Angel college of engineering and technology

Money Matter: A personal Finance Management App

Team code:

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- Key Features:
- 1. User Registration and Authentication:
- ▶ Sign up/Login with email, phone number, or social media accounts.
- Secure authentication methods, including two-factor authentication (2FA).
- 2. Dashboard:
- Summary of accounts, transactions, budgets, and financial goals.
- Visual representations like graphs and charts for an overview of financial health.
- 3. Account Management:
- Link bank accounts, credit cards, loans, and investments.
- Automatic transaction import and categorization.

- 4. Expense Tracking:
- Manual and automatic transaction logging.
- Categorization of expenses.
- Customizable tags and categories.
- ▶ 5. Budgeting:
- Set monthly/annual budgets.
- Track spending against budgets.
- Alerts and notifications for budget limits.
- ▶ 6. Financial Goals:
- Set and track savings goals.
- Progress visualization.
- Suggestions for achieving goals.

- Design and Development Process:
- 1. Requirement Analysis:
- Identify and document all features and functionalities.
- Create user personas and scenarios.
- 2. Design:
- Wireframing and prototyping.
- UI/UX design focusing on simplicity and usability.
- 3. Development:
- ▶ Set up the development environment.
- Implement features incrementally, starting with core functionalities.
- Regular testing and quality assurance.
- 4. Deployment:
- ▶ Set up continuous integration/continuous deployment (CI/CD) pipelines.
- Deploy to app stores (Apple App Store, Google Play Store).
- 5. Maintenance:
- Regular updates and feature enhancements.
- Monitor user feedback and address issues promptly.



```
class\,Login\,Activity:Component\,Activity()\,\{
 private la teinit var da tabaseHelper: UserD atabaseHelper
  override fun onCreate(savedInstanceState: Bundle?) {
    super. on Create (saved Instance State)
    databaseHelper = UserDatabaseHelper(this)
    setContent {
       {\it Expenses Tracker Theme} \, \{
         // A surface container using the 'background' color from the theme
         Surface(
            modifier = Modifier.fillMaxSize(),
            color = MaterialTheme.colors.background
                                                           ) {
            LoginScreen(this, databaseHelpe } } } }
@Composable
fun\ LoginScreen (context:\ Context,\ database Helper:\ User Database Helper) \{
  Image(
    painterResource(id = R.drawable.img_1), contentDescription = "",
    alpha = 0.3F,
    contentScale = ContentScale.FillHeight,
  var usemame 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 = usemame,
       onValueChange = { usemame = 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),
       visual Transformation = Password Visual Transformation () \\
 ) 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(usemame)
       if (user != null && user.password = password) {
         error = "Successfully log in"
         context.startActivity(
            Intent(
              context,
              MainActivity::class.jav
         //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(
         In tent (
            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)
```

Package com.example.expensestracker import android.content.Context import android content. Intent import android.os.Bundle $import\ and roid x. activity. Component Activity\\$ import androidx.activity.compose.setContent import androidx.compose.foundation.lmage import androidx.compose.foundation.layout.* $import\ and roid x. compose. material. ^{*}$ 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 $import\ com.\ example.\ expenses tracker.\ ui.\ theme.\ Expenses Tracker Theme$ class Register Activity: Component Activity() { private la teinit var da tabase Helper: UserD atabase Helper 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
          ) {
            Registration Screen (this, database Helper) \\
@Composable
fun RegistrationScreen(context: Context, databaseHelper: UserDatabaseHelper) {
  Image(
    painter Resource (id = R.\,drawable.\,img\_1)\,,\,content Description = \text{""}\,,
    alpha=0.3F,
    contentScale = ContentScale.FillHeight,
  var usemame 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 = usemame,
       onValueChange = { usemame = 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),
       visual Transformation = Password Visual Transformation () \\
    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)
  {\tt ContextCompat.startActivity} ({\tt context,\ intent,\ null})
```

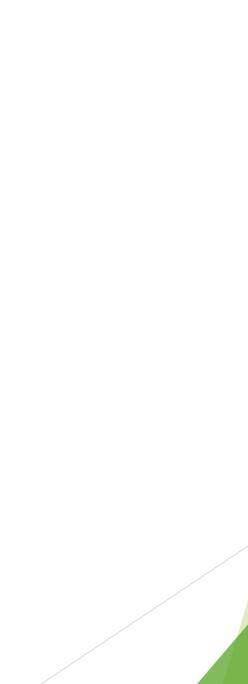
```
Package com.example.expensestracker
import android.annotation.SuppressLint
import android.content.Intent
import android.os.Bundle
import androidx.activity.ComponentActivity
import\ and roid x. activity. compose. set Content
import androidx.compose.foundation.Image
import androidx.compose.foundation.layout.*
import androidx.compose.material.*
import androidx.compose.runtime.*
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import\ and roid x. compose. ui. graphics. Color
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.font.FontWeight
import\ and roid x. compose. ui. text. style. Text A lign
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import\ com.\ example.\ expenses tracker.\ ui.\ theme.\ Expenses Tracker Theme
class Main Activity: Component Activity() {
  @SuppressLint (``Unused Material Scaffold Padding Parameter")
  override fun onCreate(savedInstanceState: Bundle?) {
    super. on Create (saved Instance State)
    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 = Button Defaults. \ button Colors (background Color = 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 = Button Defaults. \ button Colors (background Color = 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))
 }}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
```

```
override fun onCreate(savedInstanceState: Bundle?) {
  super. on Create (saved Instance State)
  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.java))},
                  colors = Button Defaults. button Colors (background Color = 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\ Add Expenses (context;\ Context,\ items Database Helper;\ Items Database Helper,\ expense Database Helper;\ Expense Database Helper)\ \{ items Database Helper,\ expense Database Helper,\ expense
                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 (actua lvalue < 1) {
          Toast.makeText(mContext, "Limit Over", Toast.LENGTH_SHORT).show()
       } else {
          expenseDatabaseHelper.updateExpense(expense)
          itemsDatabaseHelper.insertItems(items)
  } }){
   Text(text = "Submit")
} }
```

```
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?,
)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)
```

```
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
```

```
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 = "a mount"
 } override fun onCreate(db: SQLiteDatabase?) {
    val createTable = "CREATE TABLE $TABLE_NAME (" +
         "${COLUMN_ID} INTEGER PRIMARY KEY AUTOIN CREMENT, "+
         "${COLUMN_AMOUNT}TEXT" +
         ")"
     db?.execSQL(createTable)
   \} override\ fun\ on Upgrade (db1: SQLiteD\ atabase?,\ 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)
  \label{lem:column_ideal} \mbox{db.update}(\mbox{TABLE\_NAME}, \mbox{values}, \mbox{ "$COLUMN\_ID=?", arrayOf(expense.id.toString()))}
  db.close()
} @SuppressLint("Range")
fun getExpenseByAmount(amount: String): Expense? {
  val db1 = readableDatabase
  val\ cursor:\ Cursor:=db1.rawQuery("SELECT*FROM$\{ExpenseDatabaseHelper.TABLE\_NAME\}\ WHERE\ S\{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()
  retum expense
@SuppressLint("Range")
fun getExpenseByld(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()
  retum 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()
  retum 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()) {
       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()
  retum expenses
```

```
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?,
)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 updateltems(items: Items)
  @Delete
  suspend fun deleteItems(items: Items)
```

```
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
```

```
Package com.example.expensestracker
import android.annotation.SuppressLint
import android.content.ContentValues
import android.content.Context
import android database. Cursor
import\ and roid.\ database.sqlite. SQLiteD\ atabase
import\ and roid.\ database.sqlite. SQLite Open Helper
class\,ItemsDatabaseHelper(context:\,\,Context):
  SQLiteOpenHelper(context, DATABASE_NAME, null,DATABASE_VERSION){
  companion object {
    private const val DATABASE_VERSION = 1
    private constival 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 AUTOIN CREMENT, "+
         "${COLUMN_ITEM_NAME} TEXT,"+
         "${COLUMN_QUANTITY}TEXT,"+
         "${COLUMN_COST} TEXT" +
         ")"
    db?.execSQL(createTable)
```

```
override\ fun\ on Upgrade (db: SQLiteD\ atabase?,\ oldVersion: Int,\ newVersion:\ Int)\ \{
   db?.execSQL("DROP TABLE IF EXISTS $TABLE_NAME")
   onCreate(db)
} funinsertItems(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 getltemsByCost(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()
   retum items
```

```
@SuppressLint("Range")
fun getltemsByld(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()
  retum 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()
  retum item}}
```



```
// in scaffold we are specifying top bar.
bottomBar = {
  // inside top bar we are specifying
  // background color.
  {\tt 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 = Button Defaults.button Colors (background Color = 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 = Button Defaults. \ button Colors (background Color = 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 = {

```
applicationContext,
                 ViewRecords Activity::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 = expense DatabaseHelper.get AllExpense()
Limit (this, expenseDatabaseHelper, expense)
```

Intent (

```
@Composable
fun\ Limit(context:\ Context,\ expenseDatabaseHelper:\ ExpenseDatabaseHelper,\ expense:\ List< Expense>) \{ and a context is the context is 
        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)
         } } } }
}//@Composable
//fun Records (expense: List < Expense >) {
// Text(text = "View Records", modifier = Modifier.padding(top = 24.dp, start = 106.dp, bottom = 24.dp), fontSize = 30.sp)
// Spacer(modifier = Modifier.height(30.dp))
// LazyRow(
      modifier = Modifier
         .fillMaxSize()
         .padding(top = 80.dp),
//
//
       horizontalArrangement = Arrangement.SpaceBetween
// ){
// it em {
           LazyColumn {
////
//
           items(expense) { expense ->
             Column(modifier = Modifier.padding(top = 16.dp, start = 48.dp, bottom = 20.dp)) {
//
//
               Text ("Remaining Amount: ${expense.amount}")
//
//
// }
//}
```

```
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?,
  )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 = OnConflictStrate gy.REPLACE)
  suspend fun insertUser(user: User)
  @Update
  suspend fun updateUser(user: User)
@Delete
  suspend fun deleteUser(user: User)
```

```
Package com.example.expensestracker
mport 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
```



```
Package com.example.expensestracker
mport 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_PAS SWORD = "password"
  }override fun onCreate(db: SQLiteDatabase?) {
    val createTable = "CREATE TABLE $TABLE_NAME (" +
         "$COLUMN_ID INTEGER PRIMARY KEY AUTOIN CREMENT, "+
         "$COLUMN_FIRST_NAME TEXT, " +
                                                 "$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 getUserByUsemame(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()
  retum user
@SuppressLint("Range")
fun getUserByld(id: Int): User? {
   val db = readableDatabase
```

```
val\;cursor:\;Cursor=db.rawQuery(\text{``SELECT*FROM\ \$TABLE\_NAME\ WHERE\ $COLUMN\_ID=?'',\;arrayOf(id.to\$tring()))}
  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()
  retum 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())
```

```
.close()
     db.close()
    retum users
}package com.example.expensestracker
import android.annotation.SuppressLint
import android content. Intent
import android.cs.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.\ expenses tracker.\ ui.\ theme.\ Expenses Tracker Theme
```

```
Class ViewRecordsActivity: ComponentActivity() {
 private lateinit var itemsDatabaseHelper: ItemsDatabaseHelper
  @SuppressLint ("Unused Material Scaffold Padding Parameter", "Suspicious Indentation")\\
  override fun onCreate(savedInstanceState: Bundle?) {
    super. on Create (saved Instance State)
    itemsDatabaseHelper = ItemsDatabaseHelper(this)
    setContent {
      Scaffold(
         // in scaffold we are specifying topbar.
         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 = Button Defaults. button Colors (background Color = 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 = Button Defaults. button Colors (background Color = 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}")
```

```
Package com.example.expensestracker.ui.theme
import androidx.compose.ui.graphics.Color
val Purple200 = Color(0xFFBB86FC)
val Purple500 = Color(0xFF6200EE)
val Purple700 = Color(0xFF3700B3)
val Teal200 = Color(0xFF03DAC5)
Package com.example.expensestracker.ui.theme
import\ and roid x. compose. foundation. shape. Rounded Corner Shape
import androidx.compose.material.Shapes
import androidx.compose.ui.unit.dp
val Shapes = Shapes(
  small = RoundedCornerShape (4.dp),
  medium = RoundedComerShape(4.dp),
  large = RoundedCornerShape(0.dp)
{\it Package\,com.example.expenses tracker.ui.theme}
import\ and roid x. compose. foundation. is System In Dark Theme
import androidx.compose.material.MaterialTheme
import\ and roid x. compose. material. dark Colors
import androidx.compose.material.lightColors
import androidx.compose.runtime.Composable
private val DarkColorPalette = darkColors(
  primary = Purple200,
  primaryVariant = Purple700,
  secondary = Teal200
private val LightColorPalette = lightColors(
  primary = Purple500,
  primaryVariant = Purple700,
```

secondary = Teal200

```
/* Other default colors to override
  background = Color.White,
  surface = Color. White,
  onPrimary = Color.White,
  onSecondary = Color.Black,
  onBackground = Color.Black,
  onSurface = Color.Black,
  */
@Composable
fun ExpensesTrackerTheme(
  darkTheme: Boolean = isSystemInDarkTheme(),
  content: @Composable () -> Unit
) {
  val colors = if (darkTheme) {
    DarkColorPalette
  } else {
    LightColorPalette
  MaterialTheme(
    colors = colors,
    typography = Typography,
    shapes = Shapes,
    content = content
```

```
Package com.example.expensestracker.ui.theme
import\ and roid x. compose. material. Typography
import androidx.compose.ui.text.TextStyle
import\ and roid x. compose. ui. text. font. Font Family
import\ and roid x. compose. ui. text. font. Font Weight
import androidx.compose.ui.unit.sp
// Set of Material typography styles to start with
val Typography = Typography(
 body1 = TextStyle(
    fontFamily = FontFamily.Default,
    fontWeight = FontWeight.Normal,
     fontSize = 16.sp
  /* Other default text styles to override
  button = TextStyle(
    fontFamily = FontFamily.Default,
    fontWeight = FontWeight.W500,
     fontSize = 14.sp
  caption = TextStyle(
    fontFamily = FontFamily.Default,
    fontWeight = FontWeight.Normal,
     fontSize = 12.sp
```

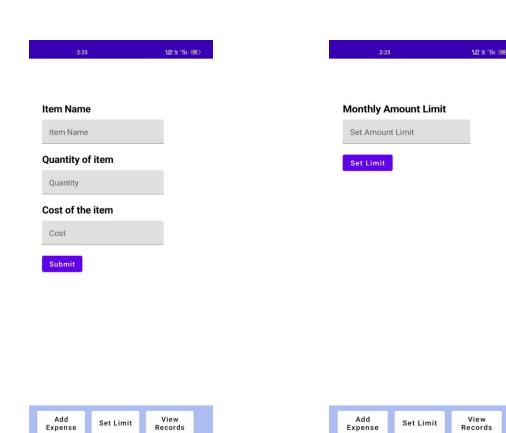




Welcome To Expense Tracker



Add Set Limit View Records



View Records

Add Set Limit View Records