Owl-M: A Material Design Study App

N.ISHACK AHAMED

J.ASHIK RAHMAN

P.SEENI ABUBAKKAR

M.BADHURU ZAMAAN

Introduction

1.1 overview

A project that demonstrates the use of Android Jetpack Compose to build a UI for an Owl-M: a material design study app. Owl-M app is a sample project built using the Android Compose UI toolkit. A Compose implementation of the Owl Material study.

Project Workflow:

- Users register into the application.
- After registration, user logins into the application.
- User enters the main page
- User can view the subject themes on selecting theme he

can read about it.

1.2 purpose

Owl-M is a material design study app designed to help users enhance their learning experience. The primary purpose of Owl-M is to provide users with a convenient and accessible way to create, organize, and access study materials.

With Owl-M, users can create digital flashcards, organize study notes, and set reminders to stay on track with their

learning goals. The app also provides a range of customizable study modes, such as quiz mode, where users can test their knowledge and track their progress.

One of the key features of Owl-M is its sleek and intuitive material design interface. The app provides users with a clean and minimalist design, making it easy to navigate and use. Additionally, Owl-M offers a range of customization options, allowing users to personalize the app to their preferred style.

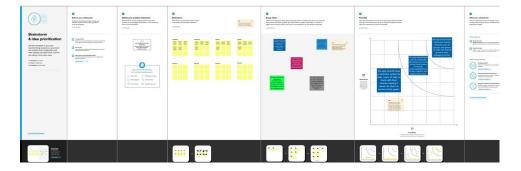
Overall, Owl-M is a powerful tool for students and anyone looking to enhance their learning experience. Its user-friendly interface and range of features make it a valuable addition to any study routine.

2.problem definition and design thinking

2.1 Empathy map



2.2 ideation & Brainstorming



Login Page:

Register Page:

Main page:



Page no:

4. Advantages and Disadvantages

Advantages:

Material Design: Owl-M is designed using Google's



- Material Design language, which makes it visually appealing and easy to use.
- Interactive learning: Owl-M offers interactive features such as flashcards, quizzes, and games to help users retain information.
- Personalized learning: Owl-M allows users to customize their study plan and set reminders to study at specific times, making it a great tool for selfpaced learning.
- Progress tracking: Owl-M tracks users' progress and provides feedback on areas that need improvement, which helps users stay motivated and focused on their learning goals.
- Multi-device support: Owl-M is available on multiple devices, including mobile phones, tablets, and desktops, which makes it convenient for users to access their study material anytime and anywhere.

Disadvantages:

• Limited content: Owl-M offers a limited selection of study material, which may not be sufficient for some users' needs.

- No social features: Owl-M does not offer any social features, such as discussion forums or collaboration tools, which may limit users' ability to connect with other learners.
- Premium features: Some of Owl-M's more advanced features, such as personalized study plans and progress tracking, are only available to premium subscribers.
- No offline mode: Owl-M requires an internet connection to access study material, which may be inconvenient for users in areas with limited internet access.
- Limited customization: Although Owl-M offers some customization options, such as the ability to set reminders and choose study themes, there are limits to how much users can personalize their study experience.

5. Application

Learning:

A study app can help students learn new concepts and information by providing interactive lessons, quizzes, and flashcards.

Revision:

Students can use study apps to revise and reinforce what they have learned in class or through self-study.

Time management:

A study app can help students manage their time by creating schedules, setting reminders, and tracking progress.

Collaboration:

Study apps can facilitate collaboration between students by allowing them to share notes, assignments, and study materials.

Test preparation:

A study app can help students prepare for exams by providing practice tests, mock exams, and feedback on their performance.

Language learning:

Study apps can help users learn new languages through interactive lessons, vocabulary lists, and audio recordings.

Skill development:

Study apps can also help users develop new skills by providing access to courses, tutorials, and instructional videos.

Professional development:

Professionals can use study apps to keep up to date with new developments in their field, develop new skills, and earn certifications.

About Android Studio Application:

- Code editing: Android Studio provides a code editor with features like code completion, syntax highlighting, and refactoring. It supports multiple languages, including Java, Kotlin, and C++.
- Visual layout editor: Android Studio has a visual layout editor that allows developers to design the user interface (UI) of their app using a drag-and-drop interface. The layout editor provides tools to create

- complex layouts and preview how the UI will look on different devices.
- Build system: Android Studio includes Gradle, a build system used to compile and package Android apps. Gradle is highly customizable and allows developers to automate many aspects of the build process.
- Debugging and testing: Android Studio has tools for debugging and testing Android apps, including a debugger, emulator, and integration with various testing frameworks.
- Integration with Google services: Android Studio has built-in support for integrating Google services like Google Maps, Google Cloud Platform, and Firebase.

About Android Studio

application:

◆ Studio is the official integrate development environment (IDE) for building Android Apps. It was first released by Google in 2013 and has since become the most popular development environment for Android app developers.

Android Studio is based on the IntelliJ IDEA community edition, and it includes many tools and features designed specifically for developing Android apps Some of the key features of Android Studio include:

User Interface (UI) Designer:

Android Studio includes a powerful Designer that allows developers to easily create and modify app layouts using drag-and-drop tools. The UI designer supports a variety of layouts, including linear, relative, and constraint layouts.

Code Editor:

Android Studi includes a powerful code editor that provides syntax highlighting, code completion, and other features to help developers write clean, efficient code. The code editor also supports debugging and refactoring tools.

Emulator:

Android Studio includes a built-in emulator that allows developers to test their apps on different Android devices without needing to own the actual devices. The emulator supports a wide range of Android versions and device configurations.

Gradle Build System:

Android Studio uses the Gradle build system, which makes it easy to manage dependencies and build complex apps with multiple modules.

Version Control:

Android Studio supports version control systems like Git, allowing developers to easily manage their code changes and collaborate with other team members.

Performance Profiling:

Android Studio includes performance profiling tools that allow developers to identify performance bottlenecks in their apps and optimize their code for better performance. Overall, Android Studio is a powerful tool for developing high-quality Android apps. It provides a range of features and tools that make it easy for developers to build, test, and deploy their apps.

6. Conclusion

In conclusion, an owl material design study app could be a useful educational tool for learning about Google's material design principles, which is a design language used in the development of Android apps and other digital products. Such an app could include interactive lessons, tutorials, and examples to help users understand the core principles of material design, as well as quizzes and assessments to test their knowledge.

Overall, a material design study app could be beneficial for anyone interested in design, from beginners to professionals, who want to develop their skills and stay up-to-date with the latest design trends. By providing users with the tools and resources they need to learn about material design, an owl material design study app could help them create more engaging and effective designs for their Android apps and other digital products.

7. Future scope

The future scope for an owl material design study app is promising as there is an increasing demand for mobile app development and design. Here are some potential future developments for the app:

Integration with augmented reality (AR) and virtual

Reality (VR) technology:

With the increasing use of AR and VR in mobile app development, the owl material design study app could integrate these technologies to provide users with a more immersive learning experience.

Expansion to other platforms:

While material design is primarily used for Android apps, it could be applied to other platforms such as iOS, web, and desktop applications. The app could expand its scope to cover these platforms and provide design resources and tutorials for these areas.

Collaboration and community features:

The app could introduce features that enable users to collaborate and share their design work with other users. This could include a community forum, design challenges, and opportunities to showcase their work.

learning experiences:

The app could use artificial intelligence and machine learning algorithms to provide personalized learning experiences for users based on their interests, skill level, and learning pace.

8. Appendix

A. Source code

Creating user database classes:

Step 1: Create User data class package com.example.owlapplication

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 User Dao interface
package com.example.owlapplication
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.owlapplication
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
```

Step 4 : Create an UserDatabaseHelper class

package com.example.owlapplication

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_FIRS
T_NAME)),
        lastName =
cursor.getString(cursor.getColumnIndex(COLUMN_LAST
NAME)),
        email =
cursor.getString(cursor.getColumnIndex(COLUMN_EMA
IL)),
```

```
password =
cursor.getString(cursor.getColumnIndex(COLUMN_PASS
WORD)),
    }
    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_FIRS
T_NAME)),
        lastName =
cursor.getString(cursor.getColumnIndex(COLUMN_LAST
NAME)),
        email =
cursor.getString(cursor.getColumnIndex(COLUMN_EMA
IL)),
        password =
cursor.getString(cursor.getColumnIndex(COLUMN_PASS
WORD)),
    }
    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_FIRS
T_NAME)),
          lastName =
cursor.getString(cursor.getColumnIndex(COLUMN_LAST
NAME)),
          email =
cursor.getString(cursor.getColumnIndex(COLUMN_EMA
IL)),
          password =
cursor.getString(cursor.getColumnIndex(COLUMN_PASS
WORD)),
```

```
users.add(user)
      } while (cursor.moveToNext())
    }
    cursor.close()
    db.close()
    return users
  }
}
Building application UI and connecting to database.
Step 1: Creating LoginActivity.kt with database
package com.example.owlapplication
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.lmage 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.PasswordVisualTransfo rmation 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.owlapplication.ui.theme.OwlApplicationT
heme
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.study_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 = "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)
}
```

Step 2 : Creating RegisterActivity.kt with database package com.example.owlapplication

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.lmage 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.owlapplication.ui.theme.OwlApplicationT heme

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.study_signup), 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.i
                              nsertUser(user)
                              error = "User
context
                              registered
                              successfully"
                              // Start LoginActivity using
                              the current
                              C
                                 0
                                 n
                                 t
                                 e
```

X

```
t
                                  n
                                  t
S
t
                                   e
a
                                  n
                                  t
r
t
Α
                                     cont
                                     ext,
C
                                     Logi
t
                                     nAct
                                     ivity
V
                                     ::cla
i
                                     ss.ja
t
                                     va
y
       } 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)
}
```

Step 3: Creating MainActivity.kt file
In MainActivity.kt file the main application is developed

 Before creating UI, we need to add some images in drawable which are in res

```
<?xml version="1.0" encoding="utf-8"?>
<vector
xmlns:android="http://schemas.android.com/apk/res/
android"
  android:width="108dp"
  android:height="108dp"
  android:viewportWidth="108"
  android:viewportHeight="108">
  <path
    android:fillColor="#3DDC84"
    android:pathData="M0,0h108v108h-108z" />
  <path
    android:fillColor="#00000000"
    android:pathData="M9,0L9,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
  <path
```

```
android:fillColor="#00000000"
  android:pathData="M19,0L19,108"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M29,0L29,108"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M39,0L39,108"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M49,0L49,108"
  android:strokeWidth="0.8"
```

android:strokeColor="#33FFFFFF" />

```
<path
  android:fillColor="#00000000"
  android:pathData="M59,0L59,108"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M69,0L69,108"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M79,0L79,108"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M89,0L89,108"
```

android:strokeWidth="0.8"

```
android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M99,0L99,108"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M0,9L108,9"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M0,19L108,19"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
```

android:fillColor="#00000000"

android:pathData="M0,29L108,29"

```
android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M0,39L108,39"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M0,49L108,49"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M0,59L108,59"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
```

android:fillColor="#00000000"

```
android:pathData="M0,69L108,69"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M0,79L108,79"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M0,89L108,89"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M0,99L108,99"
  android:strokeWidth="0.8"
```

android:strokeColor="#33FFFFFF" />

<path

```
android:fillColor="#00000000"
  android:pathData="M19,29L89,29"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M19,39L89,39"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M19,49L89,49"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M19,59L89,59"
  android:strokeWidth="0.8"
```

android:strokeColor="#33FFFFFF" />

```
<path
  android:fillColor="#00000000"
  android:pathData="M19,69L89,69"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M19,79L89,79"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M29,19L29,89"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M39,19L39,89"
```

android:strokeWidth="0.8"

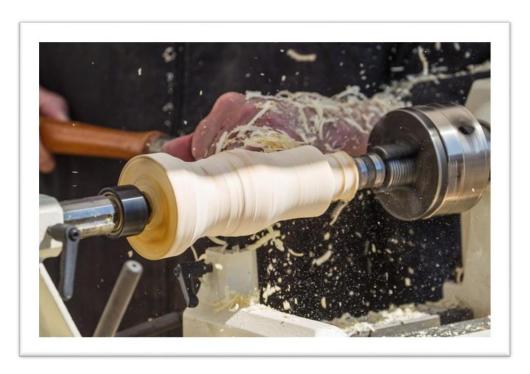
```
android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M49,19L49,89"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M59,19L59,89"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
  android:fillColor="#00000000"
  android:pathData="M69,19L69,89"
  android:strokeWidth="0.8"
  android:strokeColor="#33FFFFFF" />
<path
```

android:fillColor="#00000000"

android:pathData="M79,19L79,89"

android:strokeWidth="0.8"
android:strokeColor="#33FFFFFF" />
</vector>

Add some image: add first image



Img_2.png



Img_3.png



Img_4.png



study_login.jpg



study_signup.jpg



MainActivity.kt package com.example.owlapplication

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.lmage 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.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 {
      StudyApp(this)
    }
@Composable
fun StudyApp(context: Context) {
  Column(
    modifier = Modifier
      .padding(20.dp)
      .verticalScroll(rememberScrollState())
```

```
) {
    Text(text = "Study Material",
      fontSize = 36.sp,
      fontWeight = FontWeight.Bold,
      color = Color(0xFFFFA500),
      modifier =
Modifier.align(Alignment.CenterHorizontally))
    Spacer(modifier = Modifier.height(20.dp))
//
      01
    Card(
      modifier = Modifier
         .fillMaxWidth()
         .height(250.dp)
         .clickable {
           context.startActivity(
             Intent(context, MainActivity2::class.java)
```

```
elevation = 8.dp
      Column(
        horizontalAlignment =
Alignment.CenterHorizontally
      ) {
        Image(
           painterResource(id = R.drawable.img_1),
contentDescription = "",
           modifier = Modifier
             .height(150.dp)
             .scale(scaleX = 1.2F, scaleY = 1F)
        Text(text = stringResource(id =
R.string.course1),color = Color(0xFFFFA500),
          fontSize = 16.sp)
```

```
Text(
           text = stringResource(id = R.string.topic1),
           fontWeight = FontWeight.Bold,
           fontSize = 20.sp,
           textAlign = TextAlign.Center,
    }
    Spacer(modifier = Modifier.height(20.dp))
//
      02
    Card(
      modifier = Modifier
         .fillMaxWidth()
         .height(250.dp)
         .clickable {
           context.startActivity(
             Intent(context, MainActivity3::class.java)
```

```
elevation = 8.dp
      Column(
      horizontalAlignment =
Alignment.CenterHorizontally
    ) {
      Image(
        painterResource(id = R.drawable.img_2),
contentDescription = "",
        modifier = Modifier
           .height(150.dp)
           .scale(scaleX = 1.4F, scaleY = 1F)
      Text(text = stringResource(id =
R.string.course2),color = Color(0xFFFFA500),
        fontSize = 16.sp)
```

```
Text(
         text = stringResource(id = R.string.topic2),
         fontWeight = FontWeight.Bold,
         fontSize = 20.sp,
         textAlign = TextAlign.Center,
    }
    Spacer(modifier = Modifier.height(20.dp))
//
      03
    Card(
      modifier = Modifier
         .fillMaxWidth()
         .height(250.dp)
         .clickable {
           context.startActivity(
             Intent(context, MainActivity4::class.java)
```

```
elevation = 8.dp
      Column(
        horizontalAlignment =
Alignment.CenterHorizontally
      ) {
        Image(
           painterResource(id = R.drawable.img_3),
contentDescription = "",
           modifier = Modifier
             .height(150.dp)
             .scale(scaleX = 1.2F, scaleY = 1F)
        Text(text = stringResource(id =
R.string.course3),color = Color(0xFFFFA500),
          fontSize = 16.sp)
```

```
Text(
           text = stringResource(id = R.string.topic3),
           fontWeight = FontWeight.Bold,
           fontSize = 20.sp,
           textAlign = TextAlign.Center,
    }
    Spacer(modifier = Modifier.height(20.dp))
//
      04
    Card(
      modifier = Modifier
         .fillMaxWidth()
         .height(250.dp)
         .clickable {
           context.startActivity(
```

```
Intent(context, MainActivity5::class.java)
        },
      elevation = 8.dp
      Column(
        horizontalAlignment =
Alignment.CenterHorizontally
      ) {
        Image(
           painterResource(id = R.drawable.img_4),
contentDescription = "",
           modifier = Modifier
             .height(150.dp)
             .scale(scaleX = 1.2F, scaleY = 1F)
        Text(text = stringResource(id =
```

R.string.course4),color = Color(0xFFFFA500),

```
fontSize = 16.sp)
        Text(
          text = stringResource(id = R.string.topic4),
          fontWeight = FontWeight.Bold,
          fontSize = 20.sp,
          textAlign = TextAlign.Center,
    }
Step 4: Creating MainActivity2.kt file
package com.example.owlapplication
import android.os.Bundle
import androidx.activity.ComponentActivity
```

import androidx.activity.compose.setContent import androidx.compose.foundation.lmage import androidx.compose.foundation.background import androidx.compose.foundation.layout.* import androidx.compose.foundation.rememberScrollState import androidx.compose.foundation.verticalScroll 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.FontWeight import androidx.compose.ui.text.style.TextAlign import androidx.compose.ui.unit.dp import androidx.compose.ui.unit.sp

```
import
com.example.owlapplication.ui.theme.OwlApplicationT
heme
class MainActivity2 : ComponentActivity() {
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContent {
      Greeting()
    }
@Composable
fun Greeting() {
  Column(
    modifier = Modifier.padding(start = 26.dp, end =
26.dp, bottom = 26.dp)
      .verticalScroll(rememberScrollState())
      .background(Color.White),
    verticalArrangement = Arrangement.Top
```

```
){
    Image(
      painterResource(id = R.drawable.img_1),
      contentDescription = "",
      modifier =
Modifier.align(Alignment.CenterHorizontally)
        .scale(scaleX = 1.5F, scaleY = 1.5F)
    Spacer(modifier = Modifier.height(60.dp))
    Text(
      text = stringResource(id = R.string.course1),
      color = Color(0xFFFFA500),
      fontSize = 16.sp,
      modifier =
Modifier.align(Alignment.CenterHorizontally)
```

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

```
Text(
      text = stringResource(id = R.string.topic1),
      fontWeight = FontWeight.Bold,
      fontSize = 26.sp,
      modifier =
Modifier.align(Alignment.CenterHorizontally)
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id =
R.string.subheading1_1),
      modifier = Modifier.align(Alignment.Start),
      fontSize = 20.sp
    Spacer(modifier = Modifier.height(20.dp))
```

text = stringResource(id = R.string.text1_1),

```
modifier = Modifier.align(Alignment.Start),
      textAlign = TextAlign.Justify,
      fontSize = 16.sp
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id =
R.string.subheading1_2),
      modifier = Modifier.align(Alignment.Start),
      fontSize = 20.sp
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.text1_2),
      modifier = Modifier.align(Alignment.Start),
```

textAlign = TextAlign.Justify,
fontSize = 16.sp

)

}

Step 5: Creating MainActivity3.kt file

package com.example.owlapplication
import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.lmage
import androidx.compose.foundation.background
import androidx.compose.foundation.layout.*
import

androidx.compose.foundation.rememberScrollState import androidx.compose.foundation.verticalScroll 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.FontWeight import androidx.compose.ui.text.style.TextAlign import androidx.compose.ui.unit.dp import androidx.compose.ui.unit.sp

```
class MainActivity3 : ComponentActivity() {
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContent {
       Greeting1()
    }
}
```

```
}
@Composable
fun Greeting1() {
  Column(
    modifier = Modifier.padding(start = 26.dp, end =
26.dp, bottom = 26.dp)
      .verticalScroll(rememberScrollState())
      .background(Color.White),
    verticalArrangement = Arrangement.Top
  ) {
    Image(
      painterResource(id = R.drawable.img_2),
      contentDescription = "",
      modifier =
Modifier.align(Alignment.CenterHorizontally)
        .scale(scaleX = 1.2F, scaleY = 1F)
    Spacer(modifier = Modifier.height(20.dp))
```

```
Text(
      text = stringResource(id = R.string.course2),
      color = Color(0xFFFFA500),
      fontSize = 16.sp,
      modifier =
Modifier.align(Alignment.CenterHorizontally)
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.topic2),
      fontWeight = FontWeight.Bold,
      fontSize = 26.sp.
      modifier =
Modifier.align(Alignment.CenterHorizontally)
    Spacer(modifier = Modifier.height(20.dp))
    Text(
```

```
text = stringResource(id =
R.string.subheading2_1),
      modifier = Modifier.align(Alignment.Start),
      fontSize = 20.sp
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.text2_1),
      modifier = Modifier.align(Alignment.Start),
      textAlign = TextAlign.Justify,
      fontSize = 16.sp
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id =
R.string.subheading2_2),
      modifier = Modifier.align(Alignment.Start),
```

```
fontSize = 20.sp
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.text2_2),
      modifier = Modifier.align(Alignment.Start),
      textAlign = TextAlign.Justify,
      fontSize = 16.sp
  }
Step 6: Creating MainActivity4.kt file
package com.example.owlapplication
```

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.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.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.owlapplication.ui.theme.OwlApplicationT
heme
class MainActivity4 : ComponentActivity() {
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContent {
      Greeting2()
@Composable
fun Greeting2() {
```

```
Column(
    modifier = Modifier.padding(start = 26.dp, end =
26.dp, bottom = 26.dp)
      .verticalScroll(rememberScrollState())
      .background(Color.White),
    verticalArrangement = Arrangement.Top
  ){
    Image(
      painterResource(id = R.drawable.img_3),
      contentDescription = "",
      modifier =
Modifier.align(Alignment.CenterHorizontally)
        .scale(scaleX = 1.5F, scaleY = 2F)
    Spacer(modifier = Modifier.height(60.dp))
```

Text(

text = stringResource(id = R.string.course3),

```
color = Color(0xFFFFA500),
      fontSize = 16.sp,
      modifier =
Modifier.align(Alignment.CenterHorizontally)
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.topic3),
      fontWeight = FontWeight.Bold,
      fontSize = 26.sp.
      modifier =
Modifier.align(Alignment.CenterHorizontally)
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id =
R.string.subheading3_1),
```

```
modifier = Modifier.align(Alignment.Start),
      fontSize = 20.sp
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.text3_1),
      modifier = Modifier.align(Alignment.Start),
      textAlign = TextAlign.Justify,
      fontSize = 16.sp
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id =
R.string.subheading3_2),
      modifier = Modifier.align(Alignment.Start),
      fontSize = 20.sp
```

```
Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.text3_2),
      modifier = Modifier.align(Alignment.Start),
      textAlign = TextAlign.Justify,
      fontSize = 16.sp
  }
Step 7: Creating MainActivity5.kt file
package com.example.owlapplication
import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
```

import androidx.compose.foundation.lmage 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.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.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.owlapplication.ui.theme.OwlApplicationT
heme
class MainActivity5 : ComponentActivity() {
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContent {
      Greeting3()
    }
  }
@Composable
fun Greeting3() {
  Column(
    modifier = Modifier.padding(start = 26.dp, end =
26.dp, bottom = 26.dp)
      .verticalScroll(rememberScrollState())
```

```
.background(Color.White),
    verticalArrangement = Arrangement.Top
  ) {
    Image(
      painterResource(id = R.drawable.img_4),
      contentDescription = "",
      modifier =
Modifier.align(Alignment.CenterHorizontally)
        .scale(scaleX = 1.5F, scaleY = 1.5F)
    Spacer(modifier = Modifier.height(60.dp))
    Text(
      text = stringResource(id = R.string.course4),
      color = Color(0xFFFFA500),
      fontSize = 16.sp,
      modifier =
Modifier.align(Alignment.CenterHorizontally)
```

```
Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.topic4),
      fontWeight = FontWeight.Bold,
      fontSize = 26.sp,
      modifier =
Modifier.align(Alignment.CenterHorizontally)
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id =
R.string.subheading4_1),
      modifier = Modifier.align(Alignment.Start),
      fontSize = 20.sp
```

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

```
Text(
      text = stringResource(id = R.string.text4_1),
      modifier = Modifier.align(Alignment.Start),
      textAlign = TextAlign.Justify,
      fontSize = 16.sp
    )
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id =
R.string.subheading4_2),
      modifier = Modifier.align(Alignment.Start),
      fontSize = 20.sp
    Spacer(modifier = Modifier.height(20.dp))
    Text(
      text = stringResource(id = R.string.text4_2),
```

```
modifier = Modifier.align(Alignment.Start),
      textAlign = TextAlign.Justify,
      fontSize = 16.sp
  }
Task 6:
Modifying AndroidManifest.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_r
ules"
    android:fullBackupContent="@xml/backup_rules"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:supportsRtl="true"
    android:theme="@style/Theme.OwlApplication"
    tools:targetApi="31">
    <activity
      android:name=".RegisterActivity"
      android:exported="false"
      android:label="@string/title_activity_register"
      android:theme="@style/Theme.OwlApplication"
/>
    <activity
      android:name=".MainActivity"
      android:exported="false"
      android:label="MainActivity"
```

```
android:theme="@style/Theme.OwlApplication"
/>
    <activity
      android:name=".MainActivity5"
      android:exported="false"
      android:label="@string/title_activity_main5"
      android:theme="@style/Theme.OwlApplication"
/>
    <activity
      android:name=".MainActivity4"
      android:exported="false"
      android:label="@string/title_activity_main4"
      android:theme="@style/Theme.OwlApplication"
/>
    <activity
      android:name=".MainActivity3"
      android:exported="false"
      android:label="@string/title_activity_main3"
      android:theme="@style/Theme.OwlApplication"
/>
```

```
<activity
      android:name=".MainActivity2"
      android:exported="false"
      android:label="@string/title_activity_main2"
      android:theme="@style/Theme.OwlApplication"
/>
    <activity
      android:name=".LoginActivity"
      android:exported="true"
      android:label="@string/app_name"
android:theme="@style/Theme.OwlApplication">
      <intent-filter>
        <action
android:name="android.intent.action.MAIN" />
        <category
android:name="android.intent.category.LAUNCHER" />
      </intent-filter>
    </activity>
```

</application>

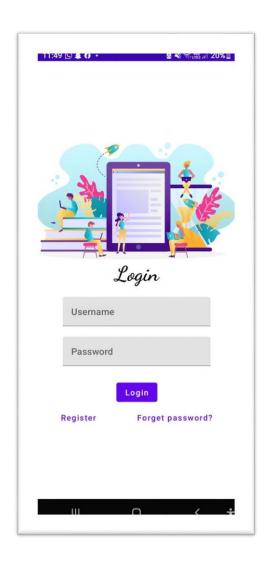
</manifest>

Task 7:

Running the application:

Final Output of the Application:

Register Page:





Login Page:

MainPage:

Book page:





Arts & Craft

The Basics of Woodturning

What Is WoodTurning

Woodturning is a form of woodworking involving a lathe. With other kinds of woodworking, the wood is stationary and the tool moves to create cuts.

In woodturning, the lathe turns the wood on its axis at high revolutions per minute while relatively stationary special cutting tools on a tool rest do the work.

A wood lathe allows woodturners to create all kinds of objects, from bowls to stair railings to chess pieces to musical instruments.

History of Woodturning

The art on monuments in ancient Egypt offers the first recorded instances of spindle turning. These illustrations showed a strap a helper used to rotate the lathe while another

Ш

0

X