INTRODUCTION

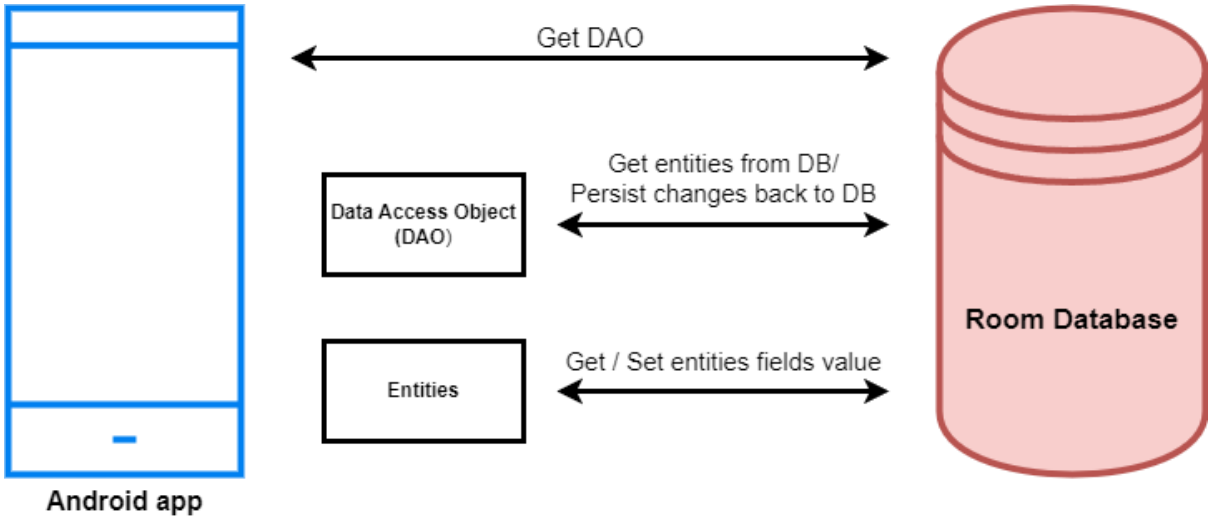
1.1PROJECT OVERVIEW

Owl-M: A Material Design Study App

Project Description:

A project that demonstrates the use of Android Jetpack Compose to build a UI for a 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.

ARCHITECHURE



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
- User can view the subject themes on selecting theme he can read about it.
- **Note:**
- To complete the project you need to finish up the tasks listed below

Tasks:

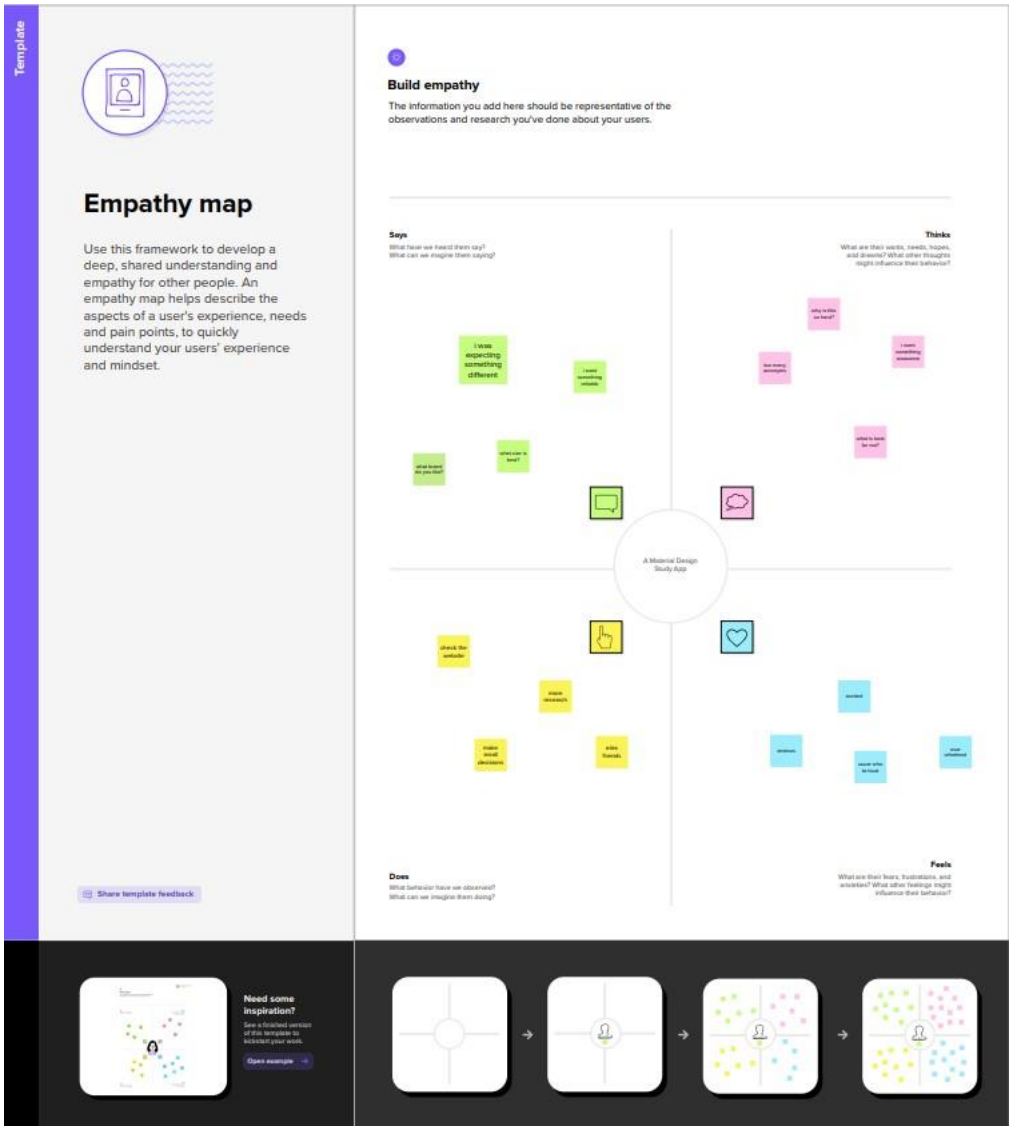
1.Required initial steps
2.Creating a new project.
3.Adding required dependencies.
4.Creating the database classes.
5.Building application UI and connecting to database.
6.Using AndroidManifest.xml
7.Running the application.

1.2 PURPOSE OF PROJECT

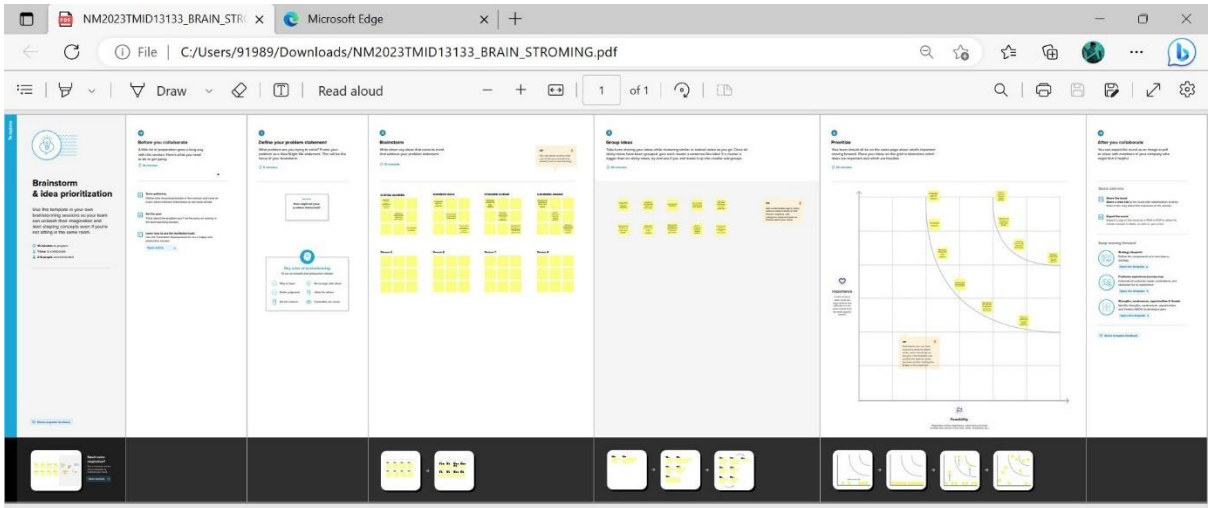
Goal of Material Design was **to enable designers to quickly build apps that were responsive, usable, and scalable**.

2 PROBLEM DEFINITION & DESIGN THINKING

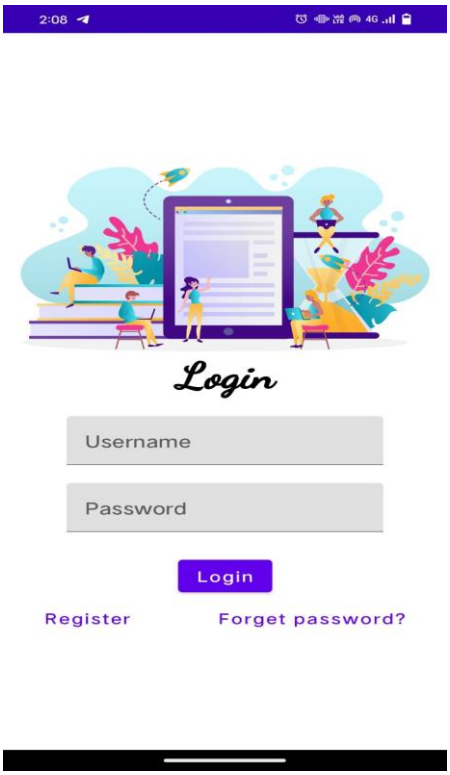
2.1 EMPATHY MAP

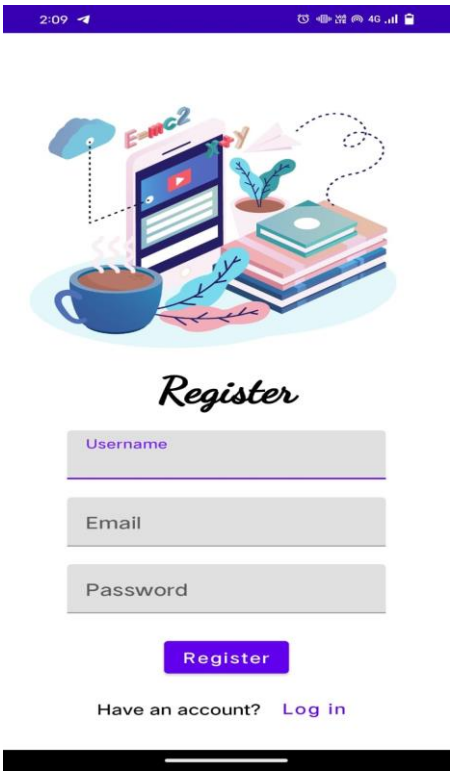


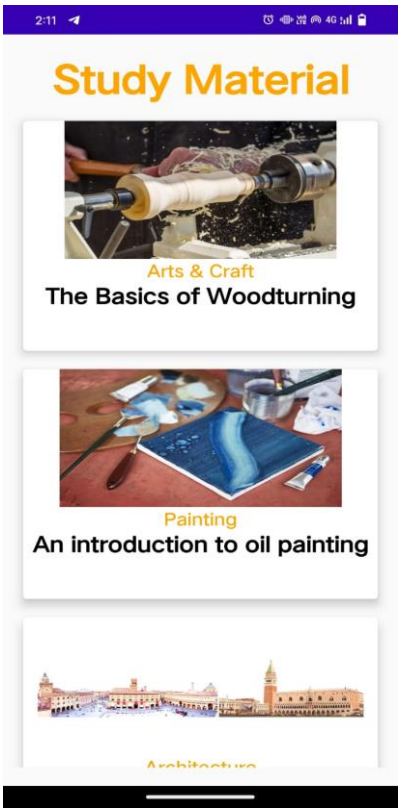
2.2 IDEATION & BRAINSTROMING

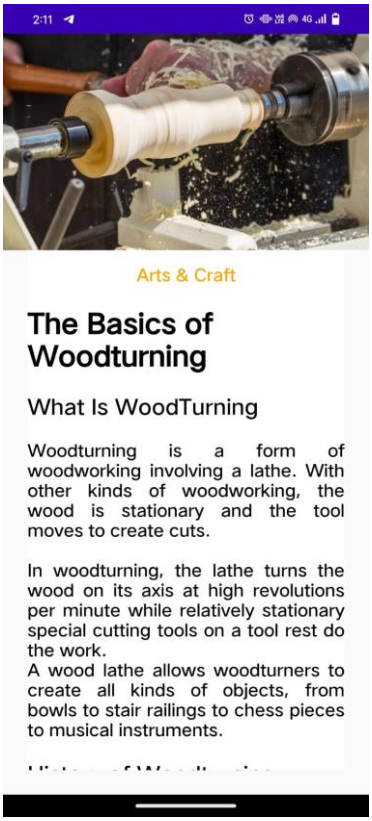

NM2023TMID13133_BRAIN_STR
Microsoft Edge
File | C:/Users/91989/Downloads/NM2023TMID13133_BRAIN_STROMING.pdf
Draw
Read aloud
1
of 1
Brainstorm
& idea prioritization

RESULT


2:08
Login
Username
Password
Login
Register
Forget password?


2:09
Register
Username
Email
Password
Register
Have an account?
Log in





4.ADVANTAGES

Advantages:

Engaging and Interactive: A Material Design Study App can be designed to be engaging and interactive, making the learning experience more enjoyable and effective.

Personalized Learning: The app can be customized to adapt to the individual needs and preferences of each learner, providing a personalized learning experience.

Accessible Anywhere, Anytime: The app can be accessed from anywhere and at any time, making it convenient for learners to study at their own pace and on their own schedule.

DIS-ADVANTAGES

Technology Dependence: A Material Design Study App requires access to technology, such as a smartphone or a computer, which can be a limitation for learners who do not have access to such technology.

Limited Interaction: A Material Design Study App can be limited in terms of the level of interaction between learners and teachers, which can be a disadvantage for learners who require more direct guidance and feedback.

Potential Distractions: The app can potentially be distracting for some learners, especially if they are studying in a noisy or busy environment.

5.APPLICATION

A Material Design Study App can be used in various ways to enhance learning and education. Here are a few possible applications:

Educational Institutions: Educational institutions such as schools, colleges, and universities can use the app to create interactive study material for their students. The app can include various features such as interactive quizzes, video tutorials, and study guides.

Corporate Training: Companies can use the app to train their employees on various topics such as sales, marketing, and customer service. The app can include interactive modules and simulations to make learning more engaging and effective.

CONCLUSION

Material Design Study App is a powerful tool that can be used to enhance learning and education in a variety of contexts. By incorporating the principles of material design, the app can create a visually appealing and user-friendly interface that can help learners engage with the material in a more effective and efficient way.

The app can be used in educational institutions, corporate training, online learning, and self-study contexts. It can include features such as interactive quizzes, video tutorials, simulations, progress tracking, personalized learning, note-taking, and bookmarking.

By using a Material Design Study App, learners can benefit from a more engaging and interactive learning experience, which can help them better understand and retain the material. This can lead to improved academic and professional performance and can help learners achieve their goals.

Overall, a Material Design Study App is an excellent tool for anyone looking to enhance their learning and education.

SCOPE AND FUTURE:

SCOPE AND FUTURE OF A Material Design Study App

The scope of a Material Design Study App is vast and can potentially revolutionize the way we learn and educate

ourselves. As technology continues to advance, the app can be further developed and enhanced to provide an even more immersive and personalized learning experience.

In the future, the app can potentially incorporate advanced technologies such as artificial intelligence and virtual reality to create a more engaging and interactive learning environment. For example, AI can be used to personalize the learning experience by adapting to the learner's individual needs and preferences, while virtual reality can be used to create realistic simulations and scenarios for learners to practice and apply their knowledge.

Overall, the future of a Material Design Study App is bright and full of potential. By continuing to innovate and develop the app, we can potentially create a more accessible and effective education system that benefits everyone.

APPENDIX

A. SOURCE CODE

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.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.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)

                    )
```

LoginActivity.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.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.PasswordVisualTransform
ation
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.OwlApplicationThem
e


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)
```