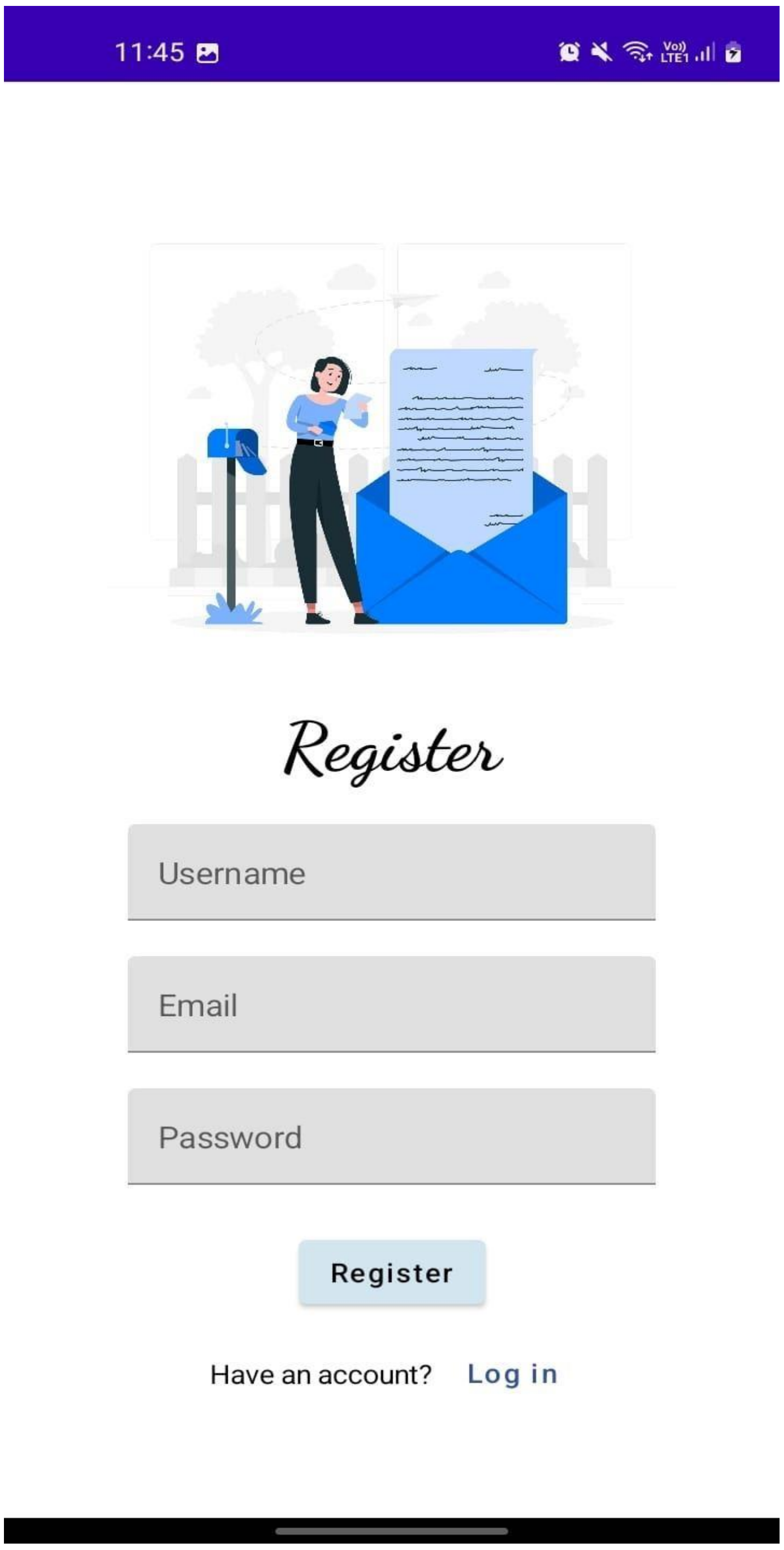


3 RESULT

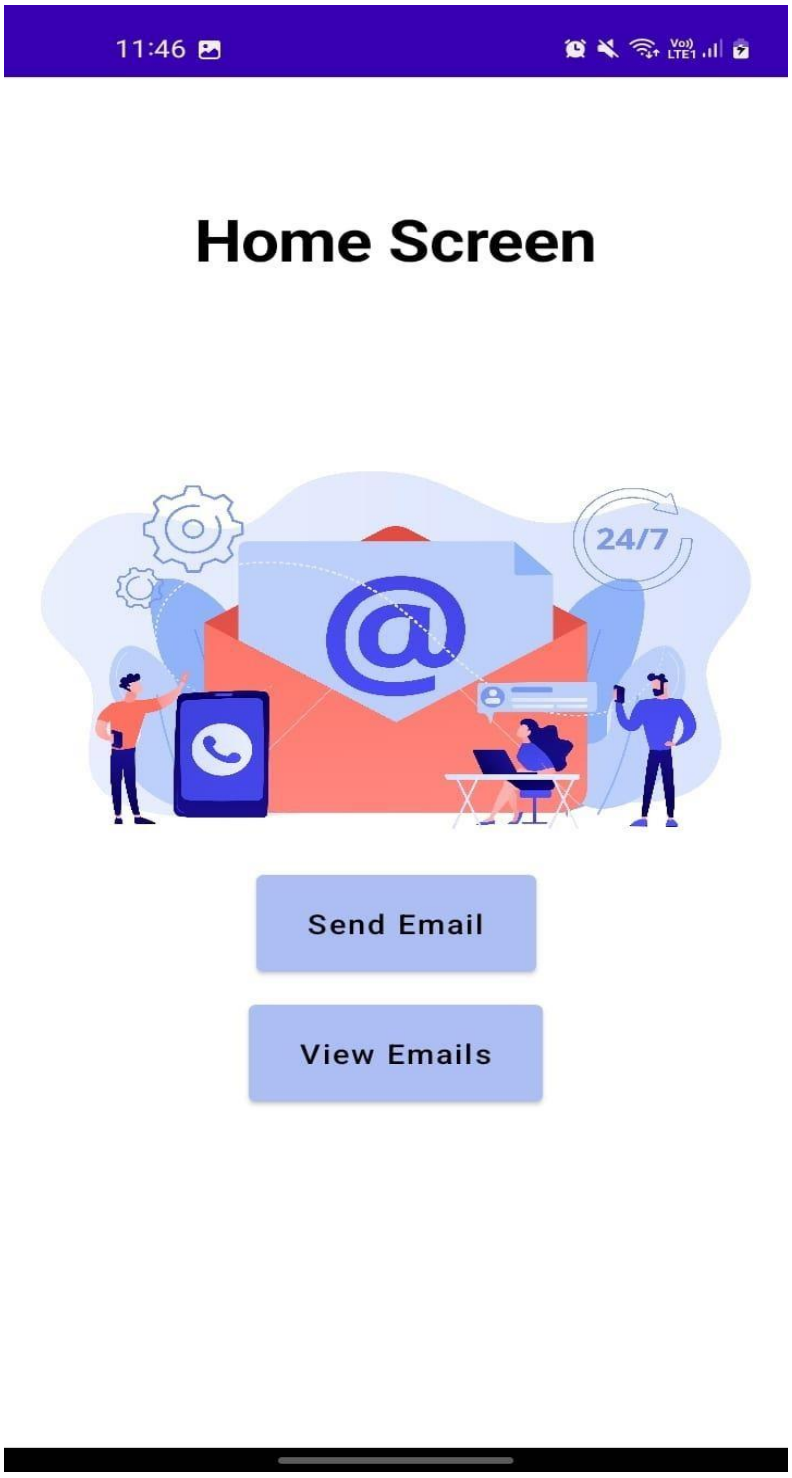
Login Page



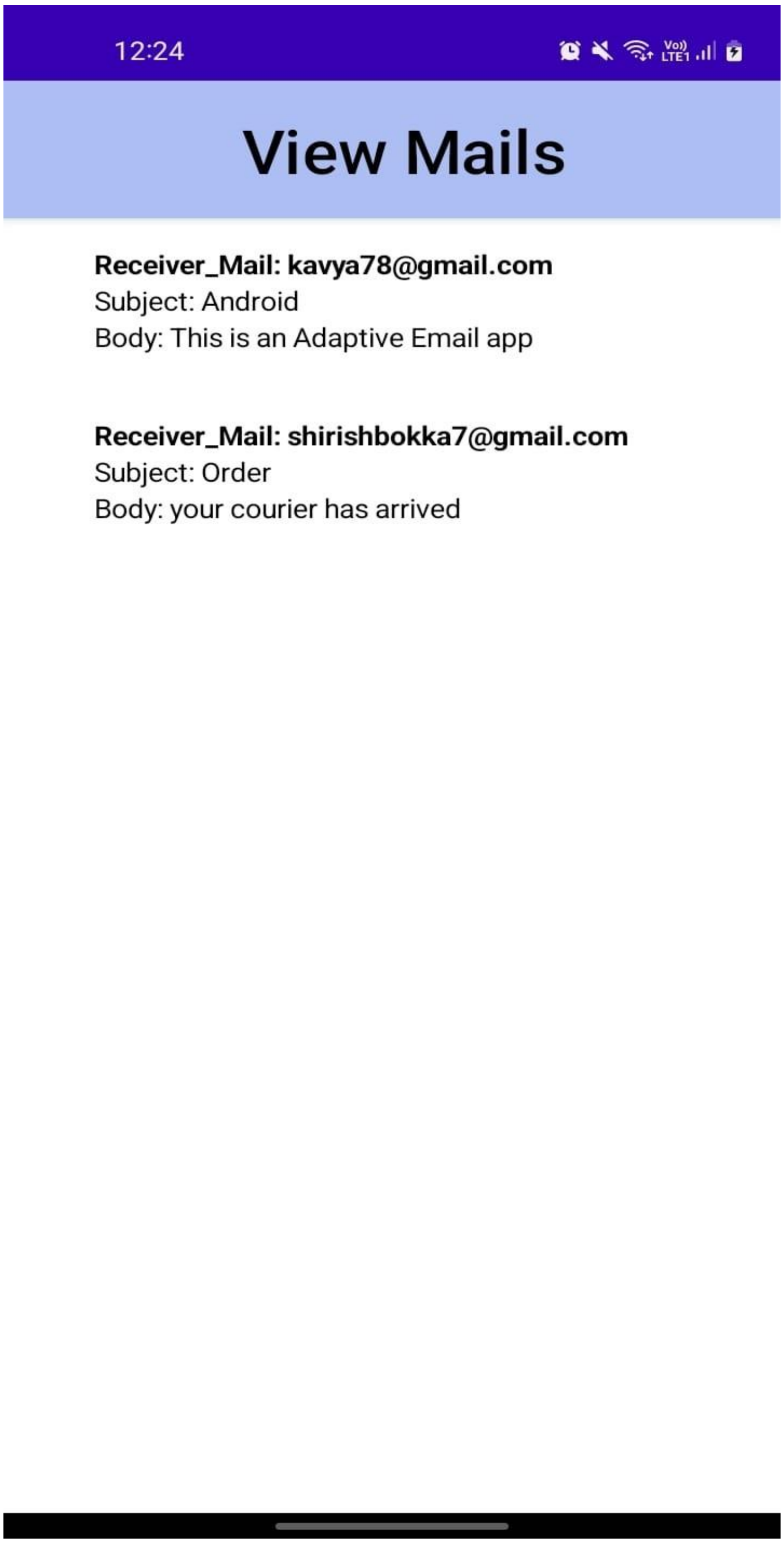
Register page



Home page



View mails


12:24

View Mails

Receiver_Mail: kavya78@gmail.com
Subject: Android
Body: This is an Adaptive Email app

Receiver_Mail: shirishbokka7@gmail.com
Subject: Order
Body: your courier has arrived

4 ADVANTAGES & DISADVANTAGES

Advantages

- cheap - sending email costs the same regardless of distance and the number of people you send it
- fast - an email should reach its recipient in minutes, or at the most within a few hours
- convenient - your message will be stored until the recipient is ready to read it, and you can easily send the same message to a large number of people
- permanent - you can keep a record of messages and replies, including details of when a message was received

One of the main advantages of email is that you can quickly and easily send electronic files such as text documents, photos and data sheets to several contacts simultaneously by attaching the file to an email. Check with your internet service provider if there is a limit to the size of email attachments you can send. Some businesses may also limit the type and size of attachments that they are willing to receive.

Disadvantages

- spam
- viruses
- data storage issues
- data protection issues

Unsolicited email can easily overwhelm your email system unless you install a firewall and anti-spam software. Viruses can spread through email attachments or links, and other internet and email security issues may arise, especially if you're using the cloud or remote access. Electronic storing space can also become a problem, particularly where emails with large attachments are widely distributed.

The less formal nature of email can lead to careless or even libellous remarks being made which can damage your business. Equally risky is sending emails by mistake, where an email can go to the wrong person accidentally, potentially leaking confidential data and sensitive business information.To minimise these risks, you should create and implement an email and internet acceptable use policy for your business and take steps to minimise the likelihood of business data breach and theft.

5 APPLICATIONS

Email can be used for various purposes can be used to communicate within the organization or personally.

- It provides flexibility in communication.
- It is a professional way to communicate.

Email is also used as a newsletter to send advertisements, promotions, and various other content.

6 CONCLUSION

Email marketing is still the driving force of some major conversions for e-businesses. But, frankly speaking, using emails to get the expected outcomes is a constantly evolving process and what is yielding results right now won’t be an integral part of the future of email marketing.

Email marketing is becoming more and more custom tailored to each individual. From tracking consumer spending habits to their internet usage, marketers are using data to figure out exactly what users need and when they need it.

Even the language used can be personalized to different segments for more effective marketing.

As email marketing grows more and more popular, however, people will become desensitized to such messages. They may begin blocking or marking emails as spam if they do not seem authentic.

Therefore, email is not going to be replaced with any other means of online marketing. It is only going to be more automated but more personalized as well.

7 FUTURE SCOPE

Email is not going to be replaced with any other means of online marketing- It is only going to be more automated but more personalized as well.

In the future of Email Marketing, you all will witness continued personalization of email as a norm.

- Hyper-Personalization will be the need of Great Importance
- Artificial Intelligence (AI) will be a Deciding Factor
- Utilization of Visuals will Increase
- Machine-to-Machine Correspondence will Rise

8 .CODING

USER.KT:

```
package com.example.emailapplication

import androidx.room.ColumnInfo
import androidx.room.Entity
import androidx.room.PrimaryKey

@Entity(tableName = "user_table")
data class User(
    @PrimaryKey(autoGenerate = true) val id: Int?,
    @ColumnInfo(name = "first_name") val firstName: String?,
    @ColumnInfo(name = "last_name") val lastName: String?,
    @ColumnInfo(name = "email") val email: String?,
    @ColumnInfo(name = "password") val password: String?,

    )
```

USERDAO.KT:

```
package com.example.emailapplication

import androidx.room.*

@Dao
interface UserDao {

    @Query("SELECT * FROM user_table WHERE email = :email")
    suspend fun getUserByEmail(email: String): User?

    @Insert(onConflict = OnConflictStrategy.REPLACE)
    suspend fun insertUser(user: User)

    @Update
    suspend fun updateUser(user: User)

    @Delete
    suspend fun deleteUser(user: User)
}
```

USERDATABASE::

```
package com.example.emailapplication

import android.content.Context
import androidx.room.Database
import androidx.room.Room
import androidx.room.RoomDatabase

@Database(entities = [User::class], version = 1)
abstract class UserDatabase : RoomDatabase() {

    abstract fun userDao(): UserDao
    companion object {

        @Volatile
        private var instance: UserDatabase? = null
        fun getDatabase(context: Context): UserDatabase {
            return instance ?: synchronized(this) {
                val newInstance = Room.databaseBuilder(
                    context.applicationContext,
                    UserDatabase::class.java,
                    "user_database"
                ).build()
                instance = newInstance
                newInstance
            }
        }
```

USERDATABSEHELPER:

```
package com.example.emailapplication

import android.annotation.SuppressLint
import android.content.ContentValues
import android.content.Context
import android.database.Cursor
import android.database.sqlite.SQLiteDatabase
import android.database.sqlite.SQLiteOpenHelper

class UserDatabaseHelper(context: Context) :
    SQLiteOpenHelper(context, DATABASE_NAME, null, DATABASE_VERSION) {

    companion object {
        private const val DATABASE_VERSION = 1
        private const val DATABASE_NAME = "UserDatabase.db"

        private const val TABLE_NAME = "user_table"
        private const val COLUMN_ID = "id"
        private const val COLUMN_FIRST_NAME = "first_name"
        private const val COLUMN_LAST_NAME = "last_name"
        private const val COLUMN_EMAIL = "email"
        private const val COLUMN_PASSWORD = "password"
    }
    override fun onCreate(db: SQLiteDatabase?) {
        val createTable = "CREATE TABLE $TABLE_NAME (" +
                "$COLUMN_ID INTEGER PRIMARY KEY AUTOINCREMENT, " +
                "$COLUMN_FIRST_NAME TEXT, " +
                "$COLUMN_LAST_NAME TEXT, " +
                "$COLUMN_EMAIL TEXT, " +
                "$COLUMN_PASSWORD TEXT" +
                ")"

        db?.execSQL(createTable)
    }

    override fun onUpgrade(db: SQLiteDatabase?, oldVersion: Int, newVersion: Int) {
        db?.execSQL("DROP TABLE IF EXISTS $TABLE_NAME")
        onCreate(db)
    }

    fun  insertUser(user: User) {
        val db = writableDatabase
        val values = ContentValues()
        values.put(COLUMN_FIRST_NAME, user.firstName)
        values.put(COLUMN_LAST_NAME, user.lastName)
        values.put(COLUMN_EMAIL, user.email)
        values.put(COLUMN_PASSWORD, user.password)
        db.insert(TABLE_NAME, null, values)
        db.close()
    }

    @SuppressLint("Range")
    fun getUserByUsername(username: String): User? {
        val db = readableDatabase
        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME WHERE
$COLUMN_FIRST_NAME = ?", arrayOf(username))
        var user: User? = null
        if (cursor.moveToFirst()) {
            user = User(
                id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                firstName = cursor.getString(cursor.getColumnIndex(COLUMN_FIRST_NAME)),
                lastName = cursor.getString(cursor.getColumnIndex(COLUMN_LAST_NAME)),
                email = cursor.getString(cursor.getColumnIndex(COLUMN_EMAIL)),
                password = cursor.getString(cursor.getColumnIndex(COLUMN_PASSWORD)),
            )
        }
        cursor.close()
        db.close()
        return user
    }
    @SuppressLint("Range")
    fun getUserById(id: Int): User? {
        val db = readableDatabase
        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME WHERE
$COLUMN_ID = ?", arrayOf(id.toString()))
        var user: User? = null
        if (cursor.moveToFirst()) {
            user = User(
                id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                firstName = cursor.getString(cursor.getColumnIndex(COLUMN_FIRST_NAME)),
                lastName = cursor.getString(cursor.getColumnIndex(COLUMN_LAST_NAME)),
                email = cursor.getString(cursor.getColumnIndex(COLUMN_EMAIL)),
                password = cursor.getString(cursor.getColumnIndex(COLUMN_PASSWORD)),
            )
        }
        cursor.close()
        db.close()
        return user
    }

    @SuppressLint("Range")
    fun getAllUsers(): List<User> {
        val users = mutableListOf<User>()
        val db = readableDatabase
        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME", null)
        if (cursor.moveToFirst()) {
            do {
                val user = User(
                    id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                    firstName =
cursor.getString(cursor.getColumnIndex(COLUMN_FIRST_NAME)),
                    lastName =
cursor.getString(cursor.getColumnIndex(COLUMN_LAST_NAME)),
                    email = cursor.getString(cursor.getColumnIndex(COLUMN_EMAIL)),
                    password = cursor.getString(cursor.getColumnIndex(COLUMN_PASSWORD)),
                )
                users.add(user)
            } while (cursor.moveToNext())
        }
        cursor.close()
        db.close()
        return users
    }

}
```

EMAIL KT:

```
package com.example.emailapplication

import androidx.room.ColumnInfo
import androidx.room.Entity
import androidx.room.PrimaryKey

@Entity(tableName = "email_table")
data class Email(
    @PrimaryKey(autoGenerate = true) val id: Int?,
    @ColumnInfo(name = "receiver_mail") val recevierMail: String?,
    @ColumnInfo(name = "subject") val subject: String?,
    @ColumnInfo(name = "body") val body: String?,
)
```

EMAILDAO.KT:

```
package com.example.emailapplication

import androidx.room.*

@Dao
interface EmailDao {

    @Query("SELECT * FROM email_table WHERE subject= :subject")
    suspend fun getOrderBySubject(subject: String): Email?

    @Insert(onConflict = OnConflictStrategy.REPLACE)
    suspend fun insertEmail(email: Email)

    @Update
    suspend fun updateEmail(email: Email)

    @Delete
    suspend fun deleteEmail(email: Email)
}
```

EMAILDATABASE.KT:

```
package com.example.emailapplication

import android.content.Context
import androidx.room.Database
import androidx.room.Room
import androidx.room.RoomDatabase

@Database(entities = [Email::class], version = 1)
abstract class EmailDatabase : RoomDatabase() {

    abstract fun emailDao(): EmailDao

    companion object {
        @Volatile
        private var instance: EmailDatabase? = null

        fun getDatabase(context: Context): EmailDatabase {
            return instance ?: synchronized(this) {
                val newInstance = Room.databaseBuilder(
                    context.applicationContext,
                    EmailDatabase::class.java,
                    "email_database"
                ).build()
                instance = newInstance
                newInstance
            }
        }
    }
}
```

EMAILDATABSEHELPER:

```
package com.example.emailapplication

import android.annotation.SuppressLint
import android.content.ContentValues
import android.content.Context
import android.database.Cursor
import android.database.sqlite.SQLiteDatabase
import android.database.sqlite.SQLiteOpenHelper

class EmailDatabaseHelper(context: Context) :
    SQLiteOpenHelper(context, DATABASE_NAME, null,DATABASE_VERSION){

    companion object {
        private const val DATABASE_VERSION = 1
        private const val DATABASE_NAME = "EmailDatabase.db"

        private const val TABLE_NAME = "email_table"
        private const val COLUMN_ID = "id"
        private const val COLUMN_RECEIVER_MAIL = "receiver_mail"
        private const val COLUMN_SUBJECT = "subject"
        private const val COLUMN_BODY = "body"
    }

    override fun onCreate(db: SQLiteDatabase?) {
        val createTable = "CREATE TABLE $TABLE_NAME (" +
                "${COLUMN_ID} INTEGER PRIMARY KEY AUTOINCREMENT, " +
                "${COLUMN_RECEIVER_MAIL} Text, " +
                "${COLUMN_SUBJECT} TEXT ," +
                "${COLUMN_BODY} TEXT " +
                ")"
        db?.execSQL(createTable)
    }

    override fun onUpgrade(db: SQLiteDatabase?, oldVersion: Int, newVersion: Int) {
        db?.execSQL("DROP TABLE IF EXISTS $TABLE_NAME")
        onCreate(db)
    }

    fun insertEmail(email: Email) {
        val db = writableDatabase
        val values = ContentValues()
        values.put(COLUMN_RECEIVER_MAIL, email.recevierMail)
        values.put(COLUMN_SUBJECT, email.subject)
        values.put(COLUMN_BODY, email.body)
        db.insert(TABLE_NAME, null, values)
        db.close()
    }



    @SuppressLint("Range")
    fun getEmailBySubject(subject: String): Email? {
        val db = readableDatabase
        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME WHERE
$COLUMN_SUBJECT = ?", arrayOf(subject))
        var email: Email? = null
        if (cursor.moveToFirst()) {
            email = Email(
                id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                recevierMail =
cursor.getString(cursor.getColumnIndex(COLUMN_RECEIVER_MAIL)),
                subject = cursor.getString(cursor.getColumnIndex(COLUMN_SUBJECT)),
                body = cursor.getString(cursor.getColumnIndex(COLUMN_BODY)),
            )
        }
        cursor.close()
        db.close()
        return email
    }
    @SuppressLint("Range")
    fun getEmailById(id: Int): Email? {
        val db = readableDatabase
        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME WHERE
$COLUMN_ID = ?", arrayOf(id.toString()))
        var email: Email? = null
        if (cursor.moveToFirst()) {
            email = Email(
                id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                recevierMail =
cursor.getString(cursor.getColumnIndex(COLUMN_RECEIVER_MAIL)),
                subject = cursor.getString(cursor.getColumnIndex(COLUMN_SUBJECT)),
                body = cursor.getString(cursor.getColumnIndex(COLUMN_BODY)),
            )
        }
        cursor.close()
        db.close()
        return email
    }

    @SuppressLint("Range")
    fun getAllEmails(): List<Email> {
        val emails = mutableListOf<Email>()
        val db = readableDatabase
        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME", null)
        if (cursor.moveToFirst()) {
            do {
                val email = Email(
                    id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                    recevierMail =
cursor.getString(cursor.getColumnIndex(COLUMN_RECEIVER_MAIL)),
                    subject = cursor.getString(cursor.getColumnIndex(COLUMN_SUBJECT)),
                    body = cursor.getString(cursor.getColumnIndex(COLUMN_BODY)),
                )
                emails.add(email)
            } while (cursor.moveToNext())
        }
        cursor.close()
        db.close()
        return emails
    }

}
```

LOGINACTIVITY.KT:

```
package com.example.emailapplication

import android.content.Context
import android.content.Intent
import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.Image
import androidx.compose.foundation.background
import androidx.compose.foundation.layout.*
import androidx.compose.material.*
import  androidx.compose.runtime.*
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.layout.ContentScale
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.font.FontFamily
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.input.PasswordVisualTransformation
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.core.content.ContextCompat
import com.example.emailapplication.ui.theme.EmailApplicationTheme

class LoginActivity : ComponentActivity() {
    private lateinit var databaseHelper: UserDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        databaseHelper = UserDatabaseHelper(this)
        setContent {

            LoginScreen(this, databaseHelper)
        }
    }
}
@Composable
fun LoginScreen(context: Context, databaseHelper: UserDatabaseHelper) {


    var username by remember { mutableStateOf("") }
    var password by remember { mutableStateOf("") }
    var error by remember { mutableStateOf("") }

    Column(
        modifier = Modifier.fillMaxSize().background(Color.White),
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.Center
    ) {
        Image(
            painterResource(id = R.drawable.email_login), contentDescription = ""
        )



        Text(
            fontSize = 36.sp,
            fontWeight = FontWeight.ExtraBold,
            fontFamily = FontFamily.Cursive,
            text = "Login"
        )
        Spacer(modifier = Modifier.height(10.dp))

        TextField(
            value = username,
            onValueChange = { username = it },
            label = { Text("Username") },
            modifier = Modifier.padding(10.dp)
                .width(280.dp)
        )

        TextField(
            value = password,
            onValueChange = { password = it },
            label = { Text("Password") },
            visualTransformation = PasswordVisualTransformation(),
            modifier = Modifier.padding(10.dp)
                .width(280.dp)
        )

        if (error.isNotEmpty()) {
            Text(
                text = error,
                color = MaterialTheme.colors.error,
                modifier = Modifier.padding(vertical = 16.dp)
            )
        }

        Button(
            onClick = {
                if (username.isNotEmpty() && password.isNotEmpty()) {
                    val user = databaseHelper.getUserByUsername(username)
                    if (user != null && user.password == password) {
                        error = "Successfully log in"
                        context.startActivity(
                            Intent(
                                context,
                                MainActivity::class.java
                            )
                        )
                        //onLoginSuccess()
                    }

                } else {
                    error = "Please fill all fields"
                }
            },
            colors = ButtonDefaults.buttonColors(backgroundColor = Color(0xFFd3e5ef)),
            modifier = Modifier.padding(top = 16.dp)
        ) {
            Text(text = "Login")
        }
        Row {
            TextButton(onClick = {context.startActivity(
                Intent(
                    context,
                    RegisterActivity::class.java
                )
            )}
            )
            { Text(color = Color(0xFF31539a),text = "Sign up") }
            TextButton(onClick = {
            })

            {
                Spacer(modifier = Modifier.width(60.dp))
                Text(color = Color(0xFF31539a),text = "Forget password?")
            }
        }
     }
  }
  private fun startMainPage(context: Context) {
     val intent = Intent(context, MainActivity::class.java)
     ContextCompat.startActivity(context, intent, null)
  }
```

MANIACTIVIY.KT:

```
package com.example.emailapplication

import android.content.Context
import android.content.Intent
import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.Image
import androidx.compose.foundation.background
import androidx.compose.foundation.layout.*
import androidx.compose.material.*
import androidx.compose.runtime.Composable
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.layout.ContentScale
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.core.content.ContextCompat
import androidx.core.content.ContextCompat.startActivity
import com.example.emailapplication.ui.theme.EmailApplicationTheme

class MainActivity : ComponentActivity() {
   override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            // A surface container using the 'background' color from the theme
            Surface(
                modifier = Modifier.fillMaxSize().background(Color.White),
            ) {
                Email(this)
            }

        }
    }
}

@Composable
fun Email(context: Context) {
    Text(
        text = "Home Screen",
        modifier = Modifier.padding(top = 74.dp, start = 100.dp, bottom = 24.dp),
        color = Color.Black,
        fontWeight = FontWeight.Bold,
        fontSize = 32.sp
    )

    Column(
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.Center
    ) {
        Image(
            painterResource(id = R.drawable.home_screen), contentDescription = ""
        )


        Button(onClick = {
            context.startActivity(
                Intent(
                    context,
                    SendMailActivity::class.java
                )
            )
        },
            colors = ButtonDefaults.buttonColors(backgroundColor = Color(0xFFadbef4))
        ) {
            Text(
                text = "Send Email",
                modifier = Modifier.padding(10.dp),
                color = Color.Black,
                fontSize = 15.sp
            )
        }
        Spacer(modifier = Modifier.height(20.dp))

        Button(onClick = {
            context.startActivity(
                Intent(
                    context,
                    ViewMailActivity::class.java
                )
            )
        },
            colors = ButtonDefaults.buttonColors(backgroundColor = Color(0xFFadbef4))
        ) {
            Text(
                text = "View Emails",
                modifier = Modifier.padding(10.dp),
                color = Color.Black,
                fontSize = 15.sp
            )
        }


    }
}
```

REGISTERACTIVITY:

```
package com.example.emailapplication

import android.content.Context
import android.content.Intent
import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.Image
import androidx.compose.foundation.background
import androidx.compose.foundation.layout.*
import androidx.compose.material.*
import  androidx.compose.runtime.*
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import  androidx.compose.ui.layout.ContentScale
import   androidx.compose.ui.res.painterResource
import  androidx.compose.ui.text.font.FontFamily
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.input.PasswordVisualTransformation
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.core.content.ContextCompat
import com.example.emailapplication.ui.theme.EmailApplicationTheme

class RegisterActivity : ComponentActivity() {
    private lateinit var databaseHelper: UserDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        databaseHelper = UserDatabaseHelper(this)
        setContent {

            RegistrationScreen(this, databaseHelper)
        }
    }
}

@Composable
fun RegistrationScreen(context: Context, databaseHelper: UserDatabaseHelper) {



    var username by remember { mutableStateOf("") }
    var password by remember { mutableStateOf("") }
    var email by remember { mutableStateOf("") }
    var error by remember { mutableStateOf("") }

    Column(
        modifier = Modifier.fillMaxSize().background(Color.White),
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.Center
    ) {
        Image(
            painterResource(id = R.drawable.email_signup), contentDescription = "",
            modifier = Modifier.height(300.dp)
        )
        Text(
            fontSize = 36.sp,
            fontWeight = FontWeight.ExtraBold,
            fontFamily = FontFamily.Cursive,
            text = "Register"
        )

        Spacer(modifier = Modifier.height(10.dp))
        TextField(
            value = username,
            onValueChange = { username = it },
            label = { Text("Username") },
            modifier = Modifier
                .padding(10.dp)
                .width(280.dp)
```

```
)

TextField(
    value = email,
    onValueChange = { email = it },
    label = { Text("Email") },
    modifier = Modifier
        .padding(10.dp)
        .width(280.dp)
)

TextField(
    value = password,
    onValueChange = { password = it },
    label = { Text("Password") },
    visualTransformation = PasswordVisualTransformation(),
    modifier = Modifier
        .padding(10.dp)
        .width(280.dp)
)


if (error.isNotEmpty()) {
    Text(
        text = error,
        color = MaterialTheme.colors.error,
        modifier = Modifier.padding(vertical = 16.dp)
    )
}

Button(
    onClick = {
        if (username.isNotEmpty() && password.isNotEmpty() && email.isNotEmpty()) {
            val user = User(
                id = null,
                firstName = username,
                lastName  = null,
                email = email,
                password = password
            )
            databaseHelper.insertUser(user)
            error = "User registered successfully"
            // Start LoginActivity using the current context
            context.startActivity(
                Intent(
                    context,
                    LoginActivity::class.java
                )
            )
            } else {
                error = "Please fill all fields"
            }
        },
        colors = ButtonDefaults.buttonColors(backgroundColor = Color(0xFFd3e5ef)),
        modifier = Modifier.padding(top = 16.dp)
    ) {
        Text(text = "Register")
    }
    Spacer(modifier = Modifier.width(10.dp))
    Spacer(modifier = Modifier.height(10.dp))

    Row() {
        Text(
            modifier = Modifier.padding(top = 14.dp), text = "Have an account?"
        )
        TextButton(onClick = {
            context.startActivity(
                Intent(
                    context,
                    LoginActivity::class.java
                )
            )
        })

        {
            Spacer(modifier = Modifier.width(10.dp))
            Text(color = Color(0xFF31539a),text = "Log in")
        }
    }
  }
}
private fun startLoginActivity(context: Context) {
  val intent = Intent(context, LoginActivity::class.java)
  ContextCompat.startActivity(context, intent, null)
}
```

SENDEMAILACTIVITY:

```
package com.example.emailapplication

import android.annotation.SuppressLint
import android.content.Context
import android.content.Intent
import android.os.Bundle
import  androidx.activity.ComponentActivity
import  androidx.activity.compose.setContent
import androidx.compose.foundation.layout.*
import androidx.compose.material.*
import  androidx.compose.runtime.*
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.platform.LocalContext
import androidx.compose.ui.text.TextStyle
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.style.TextAlign
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import com.example.emailapplication.ui.theme.EmailApplicationTheme

class SendMailActivity : ComponentActivity() {
   private lateinit var databaseHelper: EmailDatabaseHelper
   @SuppressLint("UnusedMaterialScaffoldPaddingParameter")
   override fun onCreate(savedInstanceState: Bundle?) {
      super.onCreate(savedInstanceState)
      databaseHelper = EmailDatabaseHelper(this)
      setContent {

         Scaffold(
            // in scaffold we are specifying top bar.
            topBar = {
               // inside top bar we are specifying
               // background color.
               TopAppBar(backgroundColor = Color(0xFFadbef4), modifier =
Modifier.height(80.dp),
                  // along with that we are specifying
                  // title for our top bar.
                  title = {
                     // in the top bar we are specifying
                     // title as a text
                     Text(
                        // on below line we are specifying
                        // text to display in top app bar.
                        text = "Send Mail",
                        fontSize = 32.sp,
                        color = Color.Black,

                        // on below line we are specifying
                        // modifier to fill max width.
                        modifier = Modifier.fillMaxWidth(),

                        // on below line we are
                        // specifying text alignment.
                        textAlign = TextAlign.Center,
                     )
                  }
```

```
                )
            }
        ) {
            // on below line we are
            // calling method to display UI.
            openEmailer(this,databaseHelper)
        }
    }
  }
}
@Composable
fun openEmailer(context: Context, databaseHelper: EmailDatabaseHelper)  {

    // in the below line, we are
    // creating variables for URL
    var recevierMail by remember {mutableStateOf("") }
    var subject by remember {mutableStateOf("") }
    var body by remember {mutableStateOf("") }
    var error by remember { mutableStateOf("") }

    // on below line we are creating
    // a variable for a context
    val ctx = LocalContext.current

    // on below line we are creating a column
    Column(
        // on below line we are specifying modifier
        // and setting max height and max width
        // for our column
        modifier = Modifier
            .fillMaxSize()
            .padding(top = 55.dp, bottom = 25.dp, start = 25.dp, end = 25.dp),
        horizontalAlignment = Alignment.Start
    ) {

        // on the below line, we are
        // creating a text field.
        Text(text = "Receiver Email-Id",
            fontWeight = FontWeight.Bold,
            fontSize = 16.sp)
        TextField(
            // on below line we are specifying
            // value for our  text field.
            value = recevierMail,

            // on below line we are adding on value
            // change for text field.
            onValueChange = { recevierMail = it },

            // on below line we are adding place holder as text
            label = { Text(text = "Email address") },
            placeholder = { Text(text = "abc@gmail.com") },

            // on below line we are adding modifier to it
            // and adding padding to it and filling max width
            modifier = Modifier
            .padding(16.dp)
            .fillMaxWidth(),

            // on below line we are adding text style
            // specifying color and font size to it.
            textStyle = TextStyle(color = Color.Black, fontSize = 15.sp),

            // on below line we are
            // adding single line to it.
            singleLine = true,
        )
        // on below line adding a spacer.
        Spacer(modifier = Modifier.height(10.dp))

        Text(text = "Mail Subject",
            fontWeight = FontWeight.Bold,
            fontSize = 16.sp)
        // on the below line, we are creating a text field.
        TextField(
            // on below line we are specifying
            // value for our  text field.
            value = subject,

            // on below line we are adding on value change
            // for text field.
            onValueChange = { subject = it },

            // on below line we are adding place holder as text
            placeholder = { Text(text = "Subject") },

            // on below line we are adding modifier to it
            // and adding padding to it and filling max width
            modifier = Modifier
            .padding(16.dp)
            .fillMaxWidth(),

            // on below line we are adding text style
            // specifying color and font size to it.
            textStyle = TextStyle(color = Color.Black, fontSize = 15.sp),

            // on below line we are
            // adding single line to it.
            singleLine = true,
        )
```

```
// on below line adding a spacer.
Spacer(modifier = Modifier.height(10.dp))

Text(text = "Mail Body",
   fontWeight = FontWeight.Bold,
   fontSize = 16.sp)
// on the below line, we are creating a text field.
TextField(
   // on below line we are specifying
   // value for our  text field.
   value = body,

   // on below line we are adding on value
   // change for text field.
   onValueChange = { body = it },

   // on below line we are adding place holder as text
   placeholder = { Text(text = "Body") },

   // on below line we are adding modifier to it
   // and adding padding to it and filling max width
   modifier = Modifier
      .padding(16.dp)
      .fillMaxWidth(),

   // on below line we are adding text style
   // specifying color and font size to it.
   textStyle = TextStyle(color = Color.Black, fontSize = 15.sp),

   // on below line we are
   // adding single line to it.
   singleLine = true,
)

// on below line adding a spacer.
Spacer(modifier = Modifier.height(20.dp))

// on below line adding a
// button to send an email
Button(onClick = {

   if( recevierMail.isNotEmpty() && subject.isNotEmpty() && body.isNotEmpty()) {
      val email = Email(
         id = null,
         recevierMail = recevierMail,
         subject = subject,
         body = body

      )
```

```
                databaseHelper.insertEmail(email)
                error = "Mail Saved"
            } else {
                error = "Please fill all fields"
            }

            // on below line we are creating
            // an intent to send an email
            val i = Intent(Intent.ACTION_SEND)

            // on below line we are passing email address,
            // email subject and email body
            val emailAddress = arrayOf(recevierMail)
            i.putExtra(Intent.EXTRA_EMAIL,emailAddress)
            i.putExtra(Intent.EXTRA_SUBJECT,subject)
            i.putExtra(Intent.EXTRA_TEXT,body)

            // on below line we are
            // setting type of intent
            i.setType("message/rfc822")

            // on the below line we are starting our activity to open email application.
            ctx.startActivity(Intent.createChooser(i,"Choose an Email client : "))

        },
            colors = ButtonDefaults.buttonColors(backgroundColor = Color(0xFFd3e5ef))
        ) {
            // on the below line creating a text for our button.
            Text(
                // on below line adding a text ,
                // padding, color and font size.
                text = "Send Email",
                modifier = Modifier.padding(10.dp),
                color = Color.Black,
                fontSize = 15.sp
            )
        }
    }
}
```

VIEWMAILACTIVITY:

```
package com.example.emailapplication

import android.annotation.SuppressLint
import android.os.Bundle
import android.util.Log
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.Image
import androidx.compose.foundation.layout.*
import androidx.compose.foundation.layout.R
import androidx.compose.foundation.lazy.LazyColumn
import androidx.compose.foundation.lazy.LazyRow
import  androidx.compose.foundation.lazy.items
import androidx.compose.material.*
import androidx.compose.runtime.Composable
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.layout.ContentScale
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.style.TextAlign
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import com.example.emailapplication.ui.theme.EmailApplicationTheme

class ViewMailActivity : ComponentActivity() {
    private lateinit var emailDatabaseHelper: EmailDatabaseHelper
    @SuppressLint("UnusedMaterialScaffoldPaddingParameter")
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        emailDatabaseHelper = EmailDatabaseHelper(this)
        setContent {

            Scaffold(
                // in scaffold we are specifying top bar.
                topBar = {
                    // inside top bar we are specifying
                    // background color.
                    TopAppBar(backgroundColor = Color(0xFFadbef4), modifier =
Modifier.height(80.dp),
                        // along with that we are specifying
                        // title for our top bar.
                        title = {
                            // in the top bar we are specifying
                            // title as a text
                            Text(
                                // on below line we are specifying
                                // text to display in top app bar.
                                text = "View Mails",
                                fontSize = 32.sp,
                                color = Color.Black,

                                // on below line we are specifying
                                // modifier to fill max width.
                                modifier = Modifier.fillMaxWidth(),

                                // on below line we are
                                // specifying text alignment.
                                textAlign = TextAlign.Center,
                            )
                        }
                    )
                }
            ) {
                val data = emailDatabaseHelper.getAllEmails();
                Log.d("swathi", data.toString())
                val email = emailDatabaseHelper.getAllEmails()
                ListListScopeSample(email)
            }
        }
    }
}
@Composable
fun ListListScopeSample(email: List<Email>) {
    LazyRow(
        modifier = Modifier
            .fillMaxSize(),
        horizontalArrangement = Arrangement.SpaceBetween
    ) {
        item {

            LazyColumn {
                items(email) { email ->
                    Column(
                        modifier = Modifier.padding(
                            top = 16.dp,
                            start = 48.dp,
                            bottom = 20.dp
                        )
                    ) {
                        Text("Receiver_Mail: ${email.recevierMail}", fontWeight =
FontWeight.Bold)
                        Text("Subject: ${email.subject}")
                        Text("Body: ${email.body}")
                    }
                }
            } }
}
```