



SOFTWARE APPLICATION FOR MOBILE DEVICES

OPEN ENDED LAB EXAM



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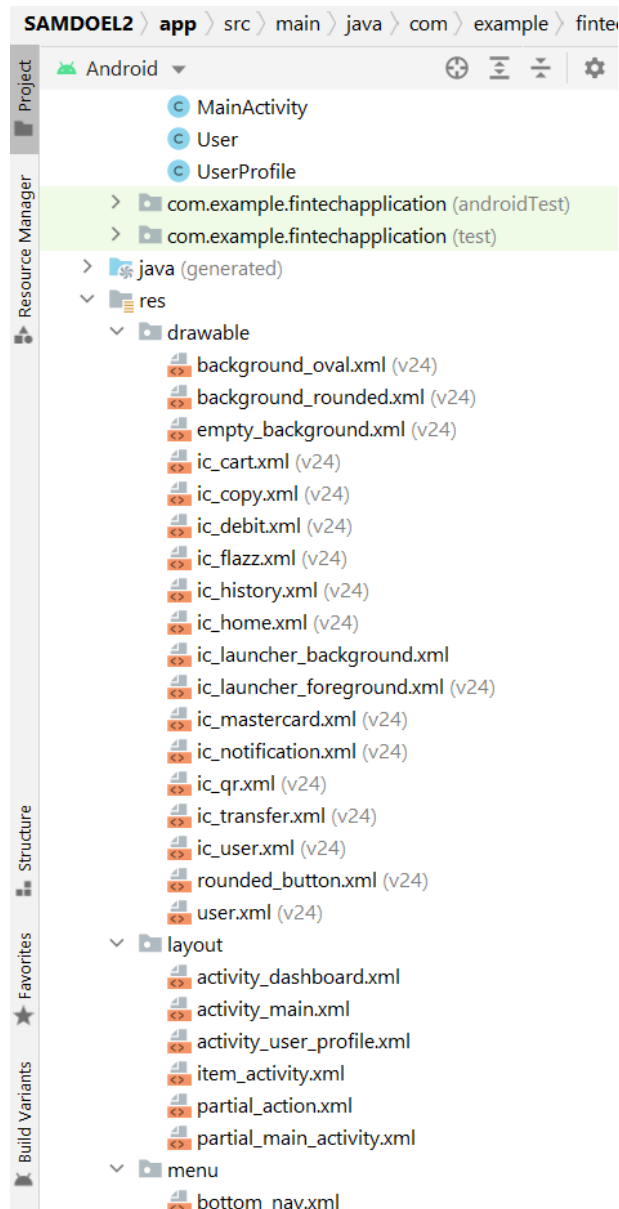
TASK 1:

GrabIt LLC Inc wants to create mobile banking Fintech Application You as a Mobile application developer need to fulfill the following requirements given below.

Requirements of App

- **SignIn Area** - User can Authenticate from this page and this authentication information will be used over the application and on executing processes. - When login OTP must be verified sent from the same number. - After Successful Verification user will be redirected to Dashboard.
- **Dashboard.** - Dashboard Contains User Wallet Amount Also Add Amount Button - Transaction History with Users Profile and Credit/Debit Info with Total Balance in the Last. - Fund Transfer Button to Transfer Amount to Any Bank and Fintech Application in the world with the list of banks and Apps containing images and country codes. - A portion in dashboard Contains Partner Ads section in which user can play videos and earn rewards either Credits/Money the reward type can be set in profile area via prompt in Application asking user about Which Type of Reward user may want (Credits or Money)
- **User Profile.** - User Data (Username, Email, Phone Number, Security Answer, Subscription) - Reward Type - Add Amount Option with a prompt of selection of bank which user want to Add Money from.
- **Notification/Message** - User can get notification when Amount Received whether app is closed or not.

SOLUTION:



XML files

- **Activity_main:**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
    tools:context=".MainActivity">
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Sign In"
    android:textSize="28sp"
    android:layout_marginTop="50dp"
    android:padding="30dp"
    android:gravity="center"
    android:textStyle="bold"
/>
```

```
<EditText
    android:id="@+id/et_name"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/enter_name"
    android:textColor="@color/textColor"
    android:layout_margin="20dp"/>
```

```
<EditText
    android:id="@+id/et_phone_number"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/phone_number"
    android:textColor="@color/textColor"
    android:layout_margin="20dp"/>
```

```
<EditText
    android:id="@+id/et_otp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/enter_otp"
    android:clickable="false"
    android:textColor="@color/textColor"
    android:layout_margin="20dp"/>
```

```
<Button
    android:id="@+id/btn_generate_otp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/generate_otp"
    android:background="@color/colorAccent"
```

```

        android:textColor="@color/textColor"
        android:textSize="18dp"
        android:layout_margin="20dp"/>
<Button
    android:id="@+id/btn_sign_in"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/verify_sign_in"
    android:background="@color/colorAccent"
    android:textColor="@color/textColor"
    android:textSize="18dp"
    android:layout_margin="20dp"/>
</LinearLayout>

```

- **Activity_dashboard:**

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
    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"
    tools:context=".Dashboard">

    <androidx.core.widget.NestedScrollView
        android:id="@+id/nestedScrollView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:layout_anchor="@+id/nestedScrollView"
        app:layout_anchorGravity="center">

        <include layout="@layout/partial_main_activity" />

    </androidx.core.widget.NestedScrollView>

    <com.google.android.material.bottomappbar.BottomAppBar
        android:id="@+id/bottomAppBar"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="bottom"
        app:fabCradleMargin="8dp"

```

```

        app:fabCradleRoundedCornerRadius="16dp">

        <com.google.android.material.bottomnavigation.BottomNavigationView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:background="@drawable/empty_background"
            android:layout_marginEnd="16dp"
            app:menu="@menu/bottom_nav" />
        </com.google.android.material.bottomappbar.BottomAppBar>

        <com.google.android.material.floatingactionbutton.FloatingActionButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:src="@drawable/ic_qr"
            app:layout_anchor="@id/bottomAppBar"
            app:fabCustomSize="72dp"
            app:maxImageSize="34dp" />

    </androidx.coordinatorlayout.widget.CoordinatorLayout>

```

- **Partial_main_activity.xml:**

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.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"
    xmlns:tools="http://schemas.android.com/tools">

    <androidx.constraintlayout.widget.Guideline
        android:id="@+id/guideline"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        app:layout_constraintGuide_begin="32dp" />

    <androidx.constraintlayout.widget.Guideline
        android:id="@+id/guideline2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        app:layout_constraintGuide_end="32dp" />

```

```
<TextView
    android:id="@+id/tvEmail"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="32dp"
    android:text=""
    app:layout_constraintStart_toStartOf="@+id/guideline"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="32dp"
    android:text="Your Balance"
    app:layout_constraintEnd_toStartOf="@+id/guideline2"
    app:layout_constraintStart_toStartOf="@+id/guideline"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
    android:id="@+id/tvbalance"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text=""
    android:textSize="28sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toStartOf="@+id/guideline2"
    app:layout_constraintStart_toStartOf="@+id/guideline"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<Button
    android:id="@+id/btn_sign_out"
    android:layout_centerInParent="true"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/sign_out"
    android:background="@drawable/rounded_button"
    android:textColor="@color/textColor"
    app:layout_constraintEnd_toEndOf="@+id/guideline2"
    app:layout_constraintTop_toTopOf="@+id/textView"
    />
```

```
<View
    android:id="@+id/view"
```

```
android:layout_width="0dp"
android:layout_height="0dp"
android:layout_marginTop="24dp"
android:background="@drawable/background_rounded"
app:layout_constraintDimensionRatio="4:2"
app:layout_constraintEnd_toStartOf="@+id/guideline2"
app:layout_constraintStart_toStartOf="@+id/guideline"
app:layout_constraintTop_toBottomOf="@+id/tvbalance" />
```

```
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="16dp"
    android:text="Account Number"
    android:textColor="@color/white"
    app:layout_constraintEnd_toStartOf="@+id/guideline2"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="@+id/guideline"
    app:layout_constraintTop_toTopOf="@+id/view" />
```

```
<TextView
    android:id="@+id/tvacc"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginTop="8dp"
    android:letterSpacing=".3"
    android:text=""
    android:textColor="@color/white"
    android:textSize="24sp"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="@+id/guideline"
    app:layout_constraintTop_toBottomOf="@+id/textView3" />
```

```
<Button
    style="@style/Widget.MaterialComponents.Button.TextButton"
    android:layout_width="wrap_content"
    android:layout_height="0dp"
    android:layout_marginStart="8dp"
    android:layout_marginEnd="8dp"
```



```
android:padding="0dp"
android:text="Copy"
android:textAlignment="textStart"
android:textAllCaps="false"
android:textColor="@color/white"
app:icon="@drawable/ic_copy"
app:iconPadding="4dp"
app:iconSize="16dp"
app:iconTint="@color/white"
app:layout_constraintBottom_toBottomOf="@+id/tvacc"
app:layout_constraintEnd_toStartOf="@+id/guideline2"
app:layout_constraintHorizontal_bias="0.0"
app:layout_constraintEnd_toEndOf="@+id/view"
app:layout_constraintTop_toTopOf="@+id/tvacc" />
```

```
<TextView
    android:id="@+id/textView6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="4dp"
    android:text="Name"
    android:textColor="@color/white"
    app:layout_constraintBottom_toTopOf="@+id/tv_name"
    app:layout_constraintStart_toStartOf="@+id/view"
    app:layout_constraintTop_toBottomOf="@+id/tvacc"
    app:layout_constraintVertical_bias="1.0" />
```

```
<TextView
    android:id="@+id/tv_name"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginBottom="8dp"
    android:text=""
    android:textColor="@color/white"
    android:textSize="16sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="@+id/view"
    app:layout_constraintStart_toStartOf="@+id/guideline" />
```

```
<TextView
```

```
android:id="@+id/textView7"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="16dp"
android:text="Phone No."
android:textColor="@color/white"
app:layout_constraintBottom_toBottomOf="@+id/textView6"
app:layout_constraintEnd_toStartOf="@+id/imageView"
app:layout_constraintStart_toEndOf="@+id/tv_name"
app:layout_constraintTop_toTopOf="@+id/textView6" />
```

<TextView

```
android:id="@+id/tv_phone_number"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="8dp"
android:text=""
android:textColor="@color/white"
android:textSize="16sp"
android:textStyle="bold"
app:layout_constraintBottom_toBottomOf="@+id/view"
app:layout_constraintStart_toStartOf="@+id/textView7"
app:layout_constraintTop_toBottomOf="@+id/textView7"
app:layout_constraintVertical_bias="1.0" />
```

<ImageView

```
android:id="@+id/imageView"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:src="@drawable/ic_mastercard"
app:layout_constraintBottom_toBottomOf="@+id/view"
app:layout_constraintEnd_toStartOf="@+id/guideline2" />
```

<TextView

```
android:id="@+id/textView9"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="16dp"
android:text="Let's Action"
android:textSize="20sp"
android:textStyle="bold"
```

```
app:layout_constraintStart_toStartOf="@+id/guideline"  
app:layout_constraintTop_toBottomOf="@+id/view" />
```

```
<HorizontalScrollView  
    android:id="@+id/horizontalScrollView"  
    android:layout_width="0dp"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="16dp"  
    android:clipToPadding="false"  
    android:paddingStart="32dp"  
    android:paddingEnd="32dp"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toBottomOf="@+id/textView9">
```

```
    <include layout="@layout/partial_action" />  
</HorizontalScrollView>
```

```
<TextView  
    android:id="@+id/textView10"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="16dp"  
    android:text="Last Activity"  
    android:textSize="20sp"  
    android:textStyle="bold"  
    app:layout_constraintStart_toStartOf="@+id/guideline"  
    app:layout_constraintTop_toBottomOf="@+id/horizontalScrollView" />
```

```
<com.google.android.material.card.MaterialCardView  
    android:layout_width="0dp"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="16dp"  
    app:cardElevation="4dp"  
    app:layout_constraintEnd_toStartOf="@+id/guideline2"  
    app:layout_constraintStart_toStartOf="@+id/guideline"  
    app:layout_constraintTop_toBottomOf="@+id/textView10">
```

```
<androidx.recyclerview.widget.RecyclerView  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_margin="16dp"  
    tools:listitem="@layout/item_activity" />
```

```
        </com.google.android.material.card.MaterialCardView>
    </androidx.constraintlayout.widget.ConstraintLayout>
```

- **Activity_user_profile.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<ScrollView 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="wrap_content">
    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <androidx.cardview.widget.CardView
            android:id="@+id/cycle_add"
            android:layout_width="120dp"
            android:layout_height="100dp"
            android:layout_row="0"
            android:layout_rowWeight="1"
            android:layout_column="0"
            android:layout_columnWeight="1"
            android:layout_gravity="center_horizontal|center_vertical"
            android:layout_centerHorizontal="true"
            android:layout_marginTop="20dp"
            android:padding="20dp"
            app:cardCornerRadius="8dp"
            app:cardElevation="8dp">

            <ImageView
                android:layout_width="80dp"
                android:layout_height="80dp"
                android:layout_gravity="center_horizontal|center_vertical"
                android:src="@drawable/user" />
        </androidx.cardview.widget.CardView>

        <LinearLayout
            android:id="@+id/user_name"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginTop="30dp"
            android:layout_marginLeft="15dp"
            android:layout_below="@id/cycle_add">
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textSize="15dp"
    android:textStyle="bold"
    android:text="Name :."
    android:layout_marginRight="20dp"></TextView>
<TextView
    android:id="@+id/username"
    android:layout_width="wrap_content"
    android:layout_height="30dp"
    android:textSize="15dp"
    android:textColor="#000"
    android:textStyle="bold"></TextView>
</LinearLayout>
```

```
<LinearLayout
    android:id="@+id/mobile_no"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="10dp"
    android:layout_marginLeft="15dp"
    android:layout_below="@id/user_name">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="15dp"
        android:textStyle="bold"
        android:text="Mobile Number :."
        android:layout_marginRight="20dp"></TextView>
    <TextView
        android:id="@+id/userphonenumber"
        android:layout_width="wrap_content"
        android:layout_height="30dp"
        android:textSize="15dp"
        android:textStyle="bold"
        android:textColor="#000"></TextView>
</LinearLayout>
```

```
<LinearLayout
    android:id="@+id/email_id"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

```
        android:layout_marginTop="10dp"
        android:layout_marginLeft="15dp"
        android:layout_below="@id/mobile_no">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="15dp"
        android:textStyle="bold"
        android:text="Email Id :"
        android:layout_marginRight="20dp"></TextView>
    <TextView
        android:id="@+id/email"
        android:layout_width="wrap_content"
        android:layout_height="30dp"
        android:textSize="15dp"
        android:textStyle="bold"
        android:textColor="#000"></TextView>
</LinearLayout>

<LinearLayout
    android:id="@+id/bank_account_no"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="10dp"
    android:layout_marginLeft="15dp"
    android:layout_below="@id/email_id">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="15dp"
        android:textStyle="bold"
        android:text="Account No :"
        android:layout_marginRight="20dp"></TextView>
    <TextView
        android:id="@+id/account_no"
        android:layout_width="wrap_content"
        android:layout_height="30dp"
        android:textSize="15dp"
        android:textStyle="bold"
        android:textColor="#000"></TextView>
</LinearLayout>
```

```
<LinearLayout
    android:id="@+id/current_balance"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="10dp"
    android:layout_marginLeft="15dp"
    android:layout_below="@id/bank_account_no">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="15dp"
        android:textStyle="bold"
        android:text="Current balance : "
        android:layout_marginRight="20dp"></TextView>
```

```
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentRight="true"
    android:layout_centerVertical="true"
    android:layout_marginRight="10dp">
```

```
    <TextView
        android:id="@+id/amt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="15sp"
        android:text=""
        android:textStyle="bold"
        android:textColor="#000"></TextView>
```

```
</LinearLayout>
</LinearLayout>
```

```
<Button
    android:id="@+id/add_amt"
    android:layout_width="wrap_content"
    android:layout_height="40dp"
    android:layout_below="@id/current_balance"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="50dp"
    android:layout_marginBottom="50dp"
```

```

        android:background="@drawable/rounded_button"
        android:paddingVertical="5dp"
        android:paddingHorizontal="10dp"
        android:text="Add Amount"
        android:textAllCaps="false"
        android:textColor="#fff"
        android:textSize="15dp"
        android:textStyle="bold"></Button>
    </RelativeLayout>
</ScrollView>

```

- **Item_activity.xml**

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.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_marginBottom="8dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">

    <androidx.cardview.widget.CardView
        android:id="@+id/cardView"
        android:layout_width="54dp"
        android:layout_height="54dp"
        android:layout_marginTop="8dp"
        app:cardCornerRadius="27dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

        <ImageView
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:scaleType="center"
            tools:src="@tools:sample/backgrounds/scenic" />
    </androidx.cardview.widget.CardView>

    <TextView
        android:id="@+id/textView11"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"

```



```

        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:textSize="16sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toTopOf="@+id/textView12"
        app:layout_constraintStart_toEndOf="@+id/cardView"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_chainStyle="packed"
        tools:text="@tools:sample/full_names" />

<TextView
    android:id="@+id/textView12"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginBottom="8dp"
    android:text="BCA - 34298493583"
    android:textColor="@android:color/darker_gray"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toEndOf="@+id/cardView"
    app:layout_constraintTop_toBottomOf="@+id/textView11" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:text="+ $154.50"
    android:textColor="#6FCF97"
    android:textSize="18sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="@+id/textView11" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

- **Partial_action.xml**

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.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="wrap_content">

```

```
<ImageButton
    android:id="@+id/imageButton"
    android:layout_width="54dp"
    android:layout_height="54dp"
    android:layout_marginStart="8dp"
    android:background="@drawable/background_oval"
    android:src="@drawable/ic_transfer"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="8dp"
    android:text="m-Transfer"
    app:layout_constraintEnd_toEndOf="@+id/imageButton"
    app:layout_constraintStart_toStartOf="@+id/imageButton"
    app:layout_constraintTop_toBottomOf="@+id/imageButton" />
```

```
<ImageButton
    android:id="@+id/imageButton2"
    android:layout_width="54dp"
    android:layout_height="54dp"
    android:layout_marginStart="64dp"
    android:background="@drawable/background_oval"
    android:src="@drawable/ic_debit"
    app:layout_constraintStart_toEndOf="@+id/imageButton"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="8dp"
    android:text="m-Payment"
    app:layout_constraintEnd_toEndOf="@+id/imageButton2"
    app:layout_constraintStart_toStartOf="@+id/imageButton2"
    app:layout_constraintTop_toBottomOf="@+id/imageButton2" />
```

```
<ImageButton
    android:id="@+id/imageButton3"
    android:layout_width="54dp"
    android:layout_height="54dp"
    android:layout_marginStart="64dp"
```

```

        android:background="@drawable/background_oval"
        android:src="@drawable/ic_cart"
        app:layout_constraintStart_toEndOf="@+id/imageButton2"
        app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="8dp"
    android:text="m-Commerce"
    app:layout_constraintEnd_toEndOf="@+id/imageButton3"
    app:layout_constraintStart_toStartOf="@+id/imageButton3"
    app:layout_constraintTop_toBottomOf="@+id/imageButton3" />

<ImageButton
    android:id="@+id/imageButton4"
    android:layout_width="54dp"
    android:layout_height="54dp"
    android:layout_marginStart="64dp"
    android:background="@drawable/background_oval"
    android:src="@drawable/ic_flazz"
    app:layout_constraintStart_toEndOf="@+id/imageButton3"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="8dp"
    android:text="Flazz"
    app:layout_constraintEnd_toEndOf="@+id/imageButton4"
    app:layout_constraintStart_toStartOf="@+id/imageButton4"
    app:layout_constraintTop_toBottomOf="@+id/imageButton4" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Java file

- **MainActivity.java**

```

package com.example.fintechapplication;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;

```

```
import android.os.Bundle;
```

```
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;
```

```
import com.google.android.gms.tasks.OnCompleteListener;  
import com.google.android.gms.tasks.Task;  
import com.google.firebase.FirebaseException;  
import com.google.firebase.auth.AuthResult;  
import com.google.firebase.auth.FirebaseAuth;  
import com.google.firebase.auth.PhoneAuthCredential;  
import com.google.firebase.auth.PhoneAuthOptions;  
import com.google.firebase.auth.PhoneAuthProvider;
```

```
import java.util.concurrent.TimeUnit;
```

```
import java.util.concurrent.TimeUnit;
```

```
public class MainActivity extends AppCompatActivity {  
    Button btnGenerateOTP, btnSignIn;  
    EditText etPhoneNumber, etOTP, etname;  
    String phoneNumber, otp;  
    private FirebaseAuth auth;  
    PhoneAuthProvider.OnVerificationStateChangedCallbacks mCallback;  
    private String verificationCode;  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        findViews();  
  
        StartFirebaseLogin();  
  
        btnGenerateOTP.setOnClickListener(new View.OnClickListener() {  
            @Override  
            public void onClick(View v) {  
                phoneNumber=etPhoneNumber.getText().toString();  
                PhoneAuthOptions options =  
                    PhoneAuthOptions.newBuilder(auth)  
                        .setPhoneNumber(phoneNumber)    // Phone number to verify
```

```

        .setTimeout(60L, TimeUnit.SECONDS) // Timeout and unit
        .setActivity(MainActivity.this)      // Activity (for callback binding)
        .setCallbacks(mCallback)           // OnVerificationStateChangedCallbacks
        .build();
    PhoneAuthProvider.verifyPhoneNumber(options);
}
});

btnSignIn.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        otp=etOTP.getText().toString();

        PhoneAuthCredential credential = PhoneAuthProvider.getCredential(verificationCode,
otp);

        SigninWithPhone(credential);
    }
});
}

private void SigninWithPhone(PhoneAuthCredential credential) {
    auth.signInWithCredential(credential)
        .addOnCompleteListener(new OnCompleteListener<AuthResult>() {
            @Override
            public void onComplete(@NonNull Task<AuthResult> task) {
                if (task.isSuccessful()) {
                    Intent intent=new Intent(MainActivity.this,Dashboard.class);
                    intent.putExtra("data", etname.getText().toString());
                    startActivity(intent);
                    finish();
                } else {
                    Toast.makeText(MainActivity.this,"Incorrect
OTP",Toast.LENGTH_SHORT).show();
                }
            }
        });
}

private void findViews() {
    btnGenerateOTP=findViewById(R.id.btn_generate_otp);
    btnSignIn=findViewById(R.id.btn_sign_in);
    etname=findViewById(R.id.et_name);
}

```

```

        etPhoneNumber=findViewById(R.id.et_phone_number);
        etOTP=findViewById(R.id.et_otp);
    }

    private void StartFirebaseLogin() {

        auth = FirebaseAuth.getInstance();
        mCallback = new PhoneAuthProvider.OnVerificationStateChangedCallbacks() {

            @Override
            public void onVerificationCompleted(PhoneAuthCredential phoneAuthCredential) {
                Toast.makeText(MainActivity.this,"verification
completed",Toast.LENGTH_SHORT).show();
            }

            @Override
            public void onVerificationFailed(FirebaseException e) {
                Toast.makeText(MainActivity.this,"verification
fialed",Toast.LENGTH_SHORT).show();
            }

            @Override
            public void onCodeSent(String s, PhoneAuthProvider.ForceResendingToken
forceResendingToken) {
                super.onCodeSent(s, forceResendingToken);
                verificationCode = s;
                Toast.makeText(MainActivity.this,"Code sent",Toast.LENGTH_SHORT).show();
            }
        };
    }
}

```

- **Dashboard.java**

```

package com.example.fintechapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;

import android.view.View;
import android.widget.Button;
import android.widget.TextView;

```

```

import android.widget.Toast;

import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.FirebaseUser;

public class Dashboard extends AppCompatActivity {

    TextView tvPhoneNumber,tvName,tvAcc,tvBal,tvEmail;
    Button btnSignOut;
    String[][] users = { { "Nisha","2347676856",
"$2345","+923182801481","nishaamin@gmail.com" },
        { "Amin","2344676856", "$2745","+923312605688","amin@gmail.com" },
        { "Zain", "9876543267","$6538","+923127271954","zainimalik@gmail.com" },
        { "Urwa", "6258763865","$1234", "+923334876453","urwa@gmail.com" } };

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_dashboard);
        findViews();
        setPhoneNumber();

        btnSignOut.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                FirebaseAuth.getInstance().signOut();
                startActivity(new Intent(Dashboard.this,MainActivity.class));
                finish();
            }
        });
    }

    private void findViews() {
        tvPhoneNumber=findViewById(R.id.tv_phone_number);
        tvName=findViewById(R.id.tv_name);
        btnSignOut=findViewById(R.id.btn_sign_out);
        tvAcc=findViewById(R.id.tvacc);
        tvBal=findViewById(R.id.tvbalance);
        tvEmail=findViewById(R.id.tvEmail);
    }

    private void setPhoneNumber(){

```

```

FirebaseUser user= FirebaseAuth.getInstance().getCurrentUser();
try {
    tvPhoneNumber.setText(user.getPhoneNumber());
    Intent i=getIntent();
    String sData=i.getStringExtra("data");
    tvName.setText(sData);

} catch (Exception e){
    Toast.makeText(this,"Phone number not found",Toast.LENGTH_SHORT).show();
}

for (String[] strings : users) {
    if (tvName.toString()==strings[0]) {
        for (int j = 0; j < strings.length; j++) {
            tvAcc.setText(strings[1]);
            tvBal.setText(strings[2]);
        }
    }
}

}

public void OnItemMenuProfileClicked(View view) {
    Intent intent=new Intent(Dashboard.this,UserProfile.class);
    User usr = new User();
    usr.setName(tvName.getText().toString());
    usr.setPhoneNo(Integer.parseInt(tvPhoneNumber.getText().toString()));
    usr.setEmail(tvEmail.getText().toString());
    usr.setAccountNo(Integer.parseInt(tvAcc.getText().toString()));
    usr.setBalance(Float.parseFloat(tvBal.getText().toString()));
    intent.putExtra("usr", usr);
    startActivity(intent);
}
}

```

- **UserProfile.java**

```
package com.example.fintechapplication;
```

```
import androidx.appcompat.app.AlertDialog;
```

```
import androidx.appcompat.app.AppCompatActivity;
```



```
import android.content.Intent;
import android.os.Bundle;
import android.widget.Button;
import android.widget.TextView;

public class UserProfile extends AppCompatActivity {
    TextView name, phoneNumber, email, account_no, amt;
    Button add_amt;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_user_profile);
        name = findViewById(R.id.username);
        phoneNumber = findViewById(R.id.userphonenumber);
        email = findViewById(R.id.email);
        account_no = findViewById(R.id.account_no);
        amt = findViewById(R.id.amt);
        add_amt = findViewById(R.id.add_amt);

        Intent i=getIntent();
        User s=(User)i.getSerializableExtra("std");

        name.setText(s.getName());
        phoneNumber.setText(s.getPhoneNo().toString());
        email.setText(s.getEmail().toString());
        account_no.setText(s.getAccountNo().toString());
        amt.setText(s.getBalance().toString());
    }
}
```

```
}
```

- **User.java**

```
package com.example.fintechapplication;
```

```
import java.io.Serializable;
```

```
public class User implements Serializable {
```

```
    String name,email;
```

```
    Integer accno,phone;
```

```
    Float balance;
```

```
    public String getName() {
```

```
        return name;
```

```
    }
```

```
    public void setName(String name) {
```

```
        this.name = name;
```

```
    }
```

```
    public Integer getPhoneNo() {
```

```
        return phone;
```

```
    }
```

```
    public void setPhoneNo(Integer phone) {
```

```
        this.phone=phone;
```

```
    }
```

```
    public String getEmail() {
```

```
        return email;
```

```
    }
```

```
    public void setEmail(String email) {
```

```
        this.email = email;
```

```
    }
```

```
    public Integer getAccountNo() {
```

```
        return accno;
```

```
    }
```

```
    public void setAccountNo(Integer accountNo) {
```

```
        this.accno = accountNo;
```

```
    }
```

```
    public Float getBalance() {
```

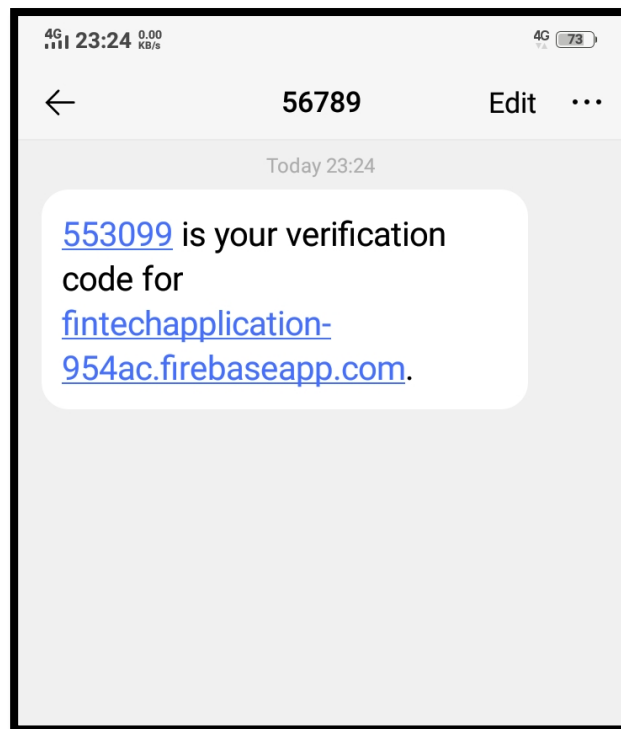
```
        return balance;
```

```
    }
```

```
public void setBalance(Float balance) {  
    this.balance = balance;  
}
```

```
@Override  
public String toString() {  
    return "User{" +  
        "name='" + name + '\" +  
        ", phone='" + phone +  
        ", email='" + email +  
        ", accno='" + accno +  
        ", balance='" + balance +  
        '}'  
    }  
}
```

OUTPUT:



11:26 PM | 0.0KB/s



Fintech Application

Sign In

Amin

+923312605688

553099

Generate OTP

Verify and Sign In

Your Balance
\$2745

SIGN OUT

Account Number

2 3 4 4 6 7 6 8 5 6

 **Copy**

Name
Amin

Phone No.
+923312605688



Let's Action



m-Transfer



m-Payment



m-Commerce

Last Activity



Laila Benson

+ \$154.50

BCA - 34298493583



David Watts

+ \$154.50

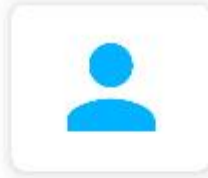
BCA - 34298493583



Jordyn D

+ \$154.50





Name : Amin

Mobile Number : +923312605688

Email Id : amin@gmail.com

Account No : 2344676856

Current balance : \$2745

Add Amount