Android App Development

Report submission

College code: 8147

College name: SRM TRP ENGINEERING COLLEGE

Year/Degree: 3rd B. Tech

Department: Artificial Intelligence and Data Science

Total number of students: 4

Student's details:

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Wanderlust: A Personalized Travel Planning and Tracking App

Wanderlust is an innovative mobile application designed to revolutionize how users plan, manage, and track their travel experiences. With personalized features and a user-centric design, Wanderlust caters to both frequent travelers and casual vacationers, offering comprehensive solutions for seamless trip management.

Learning Outcomes :

By end of this project:

- You’ll be able to work on Android studio and build an app.
- You’ll be able to integrate the database accordingly.

Project Workflow:

- Users register into the application.
- After registration , user logins into the application.
- User enters into the main page

Tasks:

1.Required initial steps
2.Creating a new project.
3.Adding required dependencies.
4.Creating the database classes.
5.Building application UI and connecting to database.
6.Using AndroidManifest.xml
7.Running the application.

Task 1:

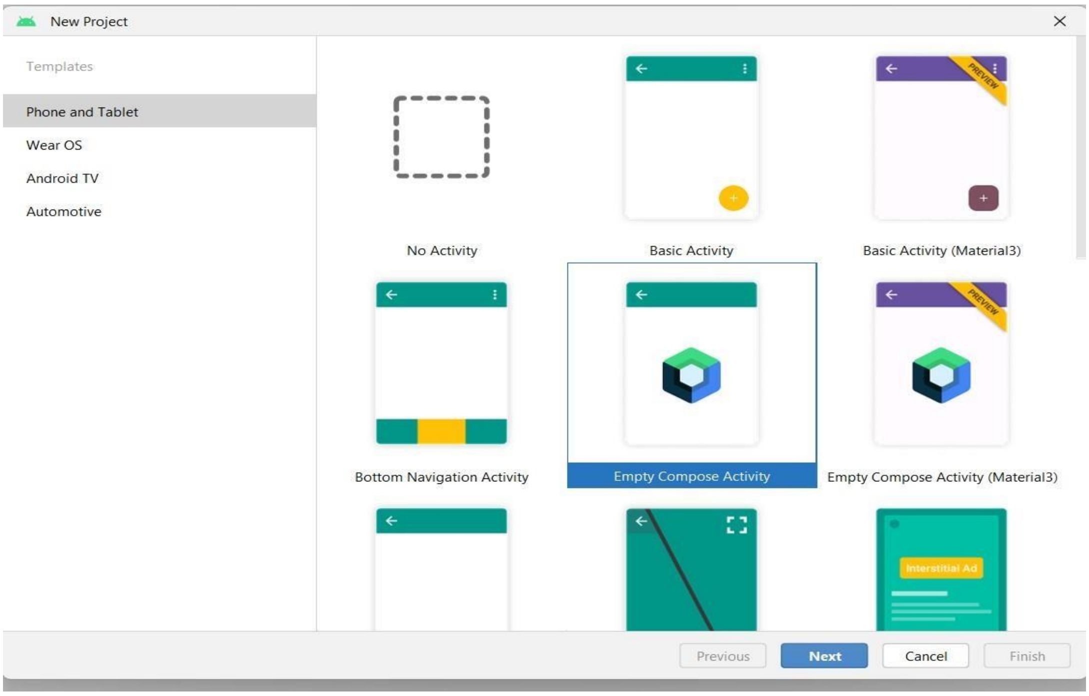
Required initial steps :
https://developer.android.com/studio/install

Task 2 :

Creating a new project.

Step 1 : Android studio > File > New > New Project > Empty Compose Activity

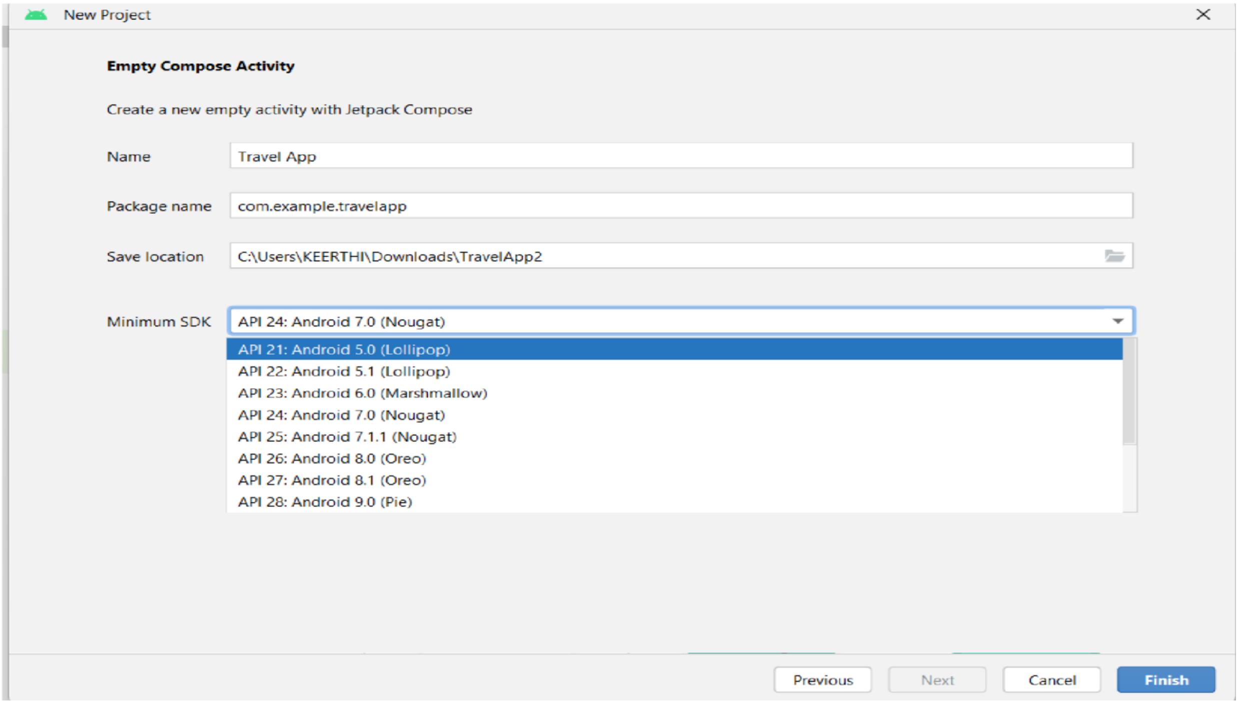
Step 2 : Click on **Next** button.



Step 3 : Give name to the new project.

Step 4 : Give the Minimum SDK value

Step 5 : Click Finish


Empty Compose Activity

Create a new empty activity with Jetpack Compose

Name: Travel App

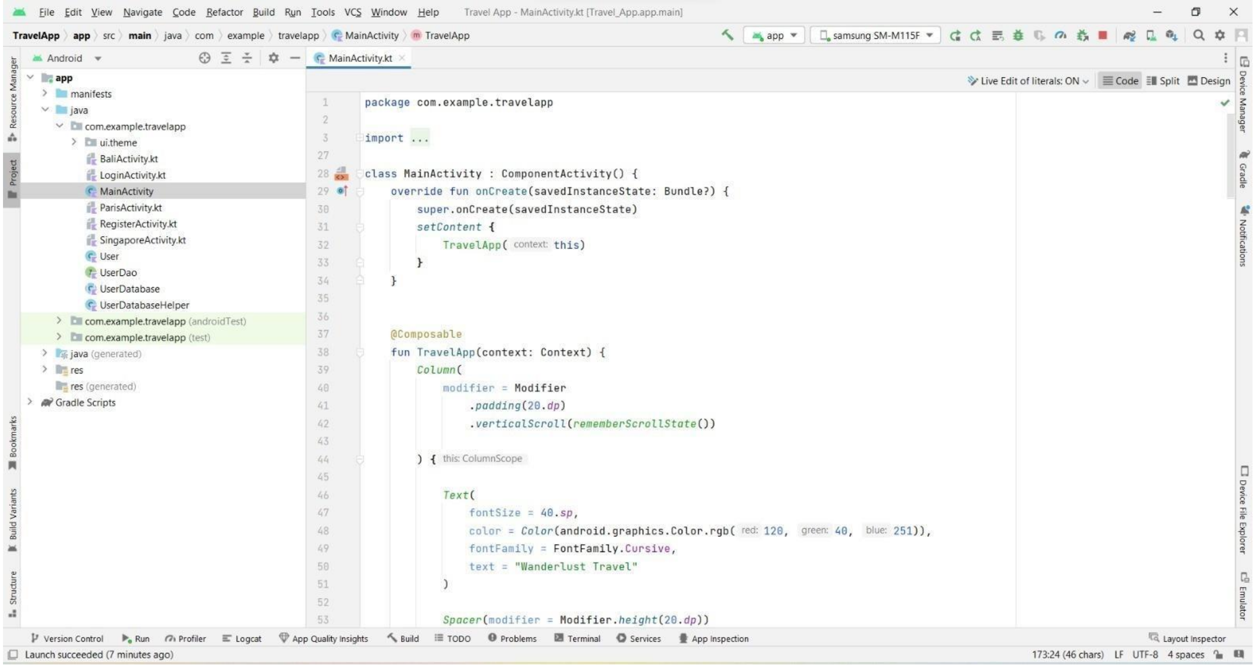
Package name: com.example.travelapp

Save location: C:\Users\KEERTHI\Downloads\TravelApp2

Minimum SDK: API 24: Android 7.0 (Nougat)

New Project
API 21: Android 5.0 (Lollipop)
API 22: Android 5.1 (Lollipop)
API 23: Android 6.0 (Marshmallow)
API 24: Android 7.0 (Nougat)
API 25: Android 7.1.1 (Nougat)
API 26: Android 8.0 (Oreo)
API 27: Android 8.1 (Oreo)
API 28: Android 9.0 (Pie)
Previous
Next
Cancel
Finish

Main activity file



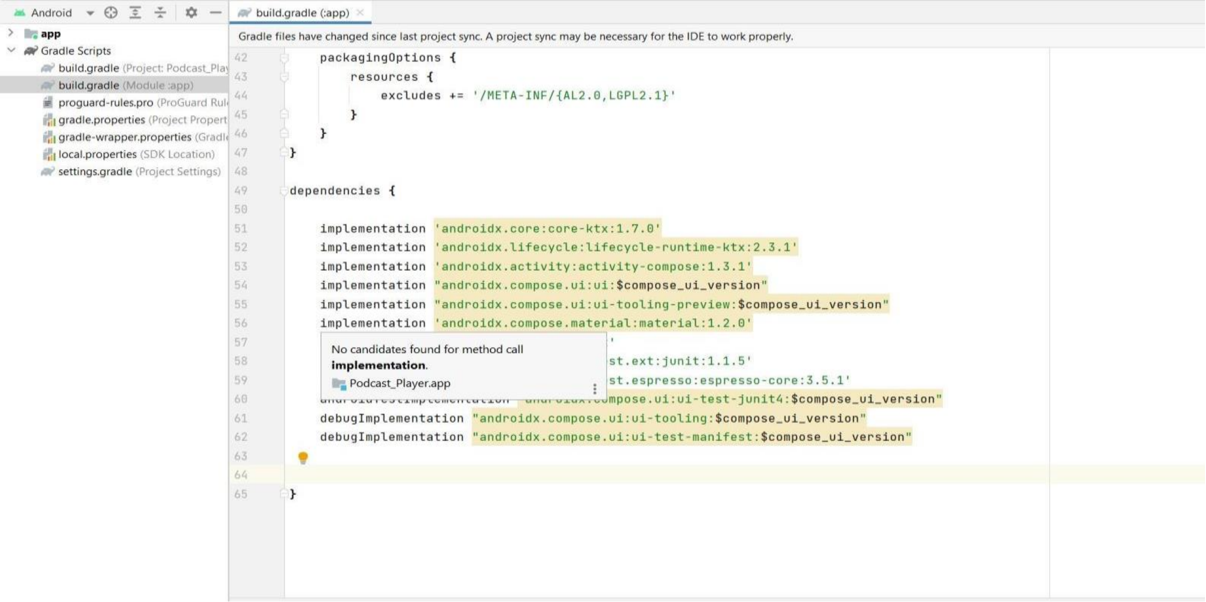
```
package com.example.travelapp

import ...

class MainActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            TravelApp( context: this)
        }
    }


    @Composable
    fun TravelApp(context: Context) {
        Column(
            modifier = Modifier
                .padding(20.dp)
                .verticalScroll(rememberScrollState())

        ) { this: ColumnScope

            Text(
                fontSize = 40.sp,
                color = Color(android.graphics.Color.rgb( red: 120, green: 40, blue: 251)),
                fontFamily = FontFamily.Cursive,
                text = "Wanderlust Travel"
            )

            Spacer(modifier = Modifier.height(20.dp))
```

Launch succeeded (7 minutes ago)

Task 3 :

Adding required dependencies.

Step 1 : Gradle scripts > build.gradle(Module :app)



Gradle files have changed since last project sync. A project sync may be necessary for the IDE to work properly.

```
    packagingOptions {
        resources {
            excludes += '/META-INF/{AL2.0,LGPL2.1}'
        }
    }
}

dependencies {

    implementation 'androidx.core:core-ktx:1.7.0'
    implementation 'androidx.lifecycle:lifecycle-runtime-ktx:2.3.1'
    implementation 'androidx.activity:activity-compose:1.3.1'
    implementation "androidx.compose.ui:ui:$compose_ui_version"
    implementation "androidx.compose.ui:ui-tooling-preview:$compose_ui_version"
    implementation 'androidx.compose.material:material:1.2.0'
                                                        '
                                                        st.ext:junit:1.1.5'
                                                        st.espresso:espresso-core:3.5.1'
    androidTestImplementation "androidx.compose.ui:ui-test-junit4:$compose_ui_version"
    debugImplementation "androidx.compose.ui:ui-tooling:$compose_ui_version"
    debugImplementation "androidx.compose.ui:ui-test-manifest:$compose_ui_version"


}
```

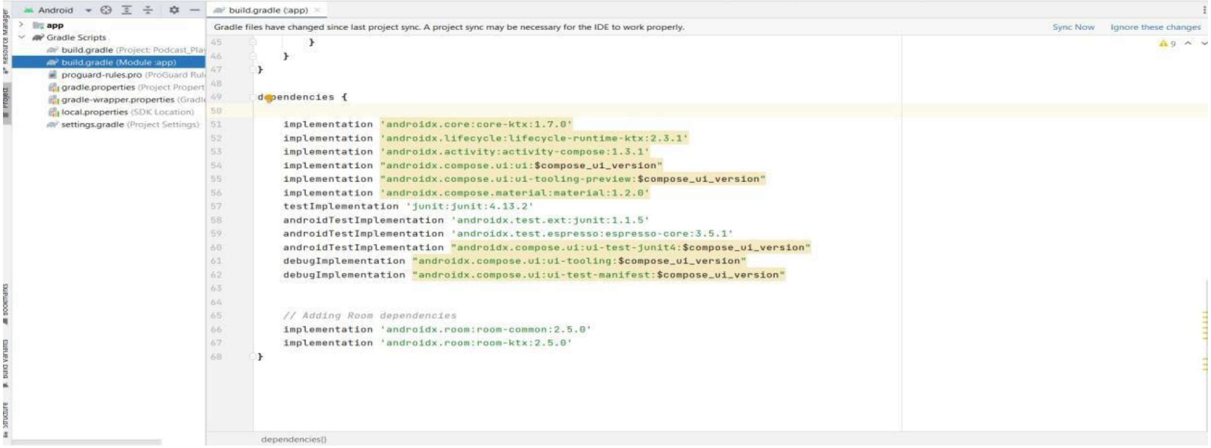
No candidates found for method call **implementation**.

Podcast_Player.app

Step 2 : Adding room dependencies.

Add the below code in dependencies

// Adding Room dependencies implementation
'androidx.room:room-common:2.5.0' implementation
'androidx.room:room-ktx:2.5.0'


Android
app
Gradle Scripts
build.gradle (Project: Podcast_Pla
build.gradle (Module :app)
proguard-rules.pro (ProGuard Rul
gradle.properties (Project Propert
gradle-wrapper.properties (Gradl
local.properties (SDK Location)
settings.gradle (Project Settings)
build.gradle (:app)
Sync Now
Ignore these changes
dependencies{}

Gradle files have changed since last project sync. A project sync may be necessary for the IDE to work properly.

```
            }
        }
}

dependencies {

    implementation 'androidx.core:core-ktx:1.7.0'
    implementation 'androidx.lifecycle:lifecycle-runtime-ktx:2.3.1'
    implementation 'androidx.activity:activity-compose:1.3.1'
    implementation "androidx.compose.ui:ui:$compose_ui_version"
    implementation "androidx.compose.ui:ui-tooling-preview:$compose_ui_version"
    implementation 'androidx.compose.material:material:1.2.0'
    testImplementation 'junit:junit:4.13.2'
    androidTestImplementation 'androidx.test.ext:junit:1.1.5'
    androidTestImplementation 'androidx.test.espresso:espresso-core:3.5.1'
    androidTestImplementation "androidx.compose.ui:ui-test-junit4:$compose_ui_version"
    debugImplementation "androidx.compose.ui:ui-tooling:$compose_ui_version"
    debugImplementation "androidx.compose.ui:ui-test-manifest:$compose_ui_version"


    // Adding Room dependencies
    implementation 'androidx.room:room-common:2.5.0'
    implementation 'androidx.room:room-ktx:2.5.0'
}
```

Step 3 : Click on Sync now

Task 4:

Creating the database classes.

Step 1 : Create User data class

```
package com.example.travelapp
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?,

   )
```

Step 2 : Create an UserDao interface

```
package com.example.travelapp

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)
}
```

Step 3 : Create an UserDatabase class

```
package com.example.travelapp
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
            }
        }
    }
}
```

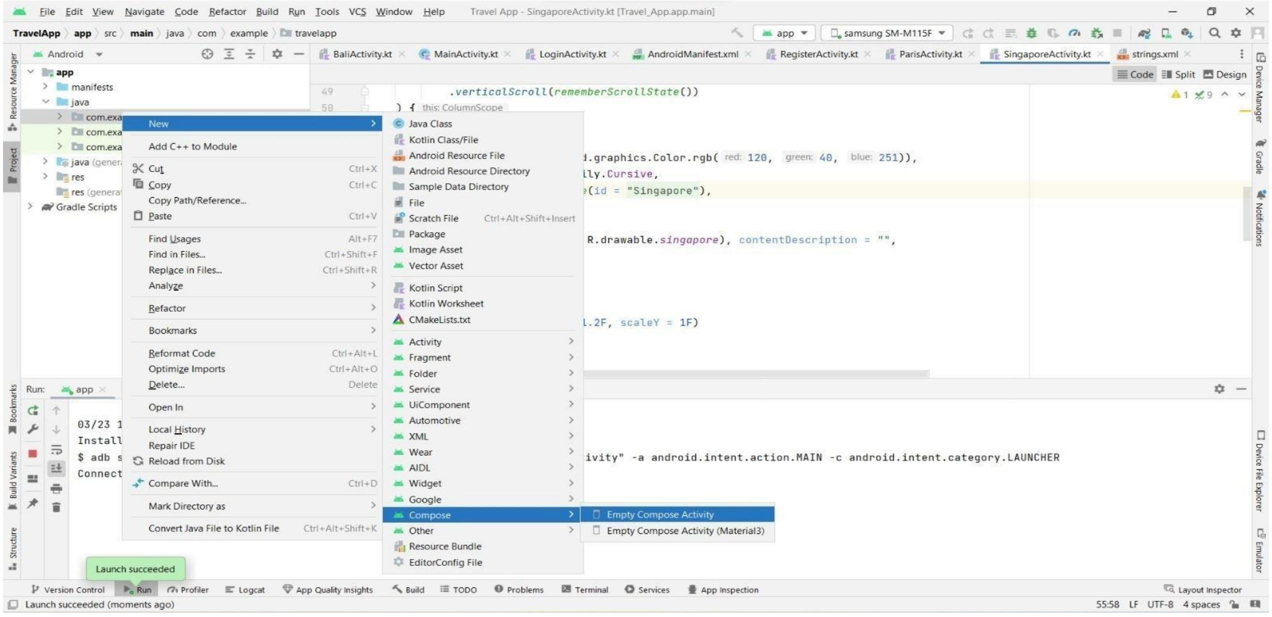
<u>Step 4 :</u> Create an UserDatabaseHelper class

```
package com.example.travelapp

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
    }

}
```

Task 5:

Building application UI and connecting to database.

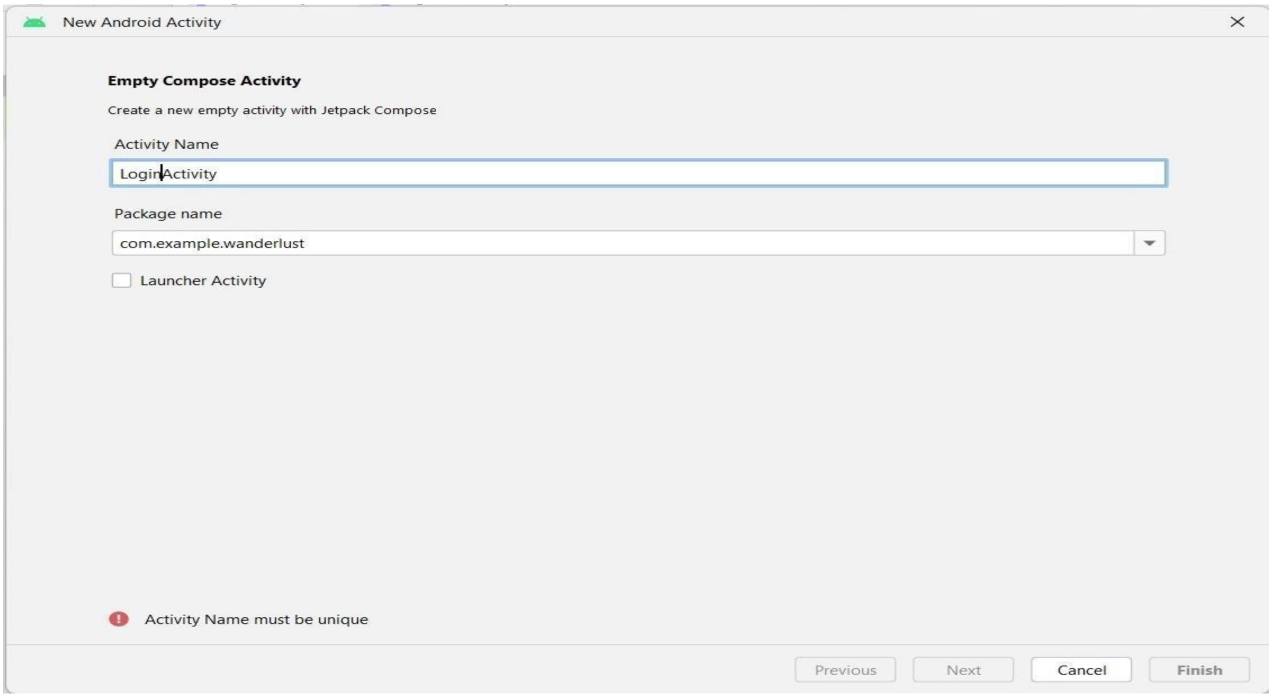
Step 1: Creating LoginActivity.kt with database



```
        .verticalScroll(rememberScrollState())
) { this: ColumnScope
l.graphics.Color.rgb( red: 120, green: 40, blue: 251)),
ily.Cursive,
(id = "Singapore"),
R.drawable.singapore), contentDescription = "",
l.2F, scaleY = 1F)
```

```
03/23 1
Install
$ adb s                              ivity" -a android.intent.action.MAIN -c android.intent.category.LAUNCHER
Connect
```

Launch succeeded (moments ago)



New Android Activity

Empty Compose Activity

Create a new empty activity with Jetpack Compose

Activity Name

LoginActivity

Package name

com.example.wanderlust

□ Launcher Activity

Activity Name must be unique

Database connection in LoginActivity.kt

```
package com.example.travelapp

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

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.trav), 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 =  "Invalid username or password"
            }

        } else {
            error = "Please fill all fields"
        }
    },
    modifier = Modifier.padding(top = 16.dp)
) {
    Text(text = "Login")
}
Row {
    TextButton(onClick = {context.startActivity(
        Intent(
                context,
                RegisterActivity::class.java
              )
            )}
            )
            { Text(text = "Register") }
            TextButton(onClick = {
            })

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

<u>Step 2 :</u> Creating RegisterActivity.kt with database

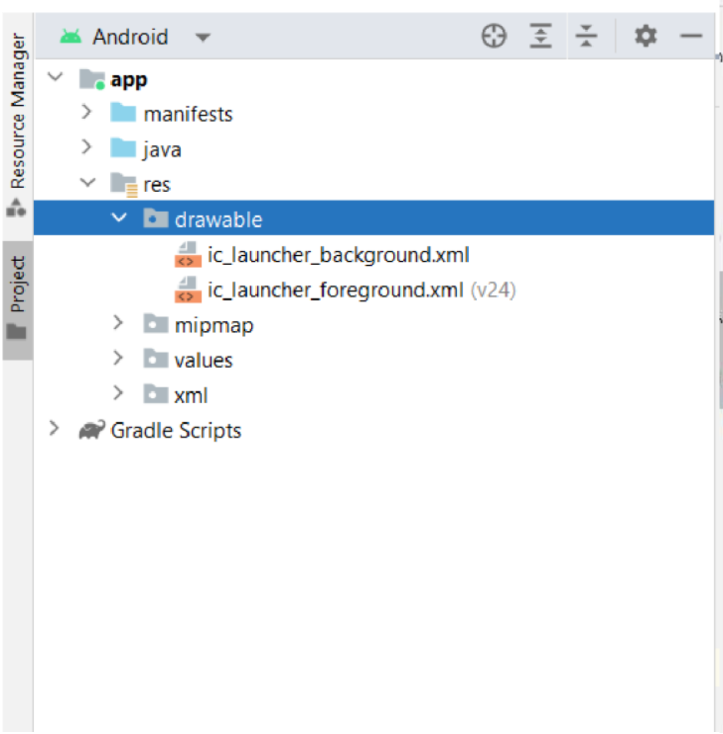
Database connection in RegisterActivity.kt

```
package com.example.travelapp
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

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.tra), contentDescription = "")

        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"
            }
        },
        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(text = "Log in")
        }
    }
  }
}
private fun startLoginActivity(context: Context) {
  val intent = Intent(context, LoginActivity::class.java)
  ContextCompat.startActivity(context, intent, null)
}
```

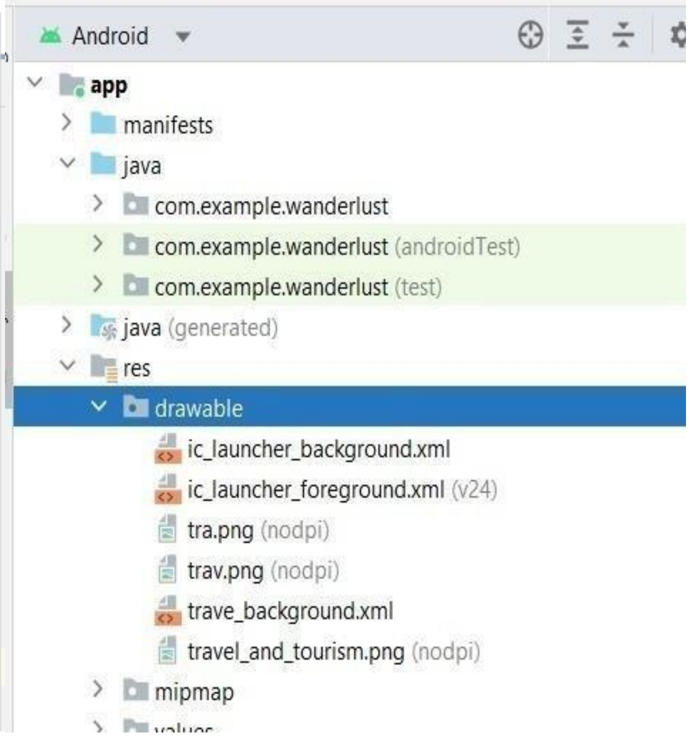
<u>Step 3 :</u> Creating MainActivity.kt file

In MainActivity.kt file the main application is developed

- Before creating UI we need to add some images in drawables which are in res



```
app
  manifests
  java
  res
    drawable
      ic_launcher_background.xml
      ic_launcher_foreground.xml (v24)
    mipmap
    values
    xml
Gradle Scripts
```



```
app
  manifests
  java
    com.example.wanderlust
    com.example.wanderlust (androidTest)
    com.example.wanderlust (test)
  java (generated)
  res
    drawable
      ic_launcher_background.xml
      ic_launcher_foreground.xml (v24)
      tra.png (nodpi)
      trav.png (nodpi)
      trave_background.xml
      travel_and_tourism.png (nodpi)
    mipmap
    values
```

MainActivity.kt

```
package com.example.travelapp

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.clickable
import androidx.compose.foundation.layout.*
import androidx.compose.foundation.rememberScrollState
import androidx.compose.foundation.verticalScroll
import androidx.compose.material.Card
import androidx.compose.material.Text
import androidx.compose.runtime.Composable
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.draw.scale
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.res.stringResource
import androidx.compose.ui.text.font.FontFamily
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.style.TextAlign
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp

class MainActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            TravelApp(this)
        }
    }


    @Composable
    fun TravelApp(context: Context) {
        Column(
            modifier = Modifier
                .padding(20.dp)
                .verticalScroll(rememberScrollState())

        ) {

            Text(
                fontSize = 40.sp,
                color = Color(android.graphics.Color.rgb(120, 40, 251)),
                fontFamily = FontFamily.Cursive,
                text = "Wanderlust Travel"
            )

            Spacer(modifier = Modifier.height(20.dp))

            // 01
            Card(
                modifier = Modifier
                    .fillMaxWidth()
                    .height(250.dp)
                    .clickable {
                    context.startActivity(
                        Intent(context, BaliActivity::class.java)

                    )
                    },
    elevation = 8.dp
)
{
    Column(
        horizontalAlignment = Alignment.CenterHorizontally
    ) {
        Image(
            painterResource(id = R.drawable.bali), contentDescription = "",
            modifier = Modifier
                .height(150.dp)
                .scale(scaleX = 1.2F, scaleY = 1F)
        )

        Text(
            text = stringResource(id = R.string.place_1),
            fontSize = 18.sp
        )


        Text(
            text = stringResource(id = R.string.description),
            fontWeight = FontWeight.Light,
            fontSize = 16.sp,
            textAlign = TextAlign.Center,
        )

        Text(
            text = stringResource(id = R.string.plan), color = Color.Gray,
            fontSize = 16.sp
        )
    }
}

Spacer(modifier = Modifier.height(20.dp))


//02
Card(
    modifier = Modifier
        .fillMaxWidth()
        .height(250.dp)
        .clickable {
        context.startActivity(
            Intent(context, ParisActivity::class.java)

        )
        },
    elevation = 8.dp
)
{
    Column(
        horizontalAlignment = Alignment.CenterHorizontally
    ) {
        Image(
            painterResource(id = R.drawable.paris), contentDescription = "",
            modifier = Modifier
                .height(150.dp)
                .scale(scaleX = 1.2F, scaleY = 1F)
        )

        Text(
            text = stringResource(id = R.string.place_2),
            fontSize = 18.sp
        )


        Text(
            text = stringResource(id = R.string.description),
            fontWeight = FontWeight.Light,
            fontSize = 16.sp,
            textAlign = TextAlign.Center,
        )

        Text(
            text = stringResource(id = R.string.plan), color = Color.Gray,
            fontSize = 16.sp
        )
    }
}

Spacer(modifier = Modifier.height(20.dp))

//03
Card(
    modifier = Modifier
        .fillMaxWidth()
```

```
                    .height(250.dp)
                    .clickable {
                    context.startActivity(
                        Intent(context, SingaporeActivity::class.java)

                    )
                    },
                elevation = 8.dp
            )
            {
                Column(
                    horizontalAlignment = Alignment.CenterHorizontally
                ) {
                    Image(
                        painterResource(id = R.drawable.singapore), contentDescription
= "",
                        modifier = Modifier
                            .height(150.dp)
                            .scale(scaleX = 1.2F, scaleY = 1F)
                    )

                    Text(
                        text = stringResource(id = R.string.place_3),
                        fontSize = 18.sp
                    )


                    Text(
                        text = stringResource(id = R.string.description),
                        fontWeight = FontWeight.Light,
                        fontSize = 16.sp,
                        textAlign = TextAlign.Center,
                    )

                    Text(
                        text = stringResource(id = R.string.plan), color = Color.Gray,
                        fontSize = 16.sp
                    )
                }
            }

            Spacer(modifier = Modifier.height(20.dp))
        }
```

```
    }
}
```

Step 4 : Creating BaliActivity.kt file

BaliActivity.kt

```
package com.example.travelapp

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.foundation.rememberScrollState
import androidx.compose.foundation.verticalScroll
import androidx.compose.material.MaterialTheme
import androidx.compose.material.Surface
import androidx.compose.material.Text
import androidx.compose.runtime.Composable
import androidx.compose.ui.Modifier
import androidx.compose.ui.draw.scale
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.res.stringResource
import androidx.compose.ui.text.font.FontFamily
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import com.example.travelapp.ui.theme.TravelAppTheme

class BaliActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            TravelAppTheme {
                // A surface container using the 'background' color from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {
                    PlaceOne()
                }
            }
        }
    }
}

@Composable
fun PlaceOne() {
    Column(modifier = Modifier.background(color = Color.White)
        .padding(20.dp)
        .verticalScroll(rememberScrollState())
    ) {
        Text(
            fontSize = 40.sp,
            color = Color(android.graphics.Color.rgb(120, 40, 251)),
            fontFamily = FontFamily.Cursive,
            text = stringResource(id = R.string.place_1),
        )
        Image(
            painterResource(id = R.drawable.bali), contentDescription = "",
            modifier = Modifier
                .padding(16.dp)
                .fillMaxWidth()
                .height(200.dp)
                .scale(scaleX = 1.2F, scaleY = 1F)
        )
        Text(
            color=Color.Black,
            text = "Day 1: Arrival and Relaxation\n" +

                    "Arrive in Bali and check into your hotel or accommodation.\n" +
                    "Spend the day relaxing and getting acclimated to the island.\n" +
                    "If you have time, explore the nearby area or head to the beach.\n" +
                    "\n" +

                    "Day 2: Ubud Tour\n" +

                    "Start your day early and head to Ubud, a cultural and artistic hub in
Bali.\n" +
                    "Visit the Monkey Forest and the Ubud Palace.\n" +
                    "Take a tour of the Tegalalang Rice Terrace, a beautiful UNESCO
World Heritage Site.\n" +
                    "End your day with a traditional Balinese dance performance.\n" +
                    "\n" +
                    "Day 3: Temple Hopping\n" +

                    "Visit some of Bali's most famous temples, such as Tanah Lot and
Uluwatu.\n" +
                    "Take in the stunning views of the ocean and cliffs.\n" +
                    "Enjoy a sunset dinner at one of the many restaurants near the
temples.\n" +
                    "\n" +
                    "Day 4: Waterfalls and Beaches\n" +

                    "Take a day trip to Bali's beautiful waterfalls, such as Tegenungan or
Gitgit.\n" +
                    "Spend the afternoon at one of Bali's world-renowned beaches, like
Seminyak or Nusa Dua.\n" +
                    "\n" +
                    "Day 5: Island Hopping\n" +

                    "Take a day trip to one of Bali's neighboring islands, such as Nusa
Lembongan or Gili Islands.\n" +
                    "Snorkel or scuba dive in the clear waters and relax on the beach.\n"
+
                    "\n" +
                    "Day 6: Cultural Activities\n" +
                    "Visit a traditional Balinese village and learn about the island.\n" +
            "\n" +
                    "Day 7: Departure\n" +
                    "Explore the surrounding area and take in the stunning sunset
views.\n" +
                    "Have dinner at a local restaurant before returning to your
accommodation."
        )


    }
}
```

Step 5 : Creating ParisActivity.kt file
ParisActivity.kt file

```
package com.example.travelapp
```

```
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.foundation.rememberScrollState
import androidx.compose.foundation.verticalScroll
import androidx.compose.material.MaterialTheme
import androidx.compose.material.Surface
import androidx.compose.material.Text
import androidx.compose.runtime.Composable
import androidx.compose.ui.Modifier
import androidx.compose.ui.draw.scale
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.res.stringResource
import androidx.compose.ui.text.font.FontFamily
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import com.example.travelapp.ui.theme.TravelAppTheme

class ParisActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            TravelAppTheme {
                // A surface container using the 'background' color from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {
                    Greeting()
                }
            }
        }
    }
}

@Composable
fun Greeting() {
    Column(
        modifier = Modifier.background(color = Color.White)
            .padding(20.dp)
            .verticalScroll(rememberScrollState())
    ) {
        Text(
            fontSize = 40.sp,
            color = Color(android.graphics.Color.rgb(120, 40, 251)),
            fontFamily = FontFamily.Cursive,
            text = stringResource(id = R.string.place_2),
        )
        Image(
            painterResource(id = R.drawable.paris), contentDescription = "",
            modifier = Modifier
                .padding(16.dp)
                .fillMaxWidth()
                .height(200.dp)
                .scale(scaleX = 1.2F, scaleY = 1F)
        )
        Text(
            color=Color.Black,
            text = "Day 1: Arrival and Introduction\n" +

                    "Check into your accommodation and freshen up\n" +
                    "Take a stroll around the neighborhood to get acquainted\n" +
                    "Visit the Eiffel Tower, preferably in the evening when it is lit up\n"
+
                    "Have a relaxing dinner at a nearby restaurant\n" +

                    "\n" +
                    "Day 2: Art and History\n" +

                    "Visit the Louvre Museum to see some of the world's most famous
art pieces\n" +
                    "Stroll through the Tuileries Garden and the Place de la Concorde\n"
+
                    "Visit the Orsay Museum, which houses a large collection of
impressionist art\n" +
                    "Have dinner at a local French restaurant\n" +

                    "\n" +
                    "Day 3: French Culture and Food\n" +
                    "Visit the Montmartre neighborhood to see the famous Basilique du Sacré-Cœur and Place du Tertre\n" +
                    "Explore the historic neighborhood of Le Marais\n" +
                    "Try some delicious French pastries at a local bakery\n" +
                    "Have dinner at a brasserie to taste some classic French cuisine\n" +

                    "\n" +

                    "Day 4: Architecture and Gardens\n" +

                    "Visit the Palace of Versailles, a UNESCO World Heritage site, and explore its beautiful gardens\n" +
                    "Walk along the Champs-Elysées and stop at the Arc de Triomphe\n" +
                    "Visit the Sainte-Chapelle, a beautiful Gothic chapel with stunning stained-glass windows\n" +
                    "Have dinner at a local restaurant in the 7th arrondissement\n" +

                    "\n" +
                    "Day 5: Shopping and Sightseeing\n" +

                    "Visit the Notre-Dame Cathedral and climb up to the top for a stunning view of the city\n" +
                    "Explore the Latin Quarter and visit the Panthéon\n" +
                    "Go shopping at the famous Galeries Lafayette or Printemps department stores\n" +
                    "Have dinner at a local bistro\n" +
                    "\n" +
                    "Day 6: Parisian Parks and Museums\n" +

                    "Visit the Musée Rodin and explore its beautiful gardens\n" +
                    "Stroll through the Luxembourg Gardens and visit the Luxembourg Palace\n" +
                    "Visit the Centre Pompidou, a modern art museum in the Marais neighborhood\n" +
                    "Have dinner at a local restaurant in the Latin Quarter\n" +
                    "\n" +
                    "Day 7: River Cruise and Farewell\n" +

                    "Take a boat cruise along the Seine River to see the city from a different perspective\n" +
                    "Visit the Musée de l'Orangerie, which houses Monet's famous water lilies paintings\n" +
                "Have a farewell dinner at a Michelin-starred restaurant"
        )
    }
}
```

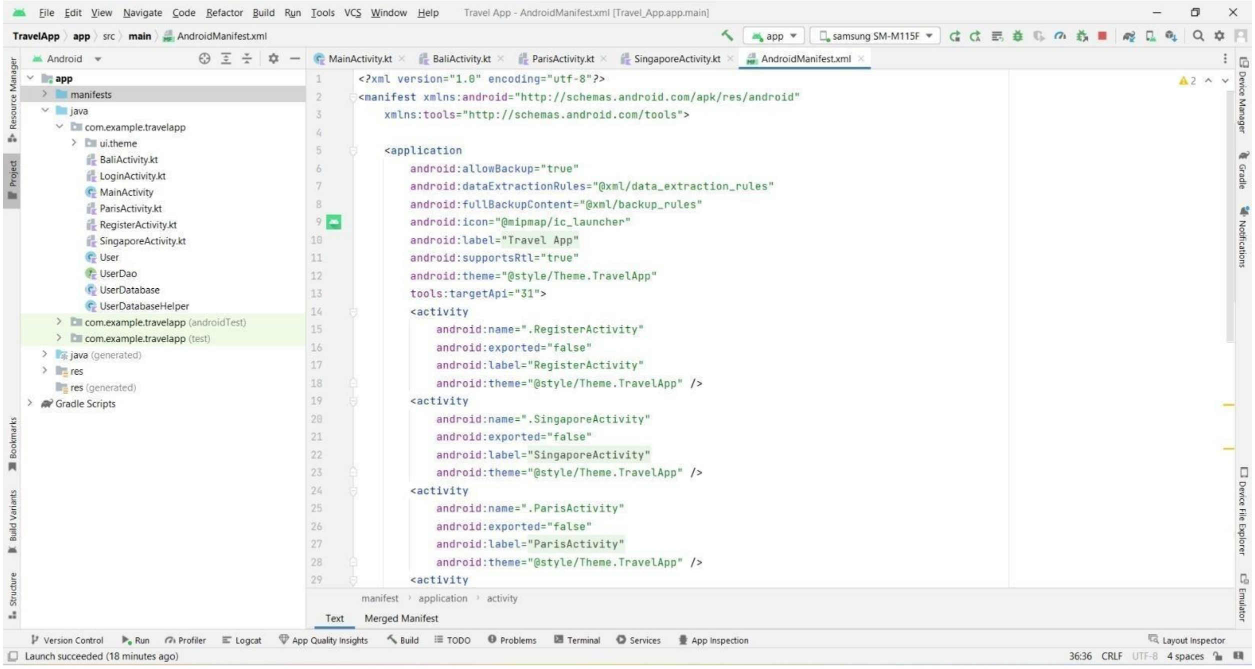
Step 6 : Creating SingaporeActivity.kt file

SingaporeActivity.kt file

```
package com.example.travelapp

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.foundation.rememberScrollState
import androidx.compose.foundation.verticalScroll
import androidx.compose.material.MaterialTheme
import androidx.compose.material.Surface
import androidx.compose.material.Text
import androidx.compose.runtime.Composable
import androidx.compose.ui.Modifier
import androidx.compose.ui.draw.scale
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.res.stringResource
import androidx.compose.ui.text.font.FontFamily
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import com.example.travelapp.ui.theme.TravelAppTheme

class SingaporeActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            TravelAppTheme {
                // A surface container using the 'background' color from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {
                    Greeting2()
                }
            }
        }
    }
}

@Composable
fun Greeting2() {

    Column(
        modifier = Modifier.background(color = Color.White)
            .padding(20.dp)
            .verticalScroll(rememberScrollState())
    ) {
        Text(
            fontSize = 40.sp,
            color = Color(android.graphics.Color.rgb(120, 40, 251)),
            fontFamily = FontFamily.Cursive,
            text = stringResource(id = R.string.place_3),
        )
        Image(
            painterResource(id = R.drawable.singapore), contentDescription = "",
            modifier = Modifier
                .padding(16.dp)
                .fillMaxWidth()
                .height(200.dp)
                .scale(scaleX = 1.2F, scaleY = 1F)
        )
        Text(
            color = Color.Black,
            text = "Day 1:\n" +
                    "Morning: Visit Gardens by the Bay and marvel at the Supertree Grove and the Flower Dome and Cloud Forest conservatories.\n" +
                    "Afternoon: Explore the Marina Bay Sands complex, which includes a casino, luxury shopping mall, and observation deck with a stunning view of the city.\n" +
                    "\n" +
                    "Day 2:\n" +

                    "Morning: Explore the historic district of Chinatown, including the Buddha Tooth Relic Temple and Museum and the Sri Mariamman Temple.\n" +
                    "Afternoon: Visit the nearby Clarke Quay for lunch and to explore its waterfront restaurants, bars, and shops.\n" +
                    "\n" +
                    "Day 3:\n" +

                    "Morning: Take a tour of the UNESCO-listed Botanic Gardens, one of the world's most famous and significant tropical gardens.\n" +
                    "Afternoon: Head over to the National Museum of Singapore, which houses a vast collection of historical and cultural artifacts.\n" +

                    "\n" +
                    "Day 4:\n" +

                    "Morning: Visit the Singapore Zoo and admire the wildlife, including orangutans, tigers, and elephants.\n" +
                    "Afternoon: Head over to Sentosa Island and relax at one of its many beaches or try some of the many attractions such as Universal Studios Singapore or Adventure Cove Waterpark.\n" +
                    "\n" +
                    "Day 5:\n" +

                    "Morning: Go on a nature walk at MacRitchie Reservoir, which offers hiking trails and stunning views of the city skyline.\n" +
                    "Afternoon: Visit Little India, a vibrant and colorful neighborhood, and explore the shops, temples, and food stalls.\n" +
                    "\n" +
                    "Day 6:\n" +
                    "Morning: Explore the trendy neighborhood of Tiong Bahru, known for its hip cafes and boutiques, as well as its Art Deco architecture.\n" +
                    "Afternoon: Visit the National Gallery Singapore, which houses the largest public collection of modern art in Singapore and Southeast Asia.\n" +
                    "\n" +
                    "Day 7:\n" +

                    "Morning: Take a day trip to the nearby island of Pulau Ubin, where you can rent a "
            )
        }
    }
```

Task 6:

Modifying AndroidManifest.xml



```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="Travel App"
        android:supportsRtl="true"
        android:theme="@style/Theme.TravelApp"
        tools:targetApi="31">
        <activity
            android:name=".RegisterActivity"
            android:exported="false"
            android:label="RegisterActivity"
            android:theme="@style/Theme.TravelApp" />
        <activity
            android:name=".SingaporeActivity"
            android:exported="false"
            android:label="SingaporeActivity"
            android:theme="@style/Theme.TravelApp" />
        <activity
            android:name=".ParisActivity"
            android:exported="false"
            android:label="ParisActivity"
            android:theme="@style/Theme.TravelApp" />
        <activity
```

When we run the app we will get the MainActivity.kt file as our first screen , but we want LoginActivity.kt , So we need to change in AndroidManifest.xml.

Changed AndroidManifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">
    <application
      android:allowBackup="true"
      android:dataExtractionRules="@xml/data_extraction_rules"
      android:fullBackupContent="@xml/backup_rules"
      android:icon="@mipmap/ic_launcher"
      android:label="@string/app_name"
      android:supportsRtl="true"
      android:theme="@style/Theme.TravelApp"
      tools:targetApi="31">
      <activity
        android:name=".RegisterActivity"
        android:exported="false"
        android:label="RegisterActivity"
        android:theme="@style/Theme.TravelApp" />
      <activity
        android:name=".SingaporeActivity"
        android:exported="false"
        android:label="@string/title_activity_singapore"
        android:theme="@style/Theme.TravelApp" />
      <activity
        android:name=".ParisActivity"
        android:exported="false"
        android:label="@string/title_activity_paris"
        android:theme="@style/Theme.TravelApp" />
      <activity
        android:name=".BaliActivity"
        android:exported="false"
        android:label="@string/title_activity_bali"
        android:theme="@style/Theme.TravelApp" />
      <activity
        android:name=".MainActivity"
        android:exported="true"
        android:label="@string/app_name"
        android:theme="@style/Theme.TravelApp"/>
      <activity
        android:name=".LoginActivity"
        android:exported="true"
        android:label="@string/app_name"
        android:theme="@style/Theme.TravelApp">
        <intent-filter>
          <action android:name="android.intent.action.MAIN" />
```

```
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

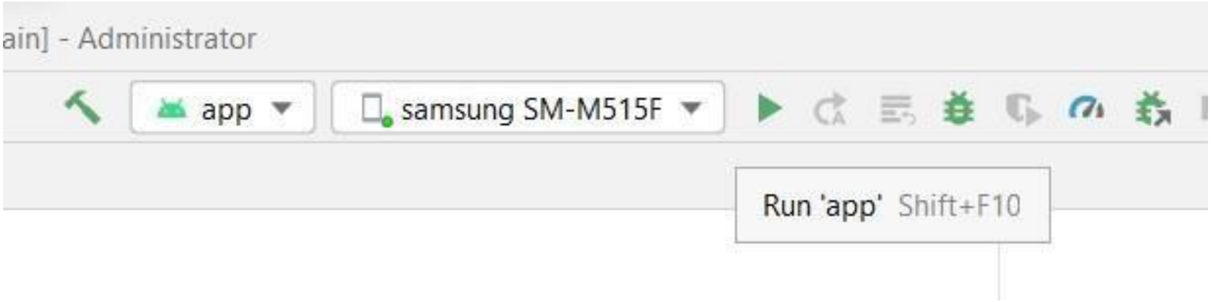
Task 7:

Running the application.

Step 1: Run apps on a hardware device

https://developer.android.com/studio/run/device

Step 2: Run the application in Mobile

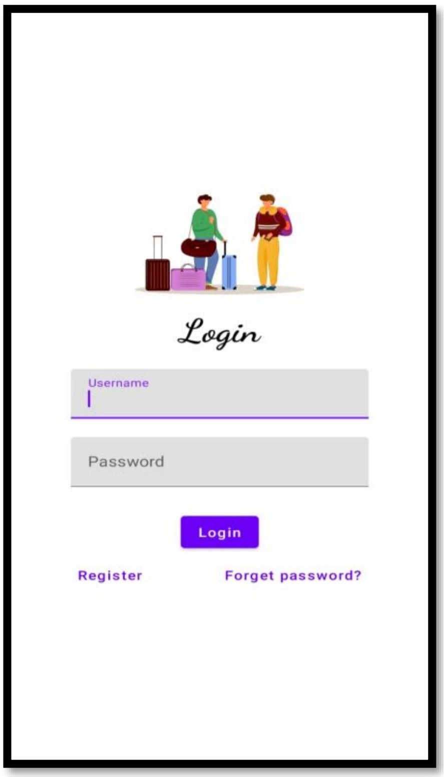


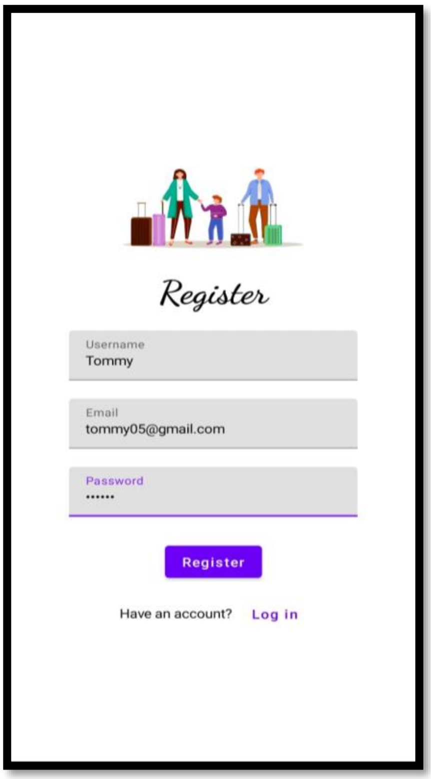
Complete Project Link:

Final Output of the Application :

https://github.com/Akilandeswari-S/Wanderlust-A-Personalized-Travel-Planning-and-Tracking-App.git

Login Page :

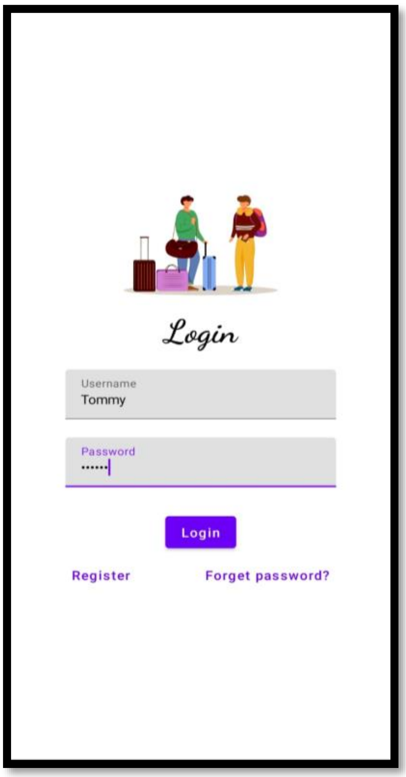




Username
Tommy

Email
tommy05@gmail.com

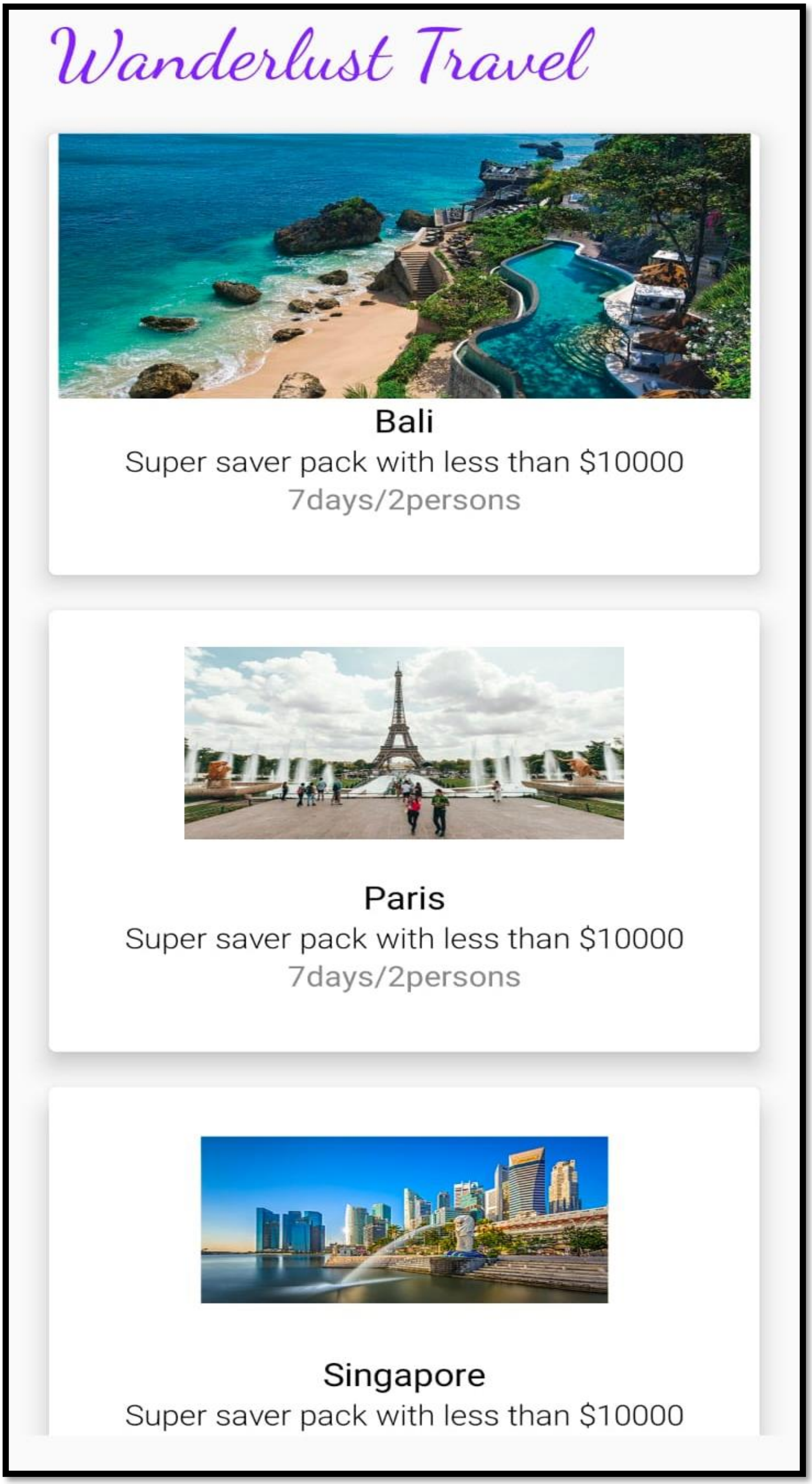
Password
••••••



Username
Tommy

Password
••••••

Front Page:



Wanderlust Travel

Bali

Super saver pack with less than $10000

7days/2persons

Paris

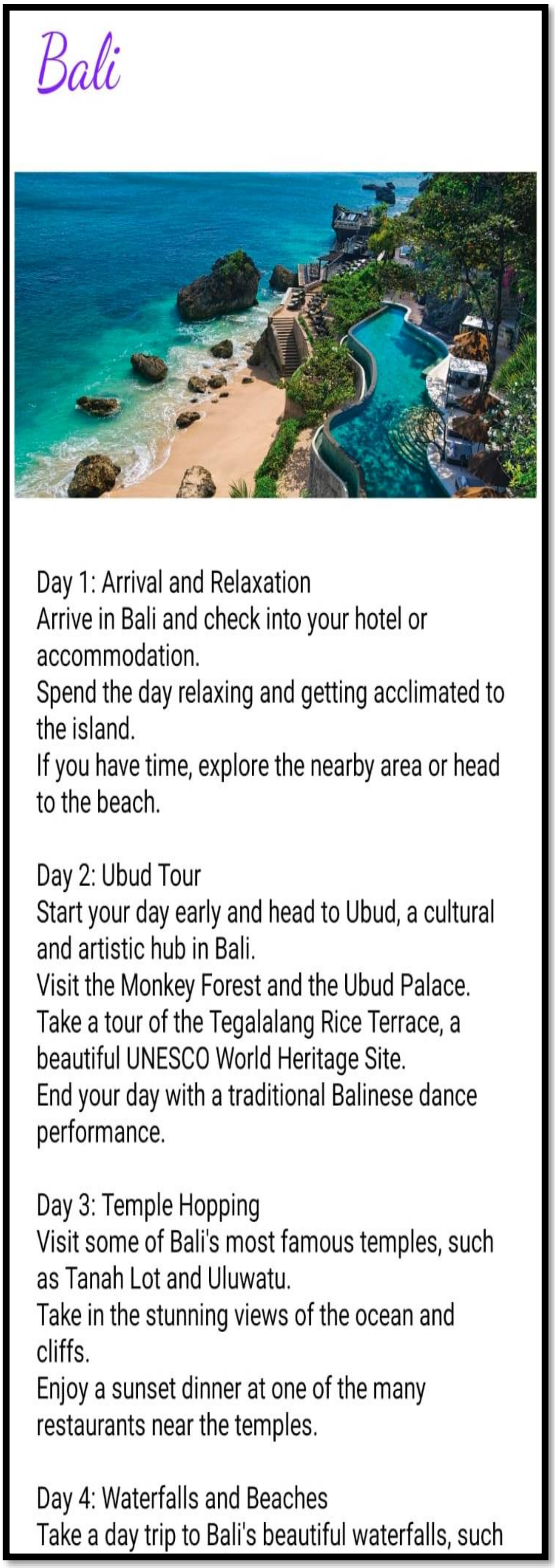
Super saver pack with less than $10000

7days/2persons

Singapore

Super saver pack with less than $10000

Selection Pages:



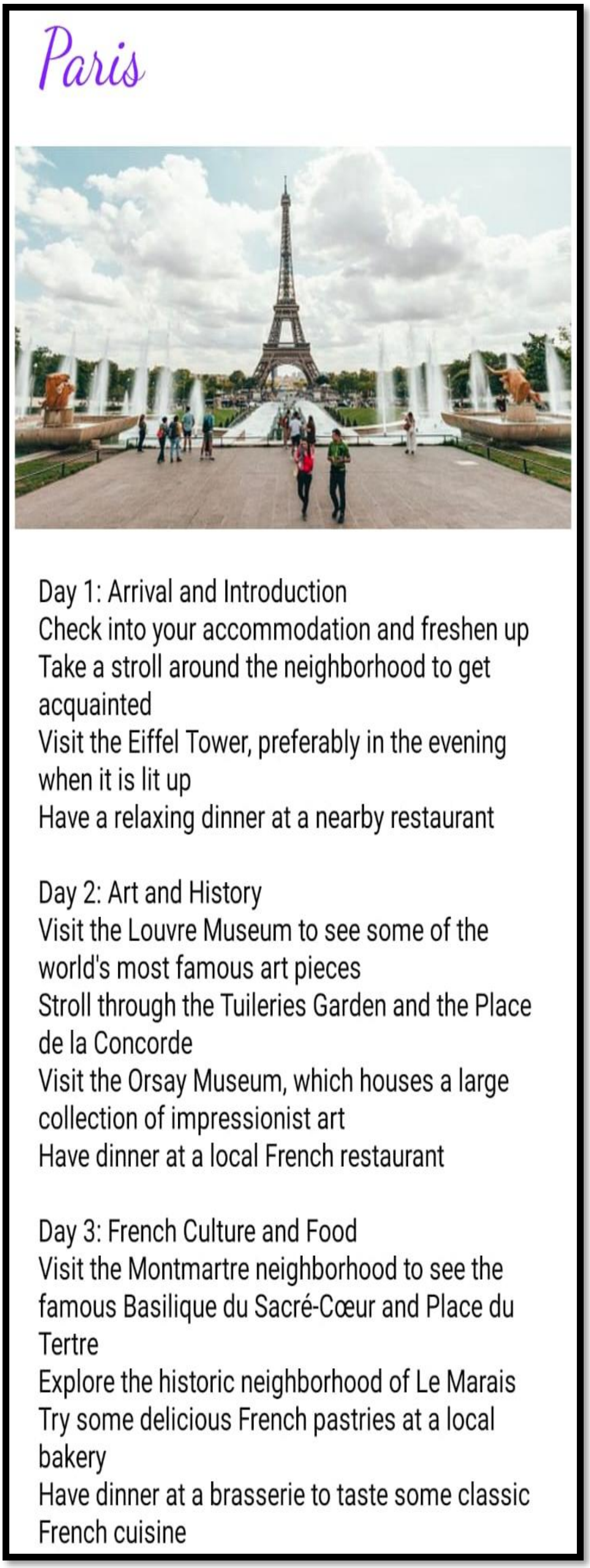
Bali

Day 1: Arrival and Relaxation
Arrive in Bali and check into your hotel or accommodation.
Spend the day relaxing and getting acclimated to the island.
If you have time, explore the nearby area or head to the beach.

Day 2: Ubud Tour
Start your day early and head to Ubud, a cultural and artistic hub in Bali.
Visit the Monkey Forest and the Ubud Palace.
Take a tour of the Tegalalang Rice Terrace, a beautiful UNESCO World Heritage Site.
End your day with a traditional Balinese dance performance.

Day 3: Temple Hopping
Visit some of Bali's most famous temples, such as Tanah Lot and Uluwatu.
Take in the stunning views of the ocean and cliffs.
Enjoy a sunset dinner at one of the many restaurants near the temples.

Day 4: Waterfalls and Beaches
Take a day trip to Bali's beautiful waterfalls, such



Paris

Day 1: Arrival and Introduction
Check into your accommodation and freshen up
Take a stroll around the neighborhood to get acquainted
Visit the Eiffel Tower, preferably in the evening when it is lit up
Have a relaxing dinner at a nearby restaurant

Day 2: Art and History
Visit the Louvre Museum to see some of the world's most famous art pieces
Stroll through the Tuileries Garden and the Place de la Concorde
Visit the Orsay Museum, which houses a large collection of impressionist art
Have dinner at a local French restaurant

Day 3: French Culture and Food
Visit the Montmartre neighborhood to see the famous Basilique du Sacré-Cœur and Place du Tertre
Explore the historic neighborhood of Le Marais
Try some delicious French pastries at a local bakery
Have dinner at a brasserie to taste some classic French cuisine

Singapore

Day 1:
Morning: Visit Gardens by the Bay and marvel at the Supertree Grove and the Flower Dome and Cloud Forest conservatories.
Afternoon: Explore the Marina Bay Sands complex, which includes a casino, luxury shopping mall, and observation deck with a stunning view of the city.

Day 2:
Morning: Explore the historic district of Chinatown, including the Buddha Tooth Relic Temple and Museum and the Sri Mariamman Temple.
Afternoon: Visit the nearby Clarke Quay for lunch and to explore its waterfront restaurants, bars, and shops.

Day 3:
Morning: Take a tour of the UNESCO-listed Botanic Gardens, one of the world's most famous and significant tropical gardens.
Afternoon: Head over to the National Museum of Singapore, which houses a vast collection of historical and cultural artifacts.