Money Matters: A Personal Finance Management App

1. Abstract:

A Personal Finance Management App is a lightweight and intuitive mobile app designed to help users manage their finances efficiently. Developed in Kotlin, the app features a simple and user-friendly interface. It allows users to:

- Login: Securely access their accounts through a basic login screen.

- Set Spending Limits: Define a monthly or weekly spending cap to maintain financial discipline.

- Track Expenses: Input daily expenses, which are recorded and displayed in real time.

- Monitor Finances: View total expenses and the remaining balance, enabling users to stay within their budget.

This straightforward implementation focuses on core functionalities, making it ideal for users seeking a hassle-free expense management solution.
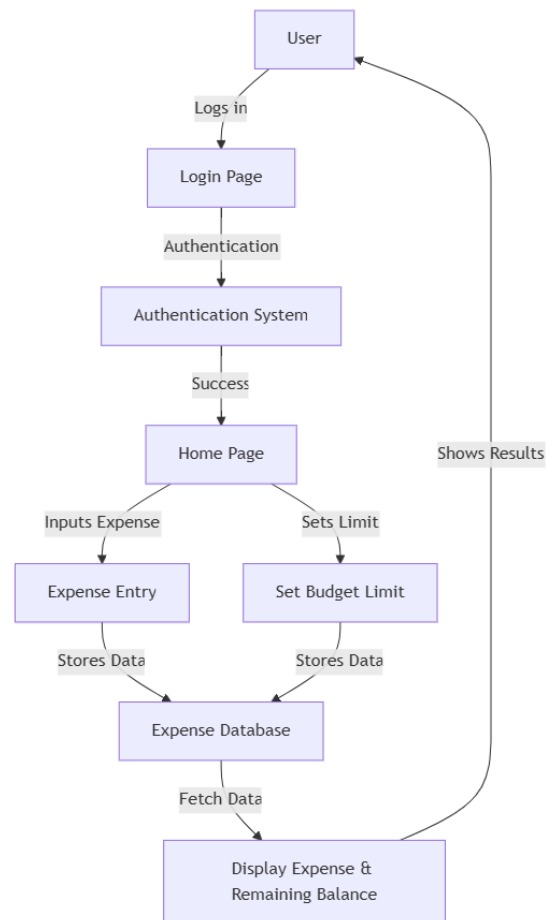
2. Introduction:

In an era where financial stability and planning are more crucial than ever, managing personal finances effectively can be a daunting task for many. Enter Money Matters, a revolutionary personal finance management app designed to simplify and enhance the way individuals handle their financial affairs. This app provides a comprehensive suite of tools that empower users to track their expenses, manage budgets, set financial goals, and make informed financial decisions.

Money Matters aims to bridge the gap between financial literacy and practical money management. With its user-friendly interface and robust features, the app caters to both beginners and seasoned financial planners. Users can easily monitor their spending patterns, analyze their financial health, and receive personalized insights to help them achieve their financial goals.
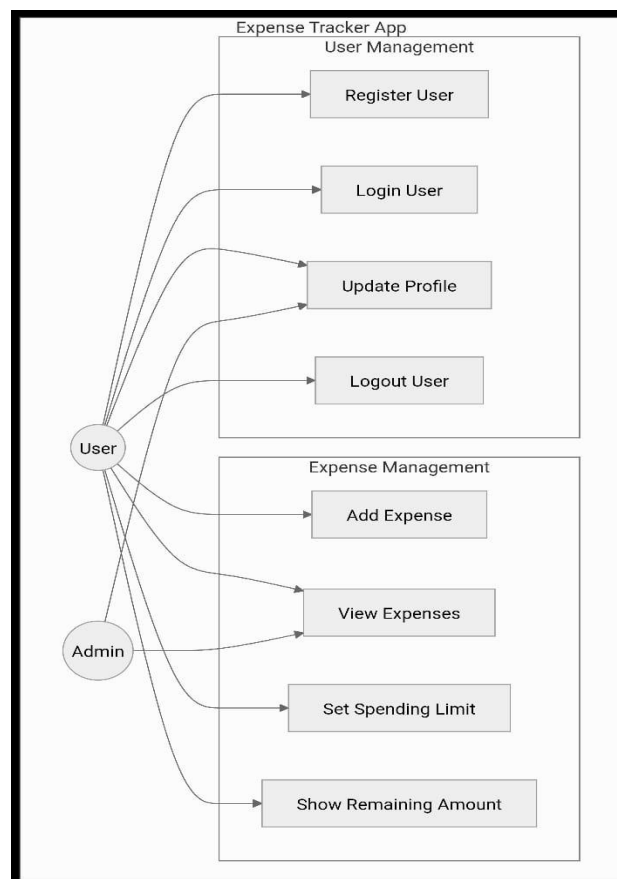
The app integrates seamlessly with various financial institutions, allowing users to sync their bank accounts, credit cards, and investments in one place. This centralization of financial data not only saves time but also provides a holistic view of one's financial status. Additionally, Money Matters offers secure data encryption to ensure the privacy and safety of user information.

As the landscape of personal finance continues to evolve, Money Matters stands out as a vital tool for anyone looking to take control of their financial future. By providing actionable insights and fostering better financial habits, Money Matters is not just an app but a partner in financial well-being.

3. Data flow diagram:

4. Use case diagram:

5. Software Requirement:

1. Programming Language: Kotlin - for developing the app.
2. IDE (Integrated Development Environment): Android Studio - for coding, designing, and testing the app.
3. Database: SQLite or Room - to store user data like expenses and budget limits.
4. Operating System: Android (minimum version 5.0 Lollipop or higher) - for app compatibility.
5. Authentication: Firebase Authentication (optional) - to manage user login securely.

6. Sample Program Code :

```kotlin
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 = {
```

```kotlin
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(
```

```kotlin
                            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))

    }
}
```
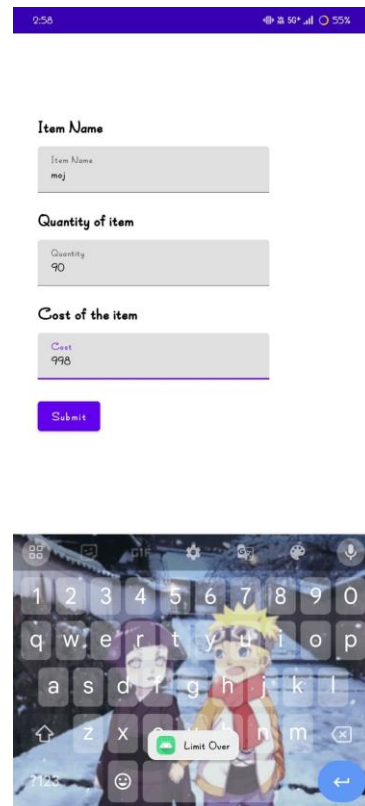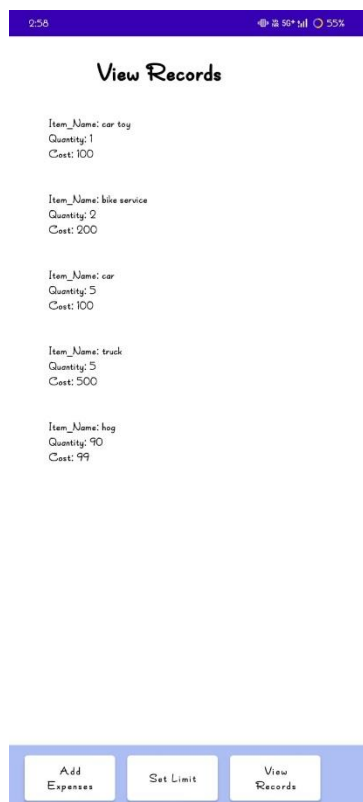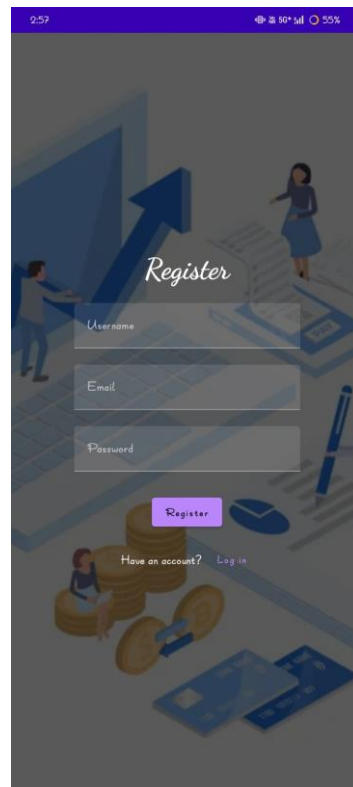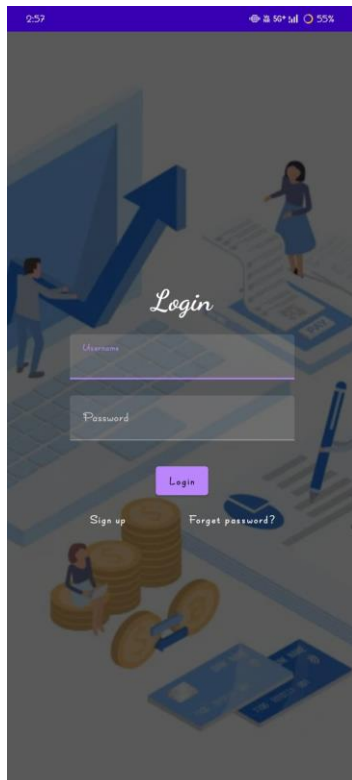
7. Output

Login

Register

Monthly Amount Limit

Set Amount Limit

Set Limit

Remaining Amount: 1
Remaining Amount: 8000
Remaining Amount: 500

Add Expenses | Set Limit | View Records

View Records

Item_Name: car toy
Quantity: 1
Cost: 100

Item_Name: bike service
Quantity: 2
Cost: 200

Item_Name: car
Quantity: 5
Cost: 100

Item_Name: truck
Quantity: 5
Cost: 500

Item_Name: hog
Quantity: 90
Cost: 99

Add Expenses | Set Limit | View Records

Item Name

Item Name
moj

Quantity of item

Quantity
90

Cost of the item

Cost
998

Submit

Limit Over

8. Conclusion:

Money Matters is designed to be a comprehensive and intuitive personal finance management app, helping users navigate the complexities of their financial lives with ease. By providing robust tools for tracking expenses, managing budgets, and setting financial goals, Money Matters empowers users to make informed decisions and achieve financial stability. Its seamless integration with financial institutions and commitment to security ensures that users can trust the app with their sensitive information. As financial literacy becomes increasingly important, Money Matters stands out as a vital resource for anyone looking to take control of their financial future.

9. Future Enhancement:

To continually improve and meet the evolving needs of its users, several future enhancements are planned for Money Matters:

- AI-Driven Insights: Implementing advanced AI algorithms to provide more personalized and predictive financial insights.

- Investment Tracking: Adding features to track investments in stocks, bonds, mutual funds, and cryptocurrencies.

- Debt Management Tools: Introducing tools to help users manage and pay off debts effectively, including loan tracking and payoff strategies.

- Expense Forecasting: Offering predictive analytics to forecast future expenses based on historical data and trends.

- Multi-Currency Support: Enabling support for multiple currencies to cater to users with international financial interests.

- Financial Education Content: Providing educational resources and tips to improve financial literacy directly within the app.

- Integration with Financial Advisors: Allowing users to connect with certified financial advisors for personalized advice.

- Enhanced User Interface: Continuously refining the user interface to make it more intuitive and user-friendly.

- Subscription Plans: Introducing premium subscription plans with additional features and personalized financial planning services.

- Sustainability Tracking: Adding tools to help users track and improve the environmental impact of their financial choices.