**PROJECT REPORT**

# Money Matters: A Personal Finance Management App

# 1. INTRODUCTION

## 1.1 Overview

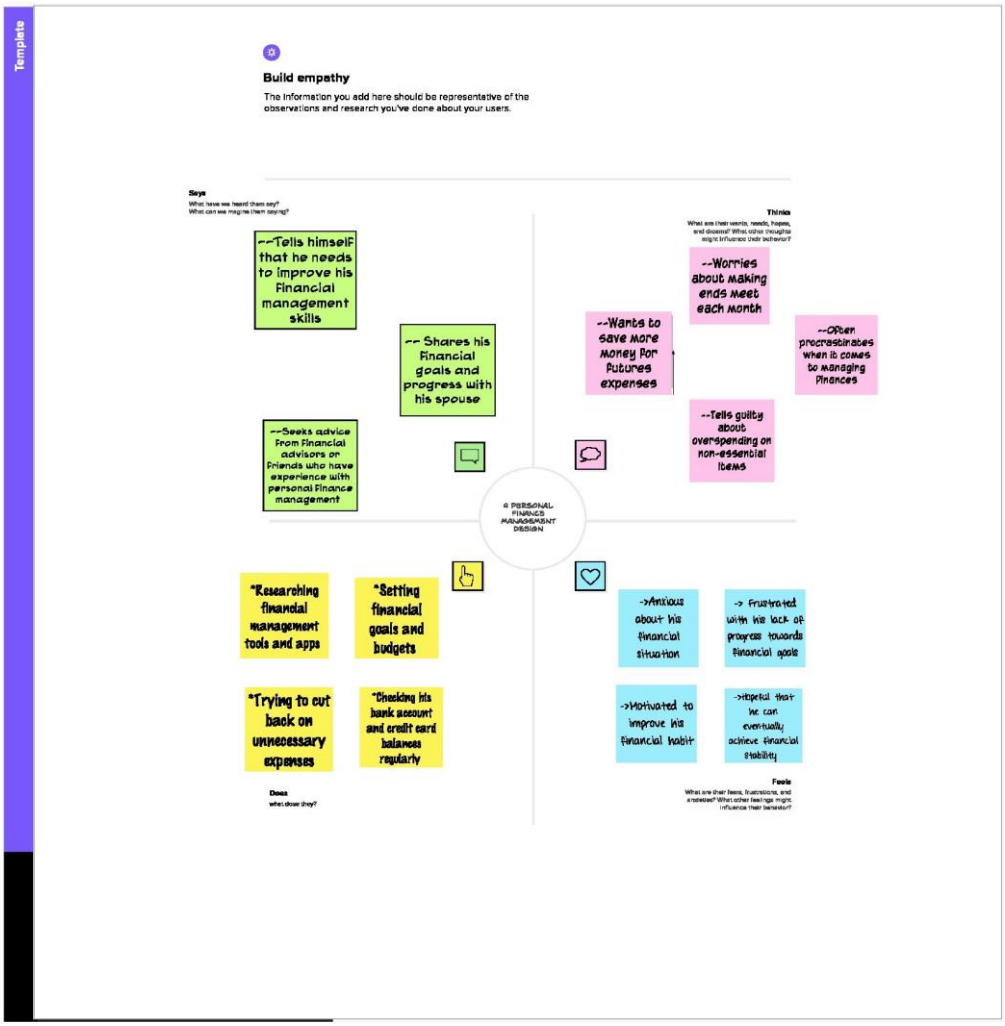
The Money Matters allows users to track the personal budgets on a daily, weekly or monthly basis. The app should have user - friendly interfaces, easy-to-use features, and personalized alerts based on spending patterns.

## 1.2 Purpose

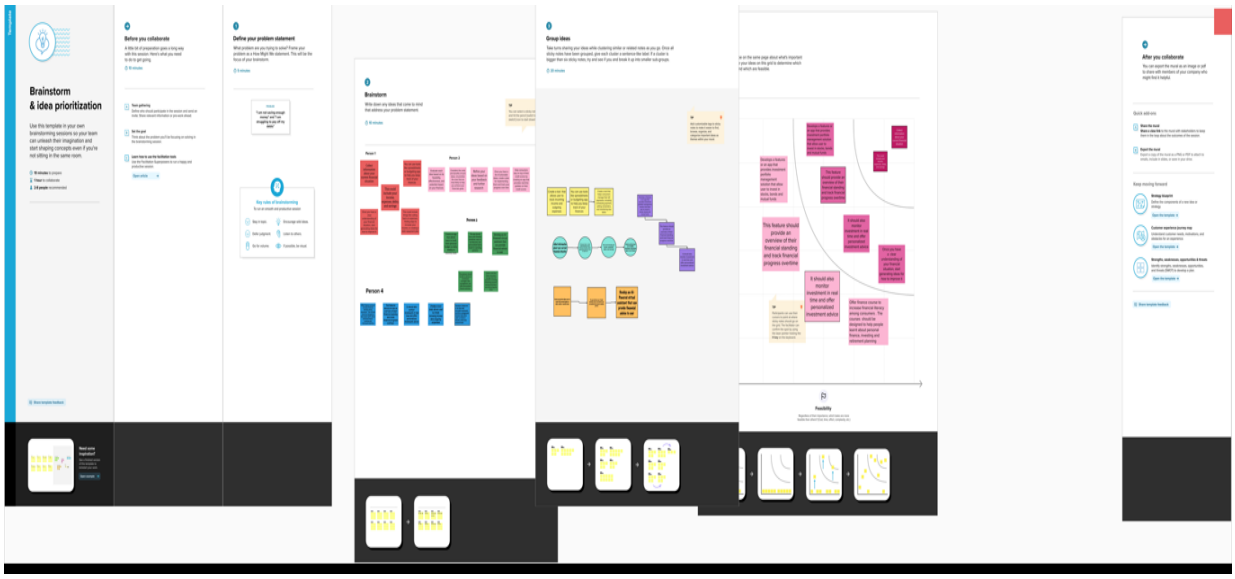
The app allows user to keep track of their expenses and accounts, and provides an overview of their financial status. Users can set a budget for various expenses and view their progress towards it.

# 2 PROBLEM DEFINITION & DESIGN THINKING

## 2.1 Empathy Map

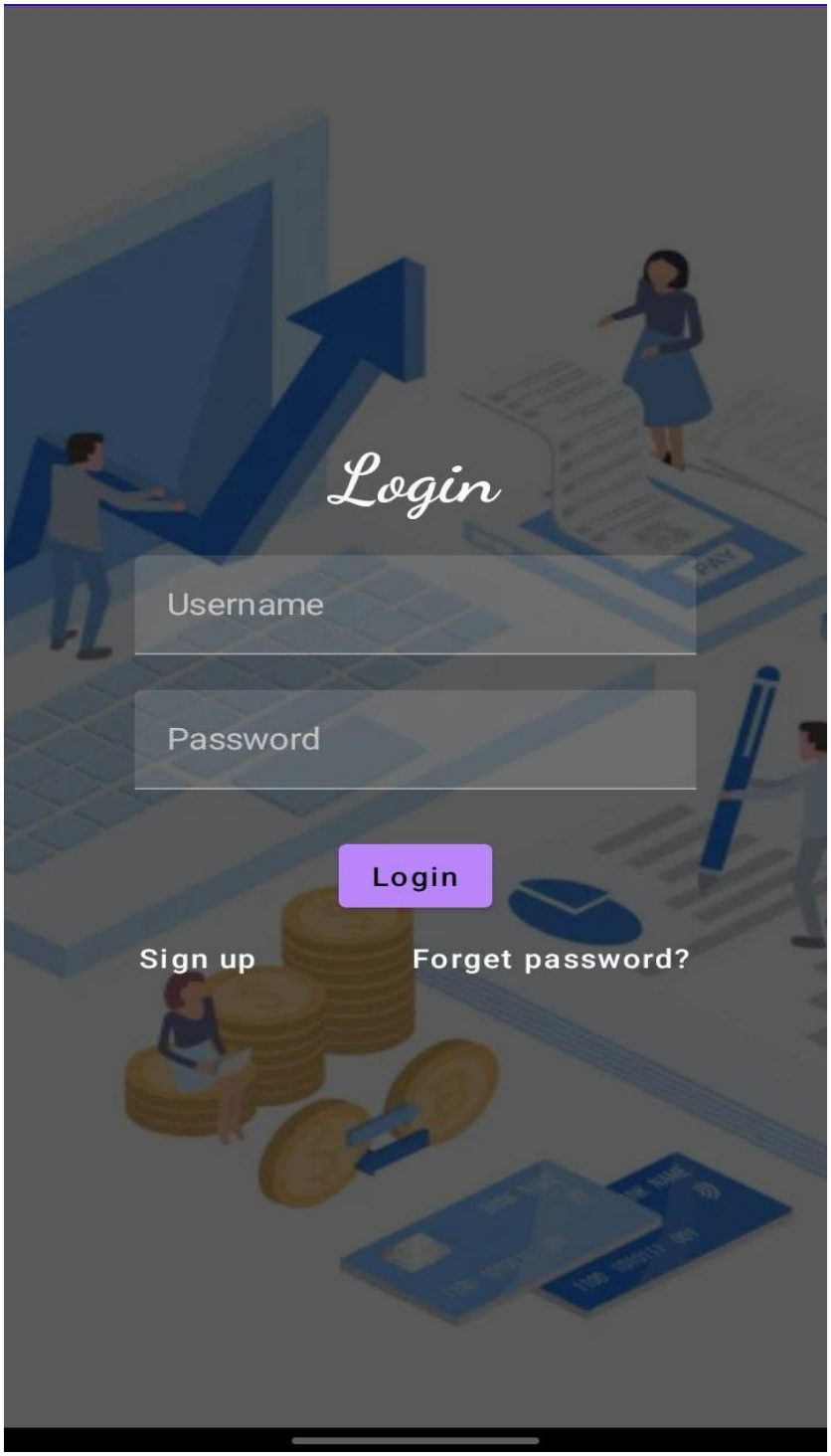


## 2.2 Ideation & Brainstorming Map

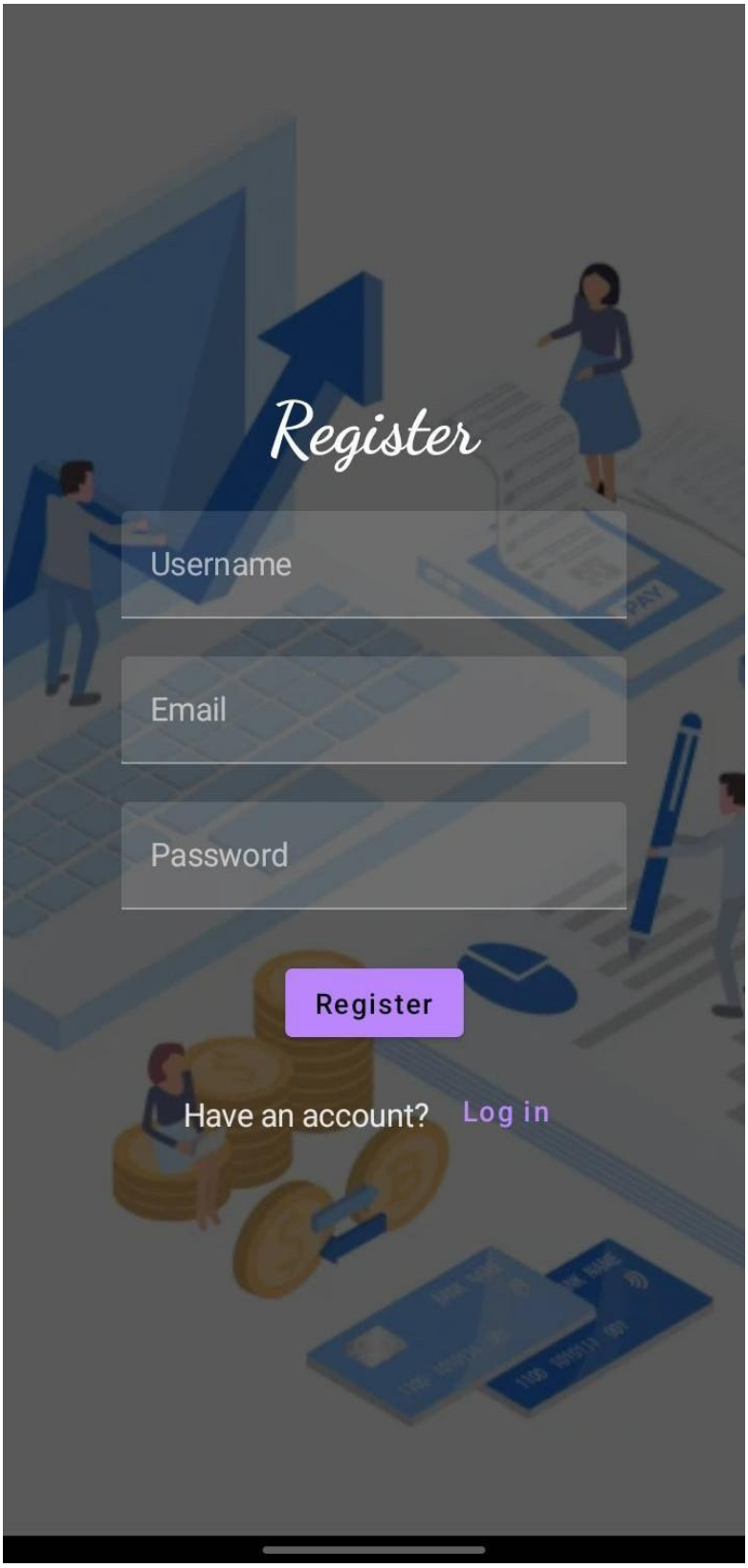


# 3 RESULT

**Login Page**



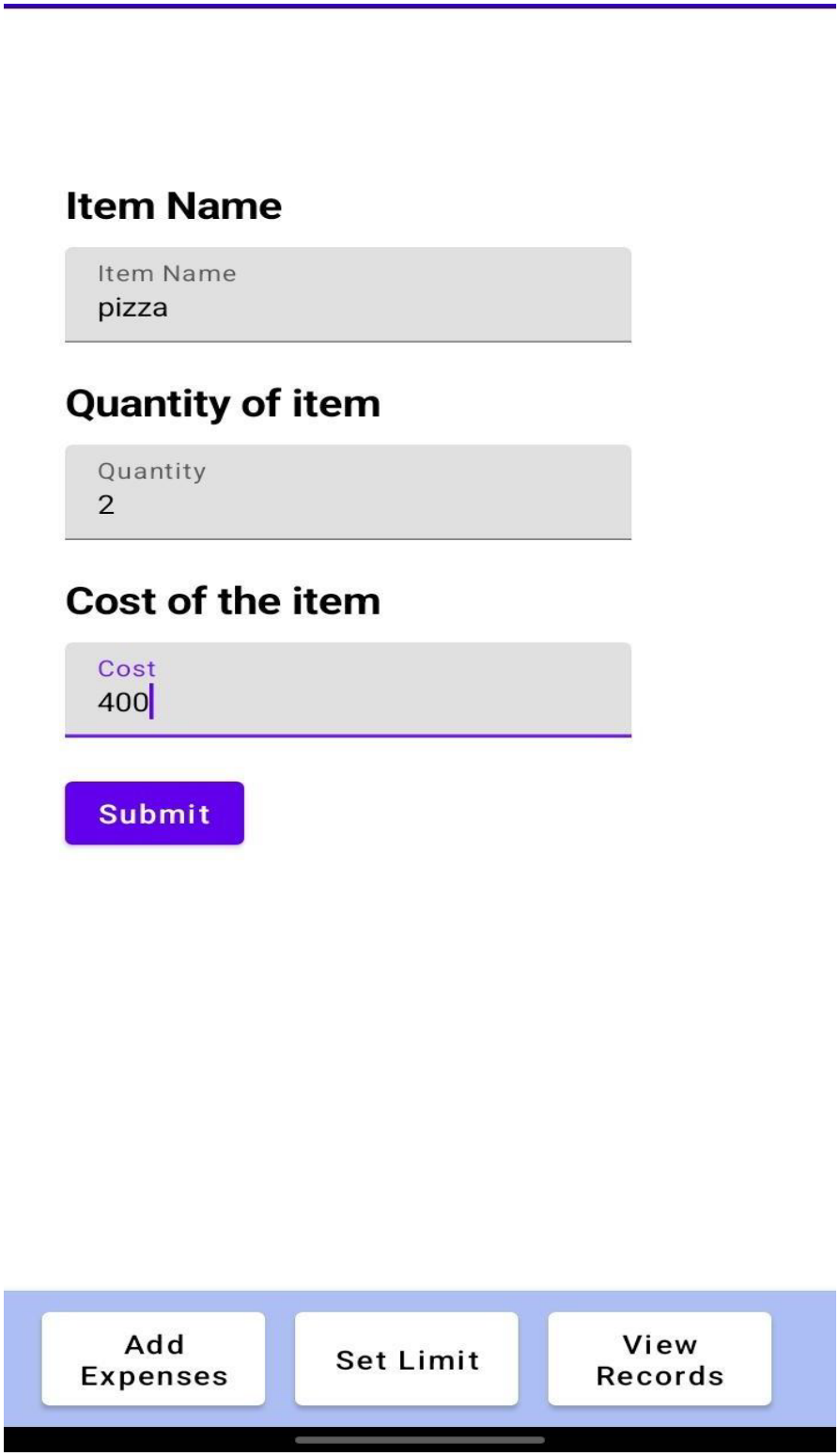
**Register Page**



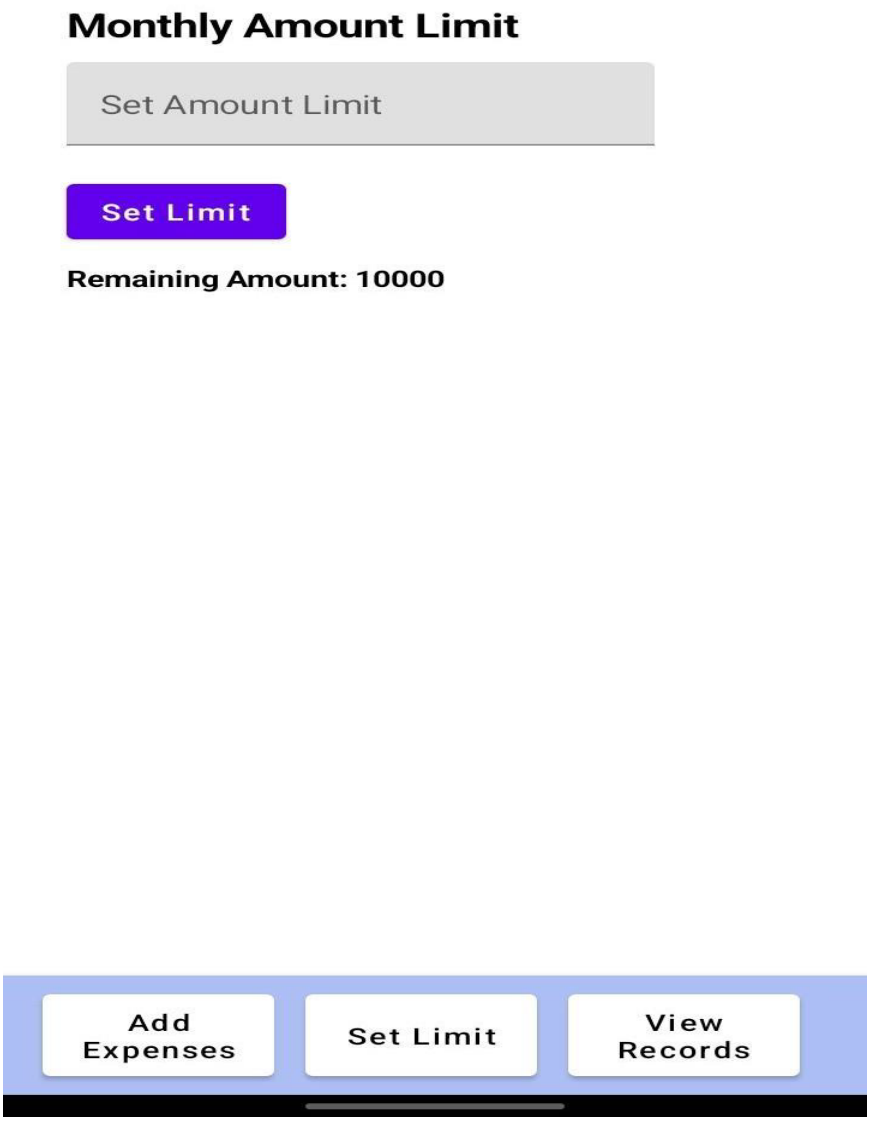
**Main Page**


Welcome To
Expense Tracker
Add Expenses
Set Limit
View Records

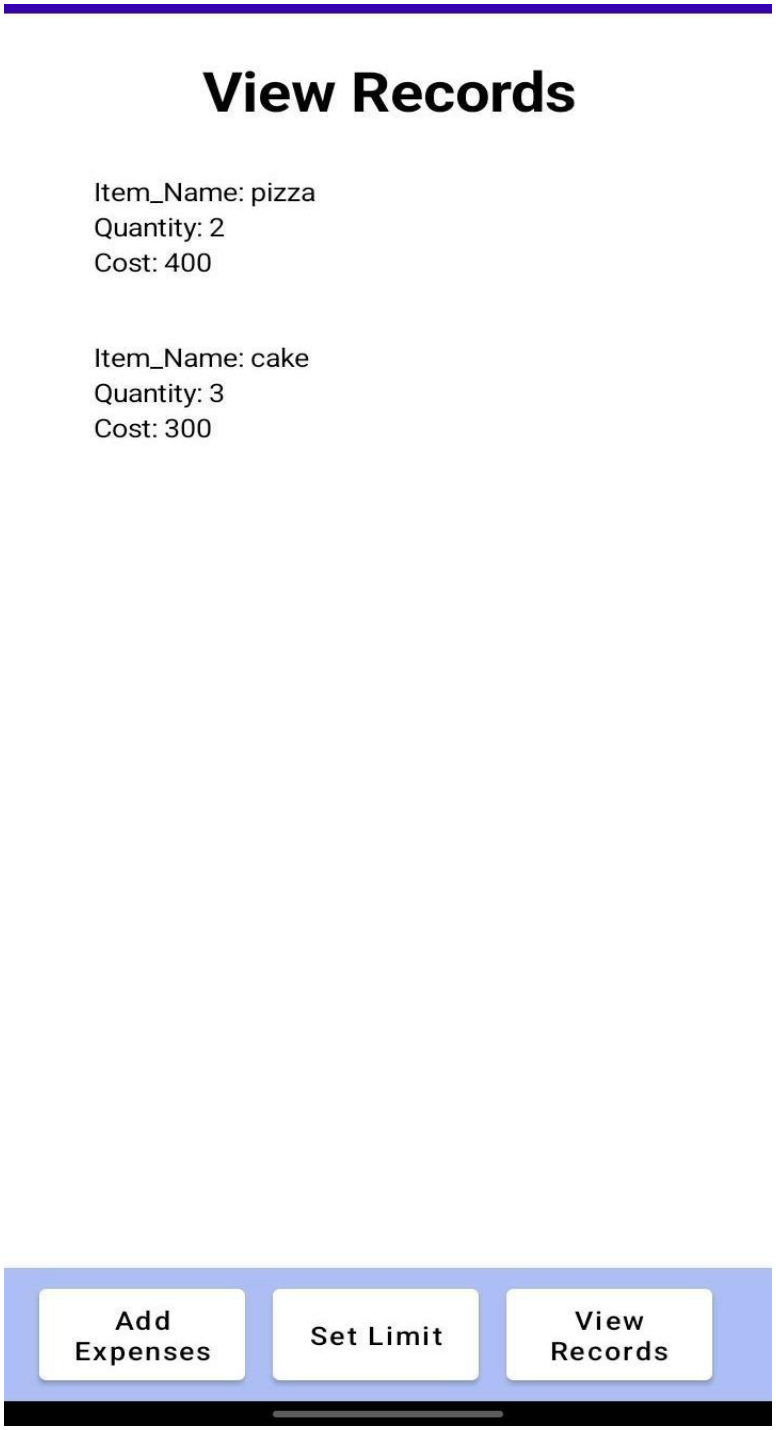
**Add Expenses Page**



**Set Limit Page before adding any data in expenses**



**View Records Page**



**Set Limit Page After adding expenes in add expense page**

# 4 ADVANTAGES & DISADVANTAGES

## 4.1 Advantages

1) Have a significant financial control
2) Be prepared for unforeseen circumstances
3) Track the expenses
4) Set the limit for expenses

## 4.2 Disadvantages

1) Time consuming process
2) Prediction and actuality might not be in line
3) You must keep track of it constantly

# 5 APPLICATIONS

A personal finance app can help track your spending, saving, investing and bill payments while keeping you updated on credit score changes.

We can connect personal finance apps to our financial institutions to see where the money from your bank account is being spent.

# 6 CONCLUSION

As the pieces of commodities are skyrocketing, we need to plan our expenses to stay afloat. Also, checking your income and expenditures in essential to stay ahead of the tide. The app allows user to keep track of their expenses and accounts, and provides an overview of their financial status. The project has options to add expenses, set the limits and view the records.

# 7 FUTURE SCOPE

The Money Matters app can be further improved by adding more features on the financial management of an individual. The App should be able to advise on investment strategies, debt management and offer personalized finance solutions. It should help consumers stay on top of their credit scores by creating an app that provides real-time updates on their credit scores.

# 8 APPENDIX

```
// User.kt
package com.example.expensestracker

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

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

    )
// UserDao.kt
package com.example.expensestracker
```

```
import androidx.room.*


@Dao
interface UserDao {


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


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


    @Update
    suspend fun updateUser(user: User)


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

**// UserDatabase.kt**

```
package com.example.expensestracker


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
```

```
            }
        }
    }
}
```

**// UserDatabaseHelper.kt**

```
package com.example.expensestracker


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
    }


}
```

**// Items.kt**

```
package com.example.expensestracker


import androidx.room.ColumnInfo
```

```
import androidx.room.Entity

import androidx.room.PrimaryKey


@Entity(tableName = "items_table")

data class Items(

    @PrimaryKey(autoGenerate = true) val id: Int?,

    @ColumnInfo(name = "item_name") val itemName: String?,

    @ColumnInfo(name = "quantity") val quantity: String?,

    @ColumnInfo(name = "cost") val cost: String?,

)


// ItemsDao.kt

package com.example.expensestracker


import androidx.room.*


@Dao

interface ItemsDao {


    @Query("SELECT * FROM items_table WHERE  cost= :cost")

    suspend fun getItemsByCost(cost: String): Items?
```

```
    @Insert(onConflict = OnConflictStrategy.REPLACE)
    suspend fun insertItems(items: Items)

    @Update
    suspend fun updateItems(items: Items)

    @Delete
    suspend fun deleteItems(items: Items)
}
```

**// ItemsDatabase.kt**

```
package com.example.expensestracker

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

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

    abstract fun ItemsDao(): ItemsDao
```

```
    companion object {

        @Volatile
        private var instance: ItemsDatabase? = null

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

**// ItemsDatabaseHelper.kt**

```
package com.example.expensestracker

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 ItemsDatabaseHelper(context: Context) :

    SQLiteOpenHelper(context, DATABASE_NAME, null,DATABASE_VERSION){


    companion object {

        private const val DATABASE_VERSION = 1

        private const val DATABASE_NAME = "ItemsDatabase.db"


        private const val TABLE_NAME = "items_table"

        private const val COLUMN_ID = "id"

        private const val COLUMN_ITEM_NAME = "item_name"

        private const val COLUMN_QUANTITY = "quantity"

        private const val COLUMN_COST = "cost"

    }


    override fun onCreate(db: SQLiteDatabase?) {
```

```
        val createTable = "CREATE TABLE $TABLE_NAME (" +
                "${COLUMN_ID} INTEGER PRIMARY KEY AUTOINCREMENT, " +
                "${COLUMN_ITEM_NAME} TEXT," +
                "${COLUMN_QUANTITY} TEXT," +
                "${COLUMN_COST} TEXT" +
                ")"

        db?.execSQL(createTable)
    }

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

    fun insertItems(items: Items) {
        val db = writableDatabase
        val values = ContentValues()
        values.put(COLUMN_ITEM_NAME, items.itemName)
        values.put(COLUMN_QUANTITY, items.quantity)
        values.put(COLUMN_COST, items.cost)
        db.insert(TABLE_NAME, null, values)
```

```
        db.close()
    }




    @SuppressLint("Range")
    fun getItemsByCost(cost: String): Items? {
        val db = readableDatabase
        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME
WHERE $COLUMN_COST = ?", arrayOf(cost))
        var items: Items? = null
        if (cursor.moveToFirst()) {
            items = Items(
                id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                itemName =
cursor.getString(cursor.getColumnIndex(COLUMN_ITEM_NAME)),
                quantity =
cursor.getString(cursor.getColumnIndex(COLUMN_QUANTITY)),
                cost =
cursor.getString(cursor.getColumnIndex(COLUMN_COST)),
            )
        }
        cursor.close()
```

```
        db.close()

        return items

    }

    @SuppressLint("Range")

    fun getItemsById(id: Int): Items? {

        val db = readableDatabase

        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME
WHERE $COLUMN_ID = ?", arrayOf(id.toString()))

        var items: Items? = null

        if (cursor.moveToFirst()) {

            items = Items(

                id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),

                itemName =
cursor.getString(cursor.getColumnIndex(COLUMN_ITEM_NAME)),

                quantity =
cursor.getString(cursor.getColumnIndex(COLUMN_QUANTITY)),

                cost =
cursor.getString(cursor.getColumnIndex(COLUMN_COST)),

            )

        }

        cursor.close()

        db.close()

        return items
```

```
    }

    @SuppressLint("Range")

    fun getAllItems(): List<Items> {

        val item = mutableListOf<Items>()

        val db = readableDatabase

        val cursor: Cursor = db.rawQuery("SELECT * FROM $TABLE_NAME",
null)

        if (cursor.moveToFirst()) {

            do {

                val items = Items(

                    id =
cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),

                    itemName =
cursor.getString(cursor.getColumnIndex(COLUMN_ITEM_NAME)),

                    quantity =
cursor.getString(cursor.getColumnIndex(COLUMN_QUANTITY)),

                    cost =
cursor.getString(cursor.getColumnIndex(COLUMN_COST)),

                )

                item.add(items)

            } while (cursor.moveToNext())

        }

        cursor.close()

        db.close()
```

```
        return item
    }
}
```

**// Expense.kt**

```
package com.example.expensestracker

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

@Entity(tableName = "expense_table")
data class Expense(
    @PrimaryKey(autoGenerate = true) val id: Int?,
    @ColumnInfo(name = "amount") val amount: String?,
)
```

**// ExpenseDao.kt**

```
package com.example.expensestracker

import androidx.room.*

@Dao
```

```
interface ExpenseDao {

    @Query("SELECT * FROM expense_table WHERE  amount= :amount")
    suspend fun getExpenseByAmount(amount: String): Expense?

    @Insert(onConflict = OnConflictStrategy.REPLACE)
    suspend fun insertExpense(items: Expense)

    @Update
    suspend fun updateExpense(items: Expense)

    @Delete
    suspend fun deleteExpense(items: Expense)
}
```

**// ExpenseDatabase.kt**

```
package com.example.expensestracker

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

```
@Database(entities = [Items::class], version = 1)
abstract class ExpenseDatabase : RoomDatabase() {

    abstract fun ExpenseDao(): ItemsDao

    companion object {

        @Volatile
        private var instance: ExpenseDatabase? = null

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

```
}
```

**//  ExpenseDatabaseHelper.kt**

```
package com.example.expensestracker

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 ExpenseDatabaseHelper(context: Context) :
    SQLiteOpenHelper(context, DATABASE_NAME, null,DATABASE_VERSION){

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

        private const val TABLE_NAME = "expense_table"
        private const val COLUMN_ID = "id"
        private const val COLUMN_AMOUNT = "amount"
```

```
    }

    override fun onCreate(db: SQLiteDatabase?) {
        val createTable = "CREATE TABLE $TABLE_NAME (" +
                "${COLUMN_ID} INTEGER PRIMARY KEY AUTOINCREMENT, " +
                "${COLUMN_AMOUNT} TEXT" +
                ")"

        db?.execSQL(createTable)
    }

    override fun onUpgrade(db1: SQLiteDatabase?, oldVersion: Int,
newVersion: Int) {
        db1?.execSQL("DROP TABLE IF EXISTS $TABLE_NAME")
        onCreate(db1)
    }

    fun insertExpense(expense: Expense) {
        val db1 = writableDatabase
        val values = ContentValues()
        values.put(COLUMN_AMOUNT, expense.amount)
        db1.insert(TABLE_NAME, null, values)
        db1.close()
```

```
    }


    fun updateExpense(expense: Expense) {
        val db = writableDatabase
        val values = ContentValues()
        values.put(COLUMN_AMOUNT, expense.amount)
        db.update(TABLE_NAME, values, "$COLUMN_ID=?",
arrayOf(expense.id.toString()))
        db.close()
    }




    @SuppressLint("Range")
    fun getExpenseByAmount(amount: String): Expense? {
        val db1 = readableDatabase
        val cursor: Cursor = db1.rawQuery("SELECT * FROM
${ExpenseDatabaseHelper.TABLE_NAME} WHERE
${ExpenseDatabaseHelper.COLUMN_AMOUNT} = ?", arrayOf(amount))
        var expense: Expense? = null
        if (cursor.moveToFirst()) {
            expense = Expense(
                id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
```

```
                amount =
cursor.getString(cursor.getColumnIndex(COLUMN_AMOUNT)),
            )
        }
        cursor.close()
        db1.close()
        return expense
    }
    @SuppressLint("Range")
    fun getExpenseById(id: Int): Expense? {
        val db1 = readableDatabase
        val cursor: Cursor = db1.rawQuery("SELECT * FROM $TABLE_NAME
WHERE $COLUMN_ID = ?", arrayOf(id.toString()))
        var expense: Expense? = null
        if (cursor.moveToFirst()) {
            expense = Expense(
                id = cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                amount =
cursor.getString(cursor.getColumnIndex(COLUMN_AMOUNT)),
            )
        }
        cursor.close()
        db1.close()
```

```
        return expense
    }
    @SuppressLint("Range")
    fun getExpenseAmount(id: Int): Int? {
        val db = readableDatabase
        val query = "SELECT $COLUMN_AMOUNT FROM $TABLE_NAME WHERE
$COLUMN_ID=?"
        val cursor = db.rawQuery(query, arrayOf(id.toString()))
        var amount: Int? = null
        if (cursor.moveToFirst()) {
            amount =
cursor.getInt(cursor.getColumnIndex(COLUMN_AMOUNT))
        }
        cursor.close()
        db.close()
        return amount
    }
    @SuppressLint("Range")
    fun getAllExpense(): List<Expense> {
        val expenses = mutableListOf<Expense>()
        val db1 = readableDatabase
        val cursor: Cursor = db1.rawQuery("SELECT * FROM $TABLE_NAME",
null)
```

```
        if (cursor.moveToFirst()) {
            do {
                val expense = Expense(
                    id =
cursor.getInt(cursor.getColumnIndex(COLUMN_ID)),
                    amount =
cursor.getString(cursor.getColumnIndex(COLUMN_AMOUNT)),
                )
                expenses.add(expense)
            } while (cursor.moveToNext())
        }
        cursor.close()
        db1.close()
        return expenses
    }

}
```

**// LoginActivity.kt**

```
package com.example.expensestracker

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.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.text.input.VisualTransformation

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.expensestracker.ui.theme.ExpensesTrackerTheme
```

```
class LoginActivity : ComponentActivity() {
    private lateinit var databaseHelper: UserDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        databaseHelper = UserDatabaseHelper(this)
        setContent {
            ExpensesTrackerTheme {
                // A surface container using the 'background' color
from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {
                    LoginScreen(this, databaseHelper)
                }
            }
        }
    }
}
@Composable
fun LoginScreen(context: Context, databaseHelper: UserDatabaseHelper)
{
```

```
    Image(
        painterResource(id = R.drawable.img_1), contentDescription =
"",
        alpha =0.3F,
        contentScale = ContentScale.FillHeight,

        )

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

    Column(
        modifier = Modifier.fillMaxSize(),
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.Center
    ) {

        Text(
            fontSize = 36.sp,
            fontWeight = FontWeight.ExtraBold,
            fontFamily = FontFamily.Cursive,
```

```
        color = Color.White,
        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") },
        modifier = Modifier.padding(10.dp)
            .width(280.dp),
        visualTransformation = PasswordVisualTransformation()

    )
```

```
        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(color = Color.White,text = "Sign up") }
```

```
            TextButton(onClick = {

            })


            {

                Spacer(modifier = Modifier.width(60.dp))

                Text(color = Color.White,text = "Forget password?")

            }

        }

    }

}

private fun startMainPage(context: Context) {

    val intent = Intent(context, MainActivity::class.java)

    ContextCompat.startActivity(context, intent, null)

}
```

**// RegisterActivity.kt**

```
package com.example.expensestracker


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.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.expensestracker.ui.theme.ExpensesTrackerTheme


class RegisterActivity : ComponentActivity() {

    private lateinit var databaseHelper: UserDatabaseHelper

    override fun onCreate(savedInstanceState: Bundle?) {

        super.onCreate(savedInstanceState)
```

```
        databaseHelper = UserDatabaseHelper(this)
        setContent {
            ExpensesTrackerTheme {
                // A surface container using the 'background' color
from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {


                    RegistrationScreen(this,databaseHelper)
                }
            }
        }
    }
}


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


    Image(
```

```
        painterResource(id = R.drawable.img_1), contentDescription =
"",
        alpha =0.3F,
        contentScale = ContentScale.FillHeight,

        )

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

    Column(
        modifier = Modifier.fillMaxSize(),
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.Center
    ) {

        Text(
            fontSize = 36.sp,
            fontWeight = FontWeight.ExtraBold,
            fontFamily = FontFamily.Cursive,
            color = Color.White,
```

```
    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") },
    modifier = Modifier
        .padding(10.dp)
        .width(280.dp),
    visualTransformation = PasswordVisualTransformation()
)



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)
}
```

**// MainActivity.kt**

```
package com.example.expensestracker

import android.annotation.SuppressLint
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.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.res.painterResource

import androidx.compose.ui.text.font.FontWeight

import androidx.compose.ui.text.style.TextAlign

import androidx.compose.ui.tooling.preview.Preview

import androidx.compose.ui.unit.dp

import androidx.compose.ui.unit.sp

import com.example.expensestracker.ui.theme.ExpensesTrackerTheme


class MainActivity : ComponentActivity() {

    @SuppressLint("UnusedMaterialScaffoldPaddingParameter")

    override fun onCreate(savedInstanceState: Bundle?) {

        super.onCreate(savedInstanceState)

        setContent {

            Scaffold(

                // in scaffold we are specifying top bar.

                bottomBar = {

                    // inside top bar we are specifying

                    // background color.

                    BottomAppBar(backgroundColor = Color(0xFFadbef4),
```

```
                        modifier = Modifier.height(80.dp),
                        // along with that we are specifying
                        // title for our top bar.
                        content = {

                            Spacer(modifier = Modifier.width(15.dp))

                            Button(
                                onClick =
{startActivity(Intent(applicationContext,AddExpensesActivity::class.ja
va))},
                                colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                modifier = Modifier.size(height =
55.dp, width = 110.dp)
                            )
                            {
                                Text(
                                    text = "Add Expenses", color =
Color.Black, fontSize = 14.sp,
                                    textAlign = TextAlign.Center
                                )
                            }
```

```
                                Spacer(modifier = Modifier.width(15.dp))


                                Button(
                                    onClick = {
                                        startActivity(
                                            Intent(
                                                applicationContext,


SetLimitActivity::class.java
                                            )
                                        )
                                    },
                                    colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                    modifier = Modifier.size(height =
55.dp, width = 110.dp)
                                )
                                {
                                    Text(
                                        text = "Set Limit", color =
Color.Black, fontSize = 14.sp,
                                        textAlign = TextAlign.Center
                                    )
```

```
                                }

                                Spacer(modifier = Modifier.width(15.dp))

                                Button(
                                    onClick = {
                                        startActivity(
                                            Intent(
                                                applicationContext,

ViewRecordsActivity::class.java
                                            )
                                        )
                                    },
                                    colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                    modifier = Modifier.size(height =
55.dp, width = 110.dp)
                                )
                                {
                                    Text(
                                        text = "View Records", color =
Color.Black, fontSize = 14.sp,
```

```
                                    textAlign = TextAlign.Center
                                )
                            }


                        }
                    )
                }
            ) {
                MainPage()
            }
        }
    }
}


@Composable
fun MainPage() {
    Column(
        modifier = Modifier.padding(20.dp).fillMaxSize(),
        verticalArrangement = Arrangement.Center,
        horizontalAlignment = Alignment.CenterHorizontally
    ) {
```

```
        Text(text = "Welcome To Expense Tracker", fontSize = 42.sp,
fontWeight = FontWeight.Bold,
        textAlign = TextAlign.Center)


        Image(painterResource(id = R.drawable.img_1),
contentDescription ="", modifier = Modifier.size(height = 500.dp,
width = 500.dp))


    }
}
```

**// AddExpensesActivity.kt**

```
package com.example.expensestracker


import android.annotation.SuppressLint
import android.content.Context
import android.content.Intent
import android.os.Bundle
import android.widget.Toast
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.layout.*
import androidx.compose.material.*
```

```
import androidx.compose.runtime.*
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.platform.LocalContext
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.style.TextAlign
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp

class AddExpensesActivity : ComponentActivity() {
    private lateinit var itemsDatabaseHelper: ItemsDatabaseHelper
    private lateinit var expenseDatabaseHelper: ExpenseDatabaseHelper
    @SuppressLint("UnusedMaterialScaffoldPaddingParameter")
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        itemsDatabaseHelper = ItemsDatabaseHelper(this)
        expenseDatabaseHelper = ExpenseDatabaseHelper(this)
        setContent {
            Scaffold(
                // in scaffold we are specifying top bar.
                bottomBar = {
```

```
                    // inside top bar we are specifying
                    // background color.
                    BottomAppBar(backgroundColor = Color(0xFFadbef4),
                        modifier = Modifier.height(80.dp),
                        // along with that we are specifying
                        // title for our top bar.
                        content = {

                            Spacer(modifier = Modifier.width(15.dp))

                            Button(
                                onClick =
{startActivity(Intent(applicationContext,AddExpensesActivity::class.ja
va))},
                                colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                modifier = Modifier.size(height =
55.dp, width = 110.dp)
                            )
                            {
                                Text(
                                    text = "Add Expenses", color =
Color.Black, fontSize = 14.sp,
                                    textAlign = TextAlign.Center
```

```
                                )
                            }

                            Spacer(modifier = Modifier.width(15.dp))

                            Button(
                                onClick = {
                                    startActivity(
                                        Intent(
                                            applicationContext,

SetLimitActivity::class.java
                                        )
                                    )
                                },
                                colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                modifier = Modifier.size(height =
55.dp, width = 110.dp)
                            )
                            {
                                Text(
```

```
                                    text = "Set Limit", color =
Color.Black, fontSize = 14.sp,
                                    textAlign = TextAlign.Center
                                )
                            }

                            Spacer(modifier = Modifier.width(15.dp))

                            Button(
                                onClick = {
                                    startActivity(
                                        Intent(
                                            applicationContext,

ViewRecordsActivity::class.java
                                        )
                                    )
                                },
                                colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                modifier = Modifier.size(height =
55.dp, width = 110.dp)
                            )
```

```
                            {
                                Text(
                                    text = "View Records", color =
Color.Black, fontSize = 14.sp,
                                    textAlign = TextAlign.Center
                                )
                            }


                        }
                    )
                }
            ) {
                AddExpenses(this, itemsDatabaseHelper,
expenseDatabaseHelper)
            }
        }
    }
}



@SuppressLint("Range")
@Composable
```

```
fun AddExpenses(context: Context, itemsDatabaseHelper:
ItemsDatabaseHelper, expenseDatabaseHelper: ExpenseDatabaseHelper) {
    Column(
        modifier = Modifier
            .padding(top = 100.dp, start = 30.dp)
            .fillMaxHeight()
            .fillMaxWidth(),
        horizontalAlignment = Alignment.Start
    ) {

        val mContext = LocalContext.current
        var items by remember { mutableStateOf("") }
        var quantity by remember { mutableStateOf("") }
        var cost by remember { mutableStateOf("") }
        var error by remember { mutableStateOf("") }

        Text(text = "Item Name", fontWeight = FontWeight.Bold,
fontSize = 20.sp)
        Spacer(modifier = Modifier.height(10.dp))
        TextField(value = items, onValueChange = { items = it },
            label = { Text(text = "Item Name") })

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

```
        Text(text = "Quantity of item", fontWeight = FontWeight.Bold,
fontSize = 20.sp)
        Spacer(modifier = Modifier.height(10.dp))
        TextField(value = quantity, onValueChange = { quantity = it },
            label = { Text(text = "Quantity") })

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

        Text(text = "Cost of the item", fontWeight = FontWeight.Bold,
fontSize = 20.sp)
        Spacer(modifier = Modifier.height(10.dp))
        TextField(value = cost, onValueChange = { cost = it },
            label = { Text(text = "Cost") })

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

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

```
        }


        Button(onClick = {
            if (items.isNotEmpty() && quantity.isNotEmpty() &&
cost.isNotEmpty()) {
                val items = Items(
                    id = null,
                    itemName = items,
                    quantity = quantity,
                    cost = cost
                )



               val limit= expenseDatabaseHelper.getExpenseAmount(1)





                val actualvalue = limit?.minus(cost.toInt())
               // Toast.makeText(mContext, actualvalue.toString(),
Toast.LENGTH_SHORT).show()


                val expense = Expense(
                    id = 1,
```

```
                    amount = actualvalue.toString()
                )
                if (actualvalue != null) {
                    if (actualvalue < 1) {
                        Toast.makeText(mContext, "Limit Over",
Toast.LENGTH_SHORT).show()
                    } else  {
                        expenseDatabaseHelper.updateExpense(expense)
                        itemsDatabaseHelper.insertItems(items)
                    }
                }


            }
        }) {
            Text(text = "Submit")
        }


    }
}
```

**// SetLimitActivity.kt**

```
package com.example.expensestracker


import android.annotation.SuppressLint
```

```
import android.content.Context

import android.content.Intent

import android.os.Bundle

import android.util.Log

import androidx.activity.ComponentActivity

import androidx.activity.compose.setContent

import androidx.compose.foundation.layout.*

import androidx.compose.foundation.lazy.LazyColumn

import androidx.compose.foundation.lazy.LazyRow

import androidx.compose.foundation.lazy.items

import androidx.compose.material.*

import androidx.compose.runtime.*

import androidx.compose.ui.Alignment

import androidx.compose.ui.Modifier

import androidx.compose.ui.graphics.Color

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.expensestracker.ui.theme.ExpensesTrackerTheme


class SetLimitActivity : ComponentActivity() {
```

```
private lateinit var expenseDatabaseHelper: ExpenseDatabaseHelper
@SuppressLint("UnusedMaterialScaffoldPaddingParameter")
override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    expenseDatabaseHelper = ExpenseDatabaseHelper(this)
    setContent {
        Scaffold(
            // in scaffold we are specifying top bar.
            bottomBar = {
                // inside top bar we are specifying
                // background color.
                BottomAppBar(backgroundColor = Color(0xFFadbef4),
                    modifier = Modifier.height(80.dp),
                    // along with that we are specifying
                    // title for our top bar.
                    content = {

                        Spacer(modifier = Modifier.width(15.dp))

                        Button(
                            onClick = {
                                startActivity(
```

```
                                        Intent(
                                            applicationContext,

AddExpensesActivity::class.java
                                        )
                                    )
                                },
                                colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                modifier = Modifier.size(height =
55.dp, width = 110.dp)
                            )
                            {
                                Text(
                                    text = "Add Expenses", color =
Color.Black, fontSize = 14.sp,
                                    textAlign = TextAlign.Center
                                )
                            }

                            Spacer(modifier = Modifier.width(15.dp))

                            Button(
```

```
                                    onClick = {
                                        startActivity(
                                            Intent(
                                                applicationContext,

SetLimitActivity::class.java
                                            )
                                        )
                                    },
                                    colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                    modifier = Modifier.size(height =
55.dp, width = 110.dp)
                                )
                                {
                                    Text(
                                        text = "Set Limit", color =
Color.Black, fontSize = 14.sp,
                                        textAlign = TextAlign.Center
                                    )
                                }

                                Spacer(modifier = Modifier.width(15.dp))
```

```
                                Button(
                                    onClick = {
                                        startActivity(
                                            Intent(
                                                applicationContext,

ViewRecordsActivity::class.java
                                            )
                                        )
                                    },
                                    colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                    modifier = Modifier.size(height =
55.dp, width = 110.dp)
                                )
                                {
                                    Text(
                                        text = "View Records", color =
Color.Black, fontSize = 14.sp,
                                        textAlign = TextAlign.Center
                                    )
                                }
```

```
                    }
                )
            }
        ) {
            val data=expenseDatabaseHelper.getAllExpense();
            Log.d("swathi" ,data.toString())
            val expense = expenseDatabaseHelper.getAllExpense()
            Limit(this, expenseDatabaseHelper,expense)
        }
    }
}


@Composable
fun Limit(context: Context, expenseDatabaseHelper:
ExpenseDatabaseHelper, expense: List<Expense>) {
    Column(
        modifier = Modifier
            .padding(top = 100.dp, start = 30.dp)
            .fillMaxHeight()
            .fillMaxWidth(),
        horizontalAlignment = Alignment.Start
```

```
    ) {

        var amount by remember { mutableStateOf("") }
        var error by remember { mutableStateOf("") }

        Text(text = "Monthly Amount Limit", fontWeight =
FontWeight.Bold, fontSize = 20.sp)
        Spacer(modifier = Modifier.height(10.dp))
        TextField(value = amount, onValueChange = { amount = it },
            label = { Text(text = "Set Amount Limit ") })

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

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

        Button(onClick = {
            if (amount.isNotEmpty()) {
```

```
        val expense = Expense(
            id = null,
            amount = amount
        )
        expenseDatabaseHelper.insertExpense(expense)
    }
}) {
    Text(text = "Set Limit")
}

Spacer(modifier = Modifier.height(10.dp))

LazyRow(
    modifier = Modifier
        .fillMaxSize()
        .padding(top = 0.dp),

    horizontalArrangement = Arrangement.Start
) {
    item {

        LazyColumn {
```

```
                    items(expense) { expense ->
                        Column(


                        ) {
                            Text("Remaining Amount:
${expense.amount}", fontWeight = FontWeight.Bold)
                        }
                    }
                }
            }


        }
    }
}
```

**// ViewRecordsActivity.kt**

```
package com.example.expensestracker


import android.annotation.SuppressLint
import android.content.Intent
import android.os.Bundle
import android.util.Log
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
```

```
import androidx.compose.foundation.ScrollState

import androidx.compose.foundation.layout.*

import androidx.compose.foundation.lazy.LazyColumn

import androidx.compose.foundation.lazy.LazyRow

import androidx.compose.foundation.lazy.items

import androidx.compose.foundation.verticalScroll

import androidx.compose.material.*

import androidx.compose.runtime.Composable

import androidx.compose.ui.Modifier

import androidx.compose.ui.graphics.Color

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.expensestracker.ui.theme.ExpensesTrackerTheme


class ViewRecordsActivity : ComponentActivity() {

    private lateinit var itemsDatabaseHelper: ItemsDatabaseHelper

    @SuppressLint("UnusedMaterialScaffoldPaddingParameter",
"SuspiciousIndentation")

    override fun onCreate(savedInstanceState: Bundle?) {

        super.onCreate(savedInstanceState)
```

```
        itemsDatabaseHelper = ItemsDatabaseHelper(this)
        setContent {
            Scaffold(
                // in scaffold we are specifying top bar.
                bottomBar = {
                    // inside top bar we are specifying
                    // background color.
                    BottomAppBar(backgroundColor = Color(0xFFadbef4),
                        modifier = Modifier.height(80.dp),
                        // along with that we are specifying
                        // title for our top bar.
                        content = {

                            Spacer(modifier = Modifier.width(15.dp))

                            Button(
                                onClick = {
                                    startActivity(
                                        Intent(
                                            applicationContext,
```

AddExpensesActivity::class.java

```
                                        )
```

```
                                    )
                                },
                                colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                modifier = Modifier.size(height =
55.dp, width = 110.dp)
                            )
                            {
                                Text(
                                    text = "Add Expenses", color =
Color.Black, fontSize = 14.sp,
                                    textAlign = TextAlign.Center
                                )
                            }

                            Spacer(modifier = Modifier.width(15.dp))

                            Button(
                                onClick = {
                                    startActivity(
                                        Intent(
                                            applicationContext,
```

SetLimitActivity::class.java

```
                                        )
                                    )
                                },
                                colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                modifier = Modifier.size(height =
55.dp, width = 110.dp)
                            )
                            {
                                Text(
                                    text = "Set Limit", color =
Color.Black, fontSize = 14.sp,
                                    textAlign = TextAlign.Center
                                )
                            }

                            Spacer(modifier = Modifier.width(15.dp))

                            Button(
                                onClick = {
                                    startActivity(
```

```
                                        Intent(
                                            applicationContext,

ViewRecordsActivity::class.java
                                        )
                                    )
                                },
                                colors =
ButtonDefaults.buttonColors(backgroundColor = Color.White),
                                modifier = Modifier.size(height =
55.dp, width = 110.dp)
                            )
                            {
                                Text(
                                    text = "View Records", color =
Color.Black, fontSize = 14.sp,
                                    textAlign = TextAlign.Center
                                )
                            }


                        }
                    )
                }
```

```
            ) {
                val data=itemsDatabaseHelper.getAllItems();
                Log.d("swathi" ,data.toString())
                val items = itemsDatabaseHelper.getAllItems()
                    Records(items)
                }
            }
        }
    }


@Composable
fun Records(items: List<Items>) {
    Text(text = "View Records", modifier = Modifier.padding(top =
24.dp, start = 106.dp, bottom = 24.dp ), fontSize = 30.sp, fontWeight
= FontWeight.Bold)
    Spacer(modifier = Modifier.height(30.dp))
    LazyRow(
        modifier = Modifier
            .fillMaxSize()
            .padding(top = 80.dp),


        horizontalArrangement = Arrangement.SpaceBetween
    ){
```

```
        item {


            LazyColumn {

                items(items) { items ->

                    Column(modifier = Modifier.padding(top = 16.dp,
start = 48.dp, bottom = 20.dp)) {

                        Text("Item_Name: ${items.itemName}")

                        Text("Quantity: ${items.quantity}")

                        Text("Cost: ${items.cost}")

                    }

                }

            }

        }


    }

}
```