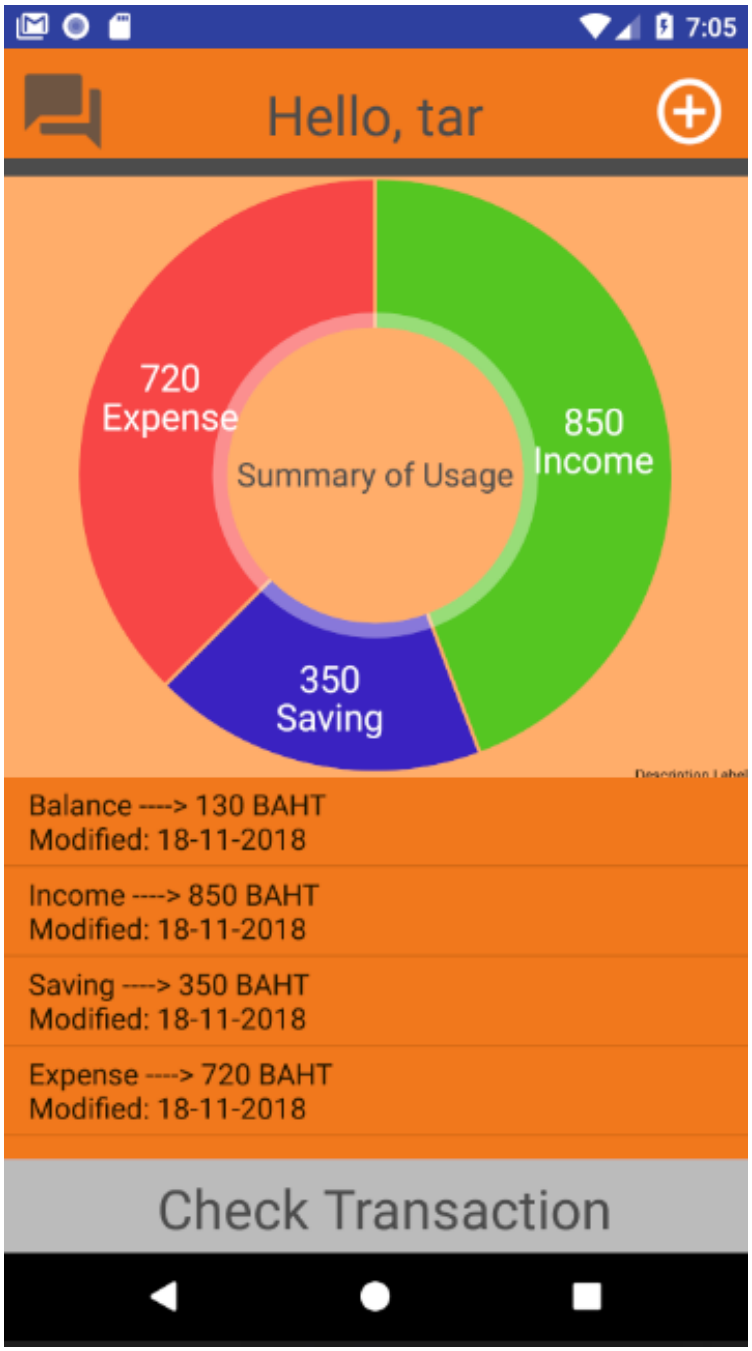
Project Mobile Application

App “Money Keeper”



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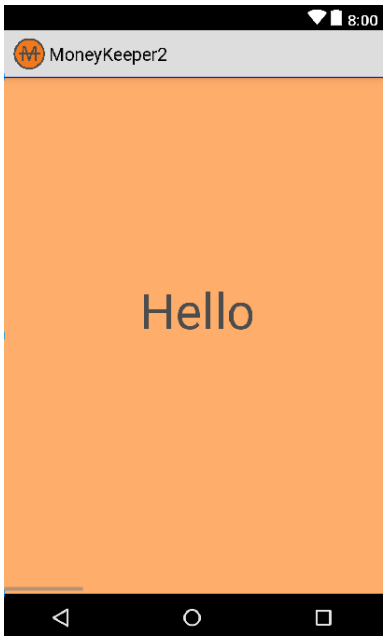
Function of Application

-Money Keeper this Application use for about save money in everyday life.

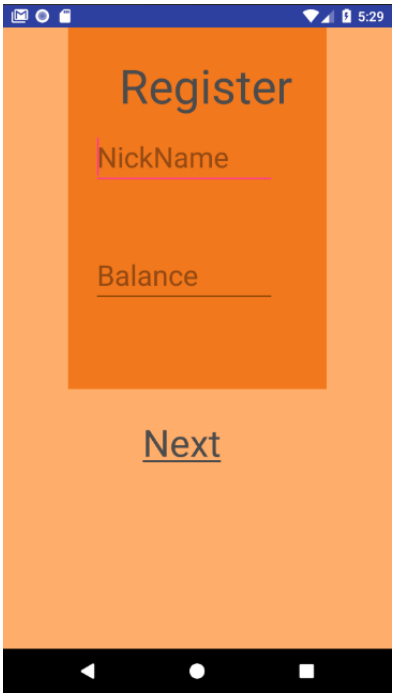
-Note title about income, expense and saving

How to use Application

-In the first page, there is a Hello page, you can slide left and you will see 'Next' button. When you click on it, it will lead you to registration page.



-Registration page ,there have fill box name and money. You have to enter your nickname and your first money for initialize balance so, after that press next



-After fill information finish, press Next. It will lead you to Main page.

In ListView on Main Page, it'll show :

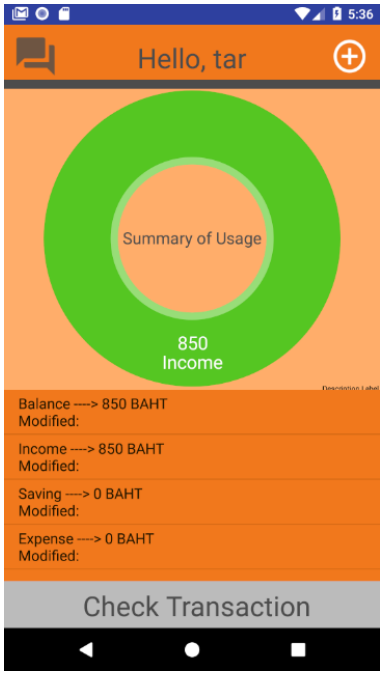
1.Balance from total summarize data of Income – Expense.

2.Income from total summarize data of Income in DATABASE.

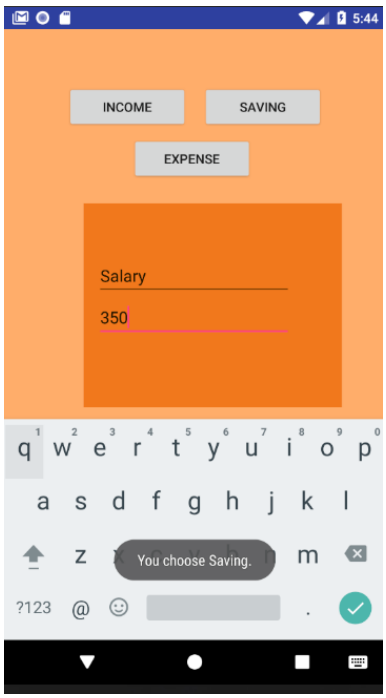
3.Saving from total summarize data of Saving in DATABASE.

4.Expense from total summarize data of Expense in DATABASE.

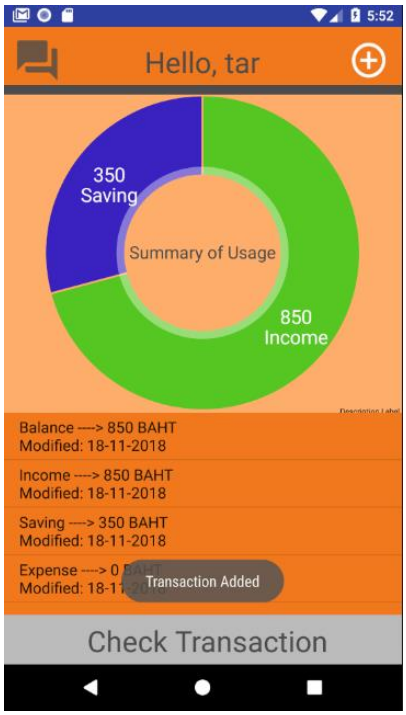
-When you on Main page, click on button '⊕'. It will lead you to add new transaction page.



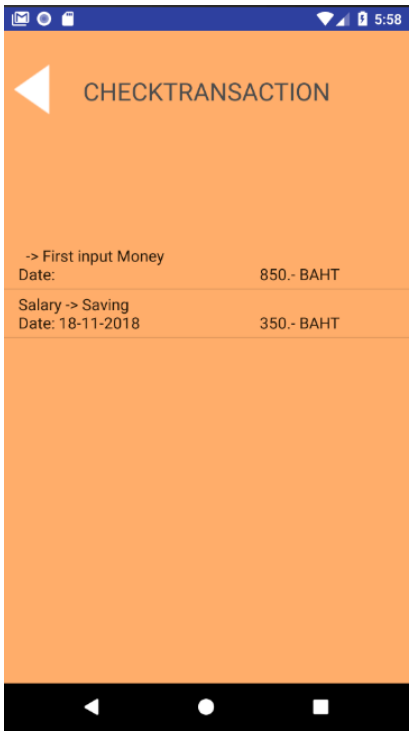
-When you’re on Add new transaction page. You have to select type of your new transaction by press the button. Next, input your description and amount after finish you choose create.



-When after you press create button, The new transaction will be added to Main page and stored in database by using SQLite.



-When click on button ‘Check Transaction’ it will show the list of transaction.

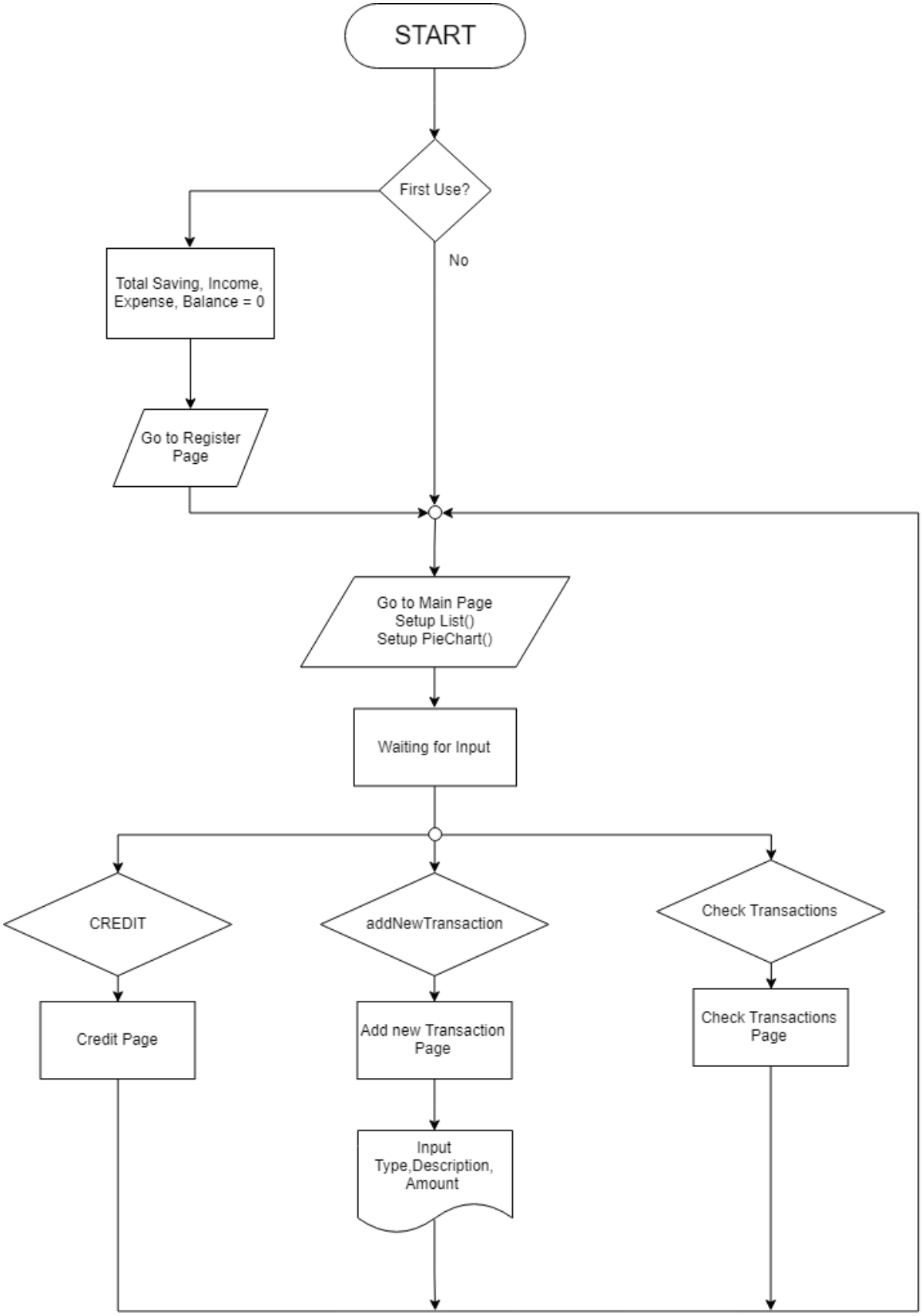


-After you’ve checked transactions Press “ ” to go back to Main Screen.

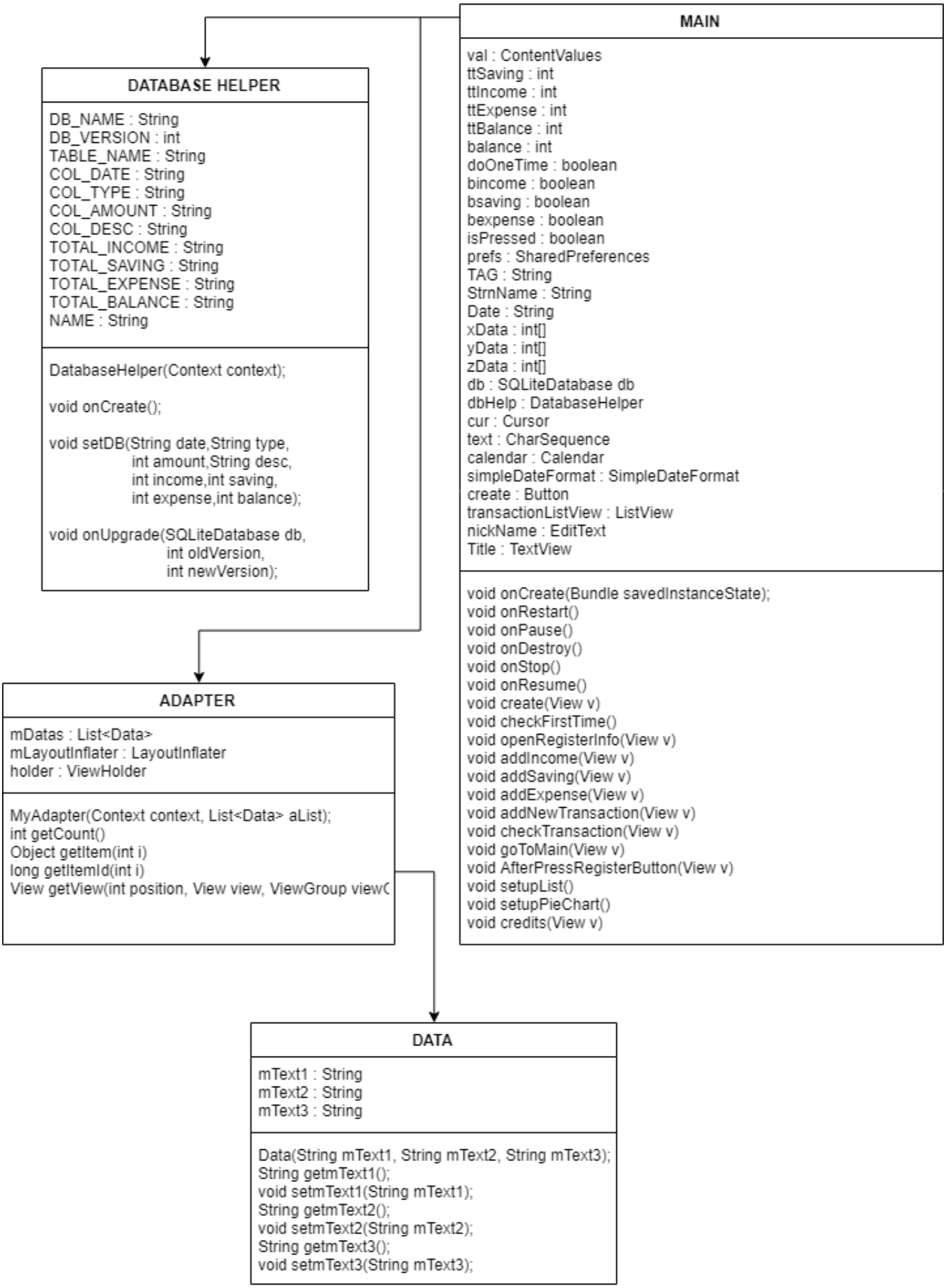
-In the Main Screen It’s also had the “ ” Button. It’s the button that lead you to credit page to say thank you.

Project Structure of Application

Flowcharts



UML


MAIN
val : ContentValues
ttSaving : int
ttIncome : int
ttExpense : int
ttBalance : int
balance : int
doOneTime : boolean
bincome : boolean
bsaving : boolean
bexpense : boolean
isPressed : boolean
prefs : SharedPreferences
TAG : String
StrnName : String
Date : String
xData : int[]
yData : int[]
zData : int[]
db : SQLiteDatabase db
dbHelp : DatabaseHelper
cur : Cursor
text : CharSequence
calendar : Calendar
simpleDateFormat : SimpleDateFormat
create : Button
transactionListView : ListView
nickName : EditText
Title : TextView
void onCreate(Bundle savedInstanceState);
void onRestart()
void onPause()
void onDestroy()
void onStop()
void onResume()
void create(View v)
void checkFirstTime()
void openRegisterInfo(View v)
void addIncome(View v)
void addSaving(View v)
void addExpense(View v)
void addNewTransaction(View v)
void checkTransaction(View v)
void goToMain(View v)
void AfterPressRegisterButton(View v)
void setupList()
void setupPieChart()
void credits(View v)
DATABASE HELPER
DB_NAME : String
DB_VERSION : int
TABLE_NAME : String
COL_DATE : String
COL_TYPE : String
COL_AMOUNT : String
COL_DESC : String
TOTAL_INCOME : String
TOTAL_SAVING : String
TOTAL_EXPENSE : String
TOTAL_BALANCE : String
NAME : String
DatabaseHelper(Context context);
void onCreate();
void setDB(String date,String type,
int amount,String desc,
int income,int saving,
int expense,int balance);
void onUpgrade(SQLiteDatabase db,
int oldVersion,
int newVersion);
ADAPTER
mDatas : List<Data>
mLayoutInflater : LayoutInflater
holder : ViewHolder
MyAdapter(Context context, List<Data> aList);
int getCount()
Object getItem(int i)
long getItemId(int i)
View getView(int position, View view, ViewGroup viewG
DATA
mText1 : String
mText2 : String
mText3 : String
Data(String mText1, String mText2, String mText3);
String getmText1();
void setmText1(String mText1);
String getmText2();
void setmText2(String mText2);
String getmText3();
void setmText3(String mText3);

CODE

1. Check First Time Using Application.

```
public void checkFirstTime(){
    if (prefs.getBoolean( key: "firstrun",  defValue: true)) {
        Log.d(TAG,  msg: "FirstRun");
        setContentView(R.layout.activity_firsttime);
        ttSaving=0;
        ttIncome=0;
        ttExpense=0;
        ttBalance=0;
        balance=0;
        bincome = false;
        bsaving = false;
        bexpense = false;
    }
    else{
        Log.d(TAG,  msg: "Not FirstRun \nStarting main class ");
        setContentView(R.layout.activity_main);
        setupList();
        setupPieChart();
    }
}
```

2.Register for First Use

```
@SuppressLint("SimpleDateFormat")
public void AfterPressRegisterButton(View v) {
    EditText bal = findViewById(R.id.editText2);
    prefs.edit().putBoolean("firstrun", false).apply();
    nickName = findViewById(R.id.nickName);
    StrnName =nickName.getText().toString();
    db.execSQL(" INSERT INTO " + DatabaseHelper.TABLE_NAME +
            "("+ DatabaseHelper.NAME +")" + " VALUES ('"+StrnName+"')");

    balance = Integer.parseInt( bal.getText().toString());
    Log.d(TAG,  msg: " Seting up first input to database");
    dbHelp.setDB( date: "\t\t\t\t\t\t\t\t\t\t\t", type: " ", balance,
            desc: "First input Money", balance, saving: 0, expense: 0,balance);
    Log.i( tag: "Executed first SQL", TAG);
    yData[0] = balance;
    setContentView(R.layout.activity_main);
    setupList();
    setupPieChart();

}
```

3.Set up List/Pie Chart

```
@SuppressLint("SetTextI18n")
public void setupList(){
    Title = findViewById(R.id.Title);
    Cursor c = db.rawQuery( sql: "SELECT NAME FROM "+ DatabaseHelper.TABLE_NAME, selectionArgs: null);
    c.moveToFirst();
    Title.setText("Hello, "+c.getString(c.getColumnIndex(DatabaseHelper.NAME)));

    ListView lv = findViewById(R.id.listView);
    ArrayList<String> dirArray = new ArrayList<>();

    cur = db.rawQuery( sql: "SELECT * FROM "+ DatabaseHelper.TABLE_NAME, selectionArgs: null);
    cur.moveToLast();
    yData[0]=Integer.parseInt(cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_BALANCE)));
    yData[1]=Integer.parseInt(cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_INCOME)));
    yData[2]=Integer.parseInt(cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_SAVING)));
    yData[3]=Integer.parseInt(cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_EXPENSE)));
    dirArray.add(zData[0]+" ----> "+cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_BALANCE))+
            " BAHT\nModified: "+cur.getString(cur.getColumnIndex(DatabaseHelper.COL_DATE)));
    dirArray.add(zData[1]+" ----> "+cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_INCOME))+
            " BAHT\nModified: "+cur.getString(cur.getColumnIndex(DatabaseHelper.COL_DATE)));
    dirArray.add(zData[2]+" ----> "+cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_SAVING))+
            " BAHT\nModified: "+cur.getString(cur.getColumnIndex(DatabaseHelper.COL_DATE)));
    dirArray.add(zData[3]+" ----> "+cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_EXPENSE))+
            " BAHT\nModified: "+cur.getString(cur.getColumnIndex(DatabaseHelper.COL_DATE)));
    ArrayAdapter<String> adapterDir = new ArrayAdapter<~>( context: this, android.R.layout.simple_list_item_1, dirArray);
    lv.setAdapter(adapterDir);

}
```

```
public void setupPieChart(){
    PieChart chart = findViewById(R.id.idPieChart);
    Log.d(TAG,  msg: "Creating chart");
    chart.setRotationEnabled(true);
    chart.setHoleRadius(50f);
    chart.setHoleColor(Color.parseColor( colorString: "#ffad6a"));
    chart.setCenterTextColor(Color.parseColor( colorString: "#4d4d4d"));
    chart.setTransparentCircleAlpha(100);
    chart.setCenterText("Summary of Usage");
    chart.setCenterTextSize(18);
    chart.setDrawEntryLabels(true);
    chart.setEntryLabelTextSize(20);
    chart.setUsePercentValues(false);
    Log.d(TAG,  msg: "Income = "+yData[1]);
    Log.d(TAG,  msg: "Saving = "+yData[2]);
    Log.d(TAG,  msg: "Expense = "+yData[3]);
    ArrayList<Integer> colors = new ArrayList<>();
    List <PieEntry> pieEntries = new ArrayList<~>();
    if(yData[1]>0){
        pieEntries.add(new PieEntry(yData[1],xData[0]));
        colors.add(ContextCompat.getColor( context: this, R.color.GreenIncome));}
    if(yData[2]>0){
        pieEntries.add(new PieEntry(yData[2],xData[1]));
        colors.add(ContextCompat.getColor( context: this, R.color.BlueSaving));
    }
    if(yData[3]>0){
        pieEntries.add(new PieEntry(yData[3],xData[2]));
        colors.add(ContextCompat.getColor( context: this, R.color.RedExpense));
    }
    PieDataSet dataSet = new PieDataSet(pieEntries,  label: " ");
    dataSet.setValueTextSize(20);
    dataSet.setValueTextColor(WHITE);
    PieData data = new PieData(dataSet);
    dataSet.setColors(colors);
    dataSet.setSliceSpace(2);
    chart.setData(data);
    chart.invalidate();
}
```

4.All Button Listeners

```java
public void addIncome(View v){
    bincome = true;
    bexpense = false;
    bsaving = false;
    text = "You choose Income.";
    Context context = getApplicationContext();
    int duration = Toast.LENGTH_SHORT;
    Toast toast = Toast.makeText(context, text, duration);
    toast.show();
}
```

```java
public void addSaving(View v){
    bsaving = true;
    bexpense = false;
    bincome = false;
    text = "You choose Saving.";
    Context context = getApplicationContext();
    int duration = Toast.LENGTH_SHORT;
    Toast toast = Toast.makeText(context, text, duration);
    toast.show();
}
```

```java
public void addExpense(View v){
    bexpense = true;
    bincome = false;
    bsaving = false;
    text = "You choose Expense.";
    Context context = getApplicationContext();
    int duration = Toast.LENGTH_SHORT;
    Toast toast = Toast.makeText(context, text, duration);
    toast.show();
}
```

```java
public void addNewTransaction(View v){
    Log.d(TAG, msg: "Adding new transaction");
    setContentView(R.layout.new_transaction);


}
```

```java
public void checkTransaction(View v){
    Log.d(TAG, msg: "start to check transaction");
    setContentView(R.layout.check_transaction);
    ListView lv = findViewById(R.id.transactionListView);
    ArrayList<String> dirArray = new ArrayList<>();

    cur = db.rawQuery( sql: "SELECT * FROM "+ DatabaseHelper.TABLE_NAME, selectionArgs: null);
    cur.moveToFirst();
    cur.moveToNext();
    String date;
    String amount;
    String type;
    String desc;
    while (!cur.isAfterLast()){
        date =cur.getString(cur.getColumnIndex(DatabaseHelper.COL_DATE));
        amount =cur.getString(cur.getColumnIndex(DatabaseHelper.COL_AMOUNT));
        type =cur.getString(cur.getColumnIndex(DatabaseHelper.COL_TYPE));
        desc =cur.getString(cur.getColumnIndex(DatabaseHelper.COL_DESC));
        dirArray.add(desc + " -> "+type+"\nDate: "+date+"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"+amount+".- BAHT");
        cur.moveToNext();
    }

    ArrayAdapter<String> adapterDir = new ArrayAdapter<~>( context: this, android.R.layout.simple_list_item_1, dirArray);
    lv.setAdapter(adapterDir);

}
```

```java
public void goToMain(View v){
    setContentView(R.layout.activity_main);
    setupList();
    setupPieChart();
}
```

```java
@SuppressLint("SimpleDateFormat")
public void AfterPressRegisterButton(View v) {
    EditText bal = findViewById(R.id.editText2);
    prefs.edit().putBoolean("firstrun", false).apply();
    nickName = findViewById(R.id.nickName);
    StrnName =nickName.getText().toString();
    db.execSQL(" INSERT INTO " + DatabaseHelper.TABLE_NAME +
            "("+ DatabaseHelper.NAME +")" + " VALUES ('"+StrnName+"')");

    balance = Integer.parseInt( bal.getText().toString());
    Log.d(TAG, msg: " Seting up first input to database");
    dbHelp.setDB( date: "\t\t\t\t\t\t\t\t\t\t\t", type: " ", balance,
            desc: "First input Money", balance, saving: 0, expense: 0,balance);
    Log.i( tag: "Executed first SQL", TAG);
    yData[0] = balance;
    setContentView(R.layout.activity_main);
    setupList();
    setupPieChart();

}
```

```java
public void credits(View v){
    setContentView(R.layout.credit_activity);
}
```

5. All methods override from AppCompatActivity

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    Log.d(TAG, msg: "Running onCreate in MainActivity");
    dbHelp = new DatabaseHelper( context: this);
    db = dbHelp.getWritableDatabase();
    prefs = getSharedPreferences( name: "com.example.itar.moneykeeper2", MODE_PRIVATE);
    setContentView(R.layout.activity_main);
    isPressed = false;
    checkFirstTime();

    //yData[0]=dbHelp.getIncome();
}
```

```
@Override
protected void onRestart() {
    super.onRestart();
    Log.d(TAG, msg: "Running onPause in MainActivity");

}
```

```
@Override
protected void onPause() {
    super.onPause();
    Log.d(TAG, msg: "Running onPause in MainActivity");
}
```

```
@Override
protected void onDestroy() {
    super.onDestroy();
    Log.d(TAG, msg: "Running onDestroy in MainActivity");
}
```

```
@Override
protected void onStop() {
    super.onStop();
    Log.d(TAG, msg: "Running onStop in MainActivity");
}
```

```
@Override
protected void onResume(){
    super.onResume();
    Log.d(TAG, msg: "Running onResume in MainActivity");

}
```

6.Methods Create is a button Listener that store data from editText to database

```
public void create(View v){
    transactionListView = (ListView)findViewById(R.id.transactionListView);
    create = (Button)findViewById(R.id.create);
    calendar = Calendar.getInstance();
    simpleDateFormat = new SimpleDateFormat( pattern: "dd-MM-YYYY");
    Date = simpleDateFormat.format(calendar.getTime());
    EditText description = findViewById(R.id.editText3);
    EditText amount = findViewById(R.id.editText5);
    String date = simpleDateFormat.format(calendar.getTime());
    String des = description.getText().toString();
    yData[0]=Integer.parseInt(cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_BALANCE)));
    yData[1]=Integer.parseInt(cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_INCOME)));
    yData[2]=Integer.parseInt(cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_SAVING)));
    yData[3]=Integer.parseInt(cur.getString(cur.getColumnIndex(DatabaseHelper.TOTAL_EXPENSE)));
    if(doOneTime){
        ttBalance += yData[0];
        ttIncome += yData[1];
        ttSaving += yData[2];
        ttExpense += yData[3];
        doOneTime = false;
    }
    int Amount = Integer.parseInt( amount.getText().toString());
    String transactionType;
    if(bincome){
        transactionType = "Income";
        ttIncome+=Amount;
        isPressed = true;
    } else
        if(bsaving){
            transactionType = "Saving";
            ttSaving+=Amount;
            isPressed = true;
    } else{
            transactionType = "Expense";
            ttExpense+=Amount;
            isPressed = true;
    }
    ttBalance = ttIncome-ttExpense;
    if(!isPressed){
        create(v);
    }
    db.execSQL("INSERT INTO " + DatabaseHelper.TABLE_NAME + "("+ DatabaseHelper.COL_DATE +"," +
            ""+ DatabaseHelper.COL_DESC +","+ DatabaseHelper.COL_AMOUNT +","+dbHelp.COL_TYPE+"," +
            ""+ DatabaseHelper.TOTAL_SAVING +","+ DatabaseHelper.TOTAL_INCOME +"," +
            ""+ DatabaseHelper.TOTAL_EXPENSE +","+ DatabaseHelper.TOTAL_BALANCE +")"
            + "VALUES('"+date+"','"+des+"','"+Amount+"','"+transactionType+"'," +
            "'"+ttSaving+"','"+ttIncome+"','"+ttExpense+"','"+ttBalance+"')");
    setContentView(R.layout.activity_main);
    setupList();
    setupPieChart();
    Context context = getApplicationContext();
    text = "Transaction Added";
    int duration = Toast.LENGTH_SHORT;
    Toast toast = Toast.makeText(context, text, duration);
    toast.show();
}
```

Gradle

```
apply plugin: 'com.android.application'

android {

    compileSdkVersion 28
    defaultConfig {
        applicationId "com.example.itar.moneykeeper2"
        minSdkVersion 26
        targetSdkVersion 28
        versionCode 1
        versionName "1.0"
        testInstrumentationRunner "android.support.test.runner.AndroidJUnitRunner"
    }
    buildTypes {
        release {
            minifyEnabled false
        proguardFiles getDefaultProguardFile('proguard-android.txt'), 'proguard-rules.pro'
    }

        packagingOptions {
            exclude 'META-INF/proguard/androidx-annotations.pro'
        }
    }
}
dependencies {
    implementation 'com.android.support:appcompat-v7:28.0.0'
    implementation fileTree(dir: 'libs', include: ['*.jar'])
    implementation 'com.android.support.constraint:constraint-layout:1.1.3'
    implementation 'com.github.PhilJay:MPAndroidChart:v3.1.0-alpha'

    testImplementation 'junit:junit:4.12'
    androidTestImplementation 'com.android.support.test:runner:1.0.2'
    androidTestImplementation 'com.android.support.test.espresso:espresso-core:3.0.2'
    implementation 'android.arch.work:work-runtime:1.0.0-alpha10'

}
```

All XML Files

1) First Time

```xml
<?xml version="1.0" encoding="utf-8"?>
<HorizontalScrollView
    android:id="@+id/horizontalScrollView1"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#ffad6a"
    xmlns:android="http://schemas.android.com/apk/res/android">
    <LinearLayout
        android:id="@+id/shapeLayout"
        android:layout_width="wrap_content"
        android:layout_height="match_parent">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="140dp"
            android:layout_marginTop="200dp"
            android:text="Hello"
            android:textColor="#4d4d4d"
            android:textSize="50sp" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="160dp"
            android:layout_marginTop="200dp"
            android:text="Your first use right?"
            android:textColor="#4d4d4d"
            android:textSize="50sp" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="160dp"
            android:layout_marginTop="200dp"
            android:text="Welcome to MoneyKeeper!"
            android:textColor="#4d4d4d"
            android:textSize="50sp" />
        <TextView
            android:id="@+id/next"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="350dp"
            android:layout_marginEnd="50dp"
            android:text="Next"
            android:onClick="openRegisterInfo"
            android:textColor="#4d4d4d"
            android:textSize="30sp" />
    </LinearLayout>
</HorizontalScrollView>
```

2) Main

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:background="#ffad6a"
    tools:context="com.example.itar.moneykeeper2.MainActivity">


    <com.github.mikephil.charting.charts.PieChart
        android:id="@+id/idPieChart"
        android:layout_width="match_parent"
        android:layout_height="372dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="0dp"
        android:layout_marginTop="65dp" />

    <ImageView
        android:id="@+id/bar"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="0dp"
        android:background="@mipmap/colorf1781b" />

    <TextView
        android:id="@+id/Title"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"
        android:text="Hello, Tar"
        android:textSize="30sp"
        android:textColor="#4d4d4d"/>
```

```
<ListView
    android:id="@+id/listView"
    android:layout_width="match_parent"
    android:layout_height="209dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentBottom="true"
    android:layout_marginStart="0dp"
    android:layout_marginBottom="51dp"
    android:background="#f1781b"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.0" />


<ImageButton
    android:layout_width="match_parent"
    android:layout_height="51dp"
    android:layout_alignParentEnd="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="0dp"
    android:layout_marginBottom="0dp"
    android:background="#bbbbbb"
    android:onClick="checkTransaction"
    android:text="Expense:"
    android:textColor="#4d4d4d"
    android:textSize="30sp" />

<ImageButton
    android:id="@+id/imageButton"
    android:layout_width="38dp"
    android:layout_height="39dp"
    android:layout_alignBottom="@+id/Title"
    android:layout_alignParentTop="true"
    android:layout_alignParentEnd="true"
    android:layout_marginTop="15dp"
    android:onClick="addNewTransaction"
    android:layout_marginEnd="15dp"
    android:layout_marginBottom="2dp"
    android:background="@mipmap/add" />
```

```
    <ImageView
        android:id="@+id/imageView7"
        android:layout_width="match_parent"
        android:layout_height="10dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="60dp"
        android:layout_marginBottom="239dp"
        android:background="@mipmap/color4d4d4d" />

    <TextView
        android:id="@+id/Check"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginTop="615dp"
        android:layout_marginEnd="76dp"
        android:layout_marginBottom="0dp"
        android:text="Check Transaction"
        android:textColor="#4d4d4d"
        android:textSize="30sp" />

    <ImageView
        android:id="@+id/imageButton4"
        android:layout_width="50dp"
        android:layout_height="50dp"
        android:layout_marginTop="10dp"
        android:layout_marginStart="10dp"
        android:background="@mipmap/quote"
        android:onClick="credits" />

</RelativeLayout>
```

3) Register

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:id="@+id/RegisterView"
    android:gravity="center_horizontal"
    android:background="#ffad6a">

        <ImageView
            android:id="@+id/imageView3"
            android:layout_width="273dp"
            android:layout_height="384dp"
            android:layout_marginEnd="8dp"
            android:layout_marginStart="8dp"
            android:background="@mipmap/colorf1781b"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent" />

        <TextView
            android:id="@+id/textView"
            android:layout_width="192dp"
            android:layout_height="wrap_content"
            android:layout_marginEnd="96dp"
            android:layout_marginTop="28dp"
            android:text="Register"
            android:textColor="#4d4d4d"
            android:textSize="50sp"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintTop_toTopOf="parent" />

        <EditText
            android:id="@+id/nickName"
            android:layout_width="192dp"
            android:layout_height="wrap_content"
            android:layout_marginStart="96dp"
            android:layout_marginTop="12dp"
            android:hint="NickName"
            android:textColor="#4d4d4d"
            android:textSize="30sp"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
        <EditText
            android:id="@+id/editText2"
            android:layout_width="192dp"
            android:layout_height="wrap_content"
            android:layout_marginTop="64dp"
            android:hint="Balance"
            android:textColor="#4d4d4d"
            android:textSize="30sp"
            app:layout_constraintStart_toStartOf="@+id/nickName"
            app:layout_constraintTop_toBottomOf="@+id/nickName" />

        <TextView
            android:id="@+id/go"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="52dp"
            android:layout_marginTop="120dp"
            android:onClick="AfterPressRegisterButton"
            android:text="Next"
            android:textColor="#4d4d4d"
            android:textSize="40sp"
            app:layout_constraintStart_toStartOf="@+id/editText2"
            app:layout_constraintTop_toBottomOf="@+id/editText2" />

</android.support.constraint.ConstraintLayout>
```

4) Check Transaction

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#ffad6a">

    <ListView
        android:id="@+id/transactionListView"
        android:layout_width="match_parent"
        android:layout_height="447dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="1.0" />

    <TextView
        android:id="@+id/CT"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginTop="44dp"
        android:layout_marginEnd="8dp"
        android:text="CHECKTRANSACTION"
        android:textColor="#4d4d4d"
        android:textSize="25sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.504"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <ImageButton
        android:id="@+id/imageButton2"
        android:layout_width="50dp"
        android:layout_height="55dp"
        android:layout_marginStart="4dp"
        android:layout_marginTop="32dp"
        android:onClick="goToMain"
        android:background="@mipmap/backbutt"
        android:rotation="180"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>
```

5) Credits

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#ffad6a">

    <TextView
        android:id="@+id/textView5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginTop="8dp"
        android:layout_marginEnd="8dp"
        android:text="Noppawee Deejungwiphat 5904062660191 CSB"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView4" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="108dp"
        android:layout_marginTop="44dp"
        android:text="Thank you"
        android:textColor="#4d4d4d"
        android:textSize="35sp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="36dp"
        android:layout_marginTop="36dp"
        android:text="Project By"
        android:textSize="20sp"
        app:layout_constraintStart_toStartOf="@+id/textView2"
        app:layout_constraintTop_toBottomOf="@+id/textView2" />
```

```
<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginTop="28dp"
    android:layout_marginEnd="8dp"
    android:text="Pannawat Niyomrat 5904062663123 CSB"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.503"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView3" />
<TextView
    android:id="@+id/textView6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginTop="40dp"
    android:layout_marginEnd="8dp"
    android:text="Presents"
    android:textSize="20sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.501"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView5" />
<TextView
    android:id="@+id/textView7"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginTop="96dp"
    android:layout_marginEnd="8dp"
    android:text="[illegible]"
    android:textSize="20sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView5" />
<TextView
    android:id="@+id/textView8"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginTop="156dp"
    android:layout_marginEnd="8dp"
    android:text="Mobile Application Developping"
    android:textSize="20sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.505"
    app:layout_constraintStart_toStartOf="parent"
```

```
    <TextView
        android:id="@+id/textView8"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginTop="156dp"
        android:layout_marginEnd="8dp"
        android:text="Mobile Application Developping"
        android:textSize="20sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.505"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView5" />
    <TextView
        android:id="@+id/textView9"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginTop="188dp"
        android:layout_marginEnd="8dp"
        android:text="1/2561"
        android:textSize="20sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.505"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView5" />
    <ImageButton
        android:id="@+id/imageButton3"
        android:layout_width="50dp"
        android:layout_height="55dp"
        android:layout_marginStart="4dp"
        android:layout_marginTop="32dp"
        android:onClick="goToMain"
        android:background="@mipmap/backbutt"
        android:rotation="180"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>
```

6) New Transaction

```
<android.support.constraint.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#ffad6a">

    <Button
        android:id="@+id/income"
        android:layout_width="130dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="68dp"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:onClick="addIncome"
        android:text="Income"
        app:layout_constraintBottom_toTopOf="@+id/expense"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="1.0" />

    <Button
        android:id="@+id/expense"
        android:layout_width="130dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="116dp"
        android:layout_marginEnd="76dp"
        android:onClick="addExpense"
        android:text="Expense"
        app:layout_constraintEnd_toEndOf="@+id/saving"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/saving"
        android:layout_width="130dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="16dp"
        android:layout_marginTop="60dp"
        android:onClick="addSaving"
        android:text="Saving"
        app:layout_constraintStart_toEndOf="@+id/income"
        app:layout_constraintTop_toTopOf="parent" />
```

```
<View
    android:id="@+id/view"
    android:layout_width="278dp"
    android:layout_height="220dp"
    android:layout_marginEnd="8dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="188dp"
    android:background="@mipmap/colorf1781b"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.666"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/create"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="84dp"
    android:layout_marginBottom="52dp"
    android:onClick="create"
    android:text="Create"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent" />

<EditText
    android:id="@+id/editText3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="100dp"
    android:layout_marginTop="244dp"
    android:ems="10"
    android:hint="Description"
    android:inputType="textEmailAddress"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/editText5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="100dp"
    android:ems="10"
    android:hint="Amount"
    android:inputType="textEmailAddress"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/editText3" />
```

```
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="68dp"
        android:onClick="goToMain"
        android:text="Cancel"
        app:layout_constraintStart_toEndOf="@+id/create"
        app:layout_constraintTop_toTopOf="@+id/create" />

</android.support.constraint.ConstraintLayout>
```

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