Small Change

Slot C || Expense Management App

Guided By

Prof. Mudigonda Krishna Siva Prasad

Group Members:

1. Abhay Chaudhary	19BCE7290
2. Aryan Subrahmonyaru	19BCE7347
3. Parakram Kumar	19BCE7312
4. Joshi Ritvij Kumar	19BCN7223

Section and slot: C-CSE 4002-TH-ONL00169

The project can be found in the link given below on Github https://github.com/Abhayindia/Expense-Management-App

Index

S.No.	Торіс	Page No.
1	Abstract	4
2	Introduction	5
3	Source Code	6-104
4	Screenshot	105-118

Abstract

In today's busy and expensive life we are in a great rush to make money. But at the end of the month we broke off. As we are unknowingly spending money on little and unwanted things. So, we have come over with the idea to track our earnings. Small Change aims to help everyone who are planning to know their expenses and save from it. Small Change is an app which users can execute in their mobile phones and update their daily expenses so that they are well known to their expenses. Here user can define their own categories for expense type like food, clothing, rent and bills where they have to enter the money that has been spent and also can add some information in additional information to specify the expense. User can also define expense categories. User will be able to see pie chart of expense. Although this app is focused on new job holders, interns and teenagers, everyone who wants to track their expense can use this app.

Introduction

Small Change is designed to keep a track of Income-Expense of a person on a day-to-day basis. This System divides the Income based on daily expenses. If you exceed day's expense, system will cut it from your income and will provide new daily expense allowed amount. If that day's expense is less, system will add it in savings. Daily expense tracking System will generate report at the end of month to show Income-Expense Curve. It will let you add the savings amount, which you had saved for some particular Festivals or days like Birthday or Anniversary. Daily Expense Tracker System is a system which will keep a track of Income-Expense of a person on a day to day basics. Small Change aims to help everyone who are planning to know their expenses and save from it. Small Change is an android app which users can execute in their mobile phones and update their daily expenses so that they are well known to their expenses. Here user can define their own categories for expense type like food, clothing, rent and bills where they have to enter the money that has been spent and also can add some information in additional information to specify the expense. User can also define expense categories. User will be able to see pie chart of expense.

Source Code

Data.java

```
private String note;
private String id;
private String date;
   this.type = type;
public void setType(String type) {
public String getDate() {
```

User.java

```
public class User {
   public String id;
   public String username;
   /*public int userImg;*/

   public User(String id, String username) {
        this.id = id;
        this.username = username;
   }

   public User() {
   }

   public String getId() {
        return id;
   }

   public void setId(String id) {
        this.id = id;
   }

   public String getUsername() {
        return username;
   }

   public void setUsername(String username) {
        this.username = username;
   }
}
```

Dashboard.java

```
import android.os.Bundle;
import androidx.annotation.NonNull;
import androidx.cardview.widget.CardView;
import androidx.constraintlayout.widget.ConstraintLayout;
import androidx.fragment.app.Fragment;

import android.util.Log;
import android.view.LayoutInflater;
import android.view.View;
import android.view.View;
import android.widget.ImageView;
import android.widget.ProgressBar;
import android.widget.RadioGoroup;
import android.widget.RadioGoroup;
import android.widget.TextView;
import android.widget.TextView;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.Database.DatabaseReference;
import com.google.firebase.database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Database.Da
```

```
public void onCreate(Bundle savedInstanceState) {
                         Bundle savedInstanceState) {
    View view = inflater.inflate(R.layout.fragment dashboard,
   mAuth = FirebaseAuth.getInstance();
```

```
upperBox = view.findViewById(R.id.upperBox);
       checkDatabaseUpdate();
       statisticFilter();
userInfo.animate().translationX(0).alpha(1).setDuration(800).setStartDelay(
photoContainer.animate().alpha(1).setDuration(600).setStartDelay(1400);
            public void onClick(View v) {
                HomeActivity.viewPager.setCurrentItem(3);
    private void statisticFilter() {
           public void onCheckedChanged(RadioGroup group, int checkedId)
                Query incomeQuery, outcomeQuery;
```

```
Calendar cal = Calendar.getInstance();
                        incomeQuery =
mIncomeDatabase.orderByChild("date").startAt(mDate).endAt(mDate);
mOutcomeDatabase.orderByChild("date").startAt(mDate).endAt(mDate);
                        incomeQuery.addValueEventListener(new
ValueEventListener() {
snapshot) {
                                totIncome = 0;
dataSnapshot:snapshot.getChildren()){
ProgressBarAnimation(incomeProgress, incomeText, 0,
error) {}
ValueEventListener() {
```

```
outcomeProgress.startAnimation(anim2);
                        incomeQuery =
mIncomeDatabase.orderByChild("date").startAt(dateTarget).endAt(mDate);
                        outcomeQuery =
                        incomeQuery.addValueEventListener(new
ValueEventListener() {
snapshot) {
dataSnapshot.getValue(Data.class);
ProgressBarAnimation(incomeProgress, incomeText, 0,
```

```
outcomeQuery.addValueEventListener(new
ValueEventListener() {
                                ProgressBarAnimation anim1 = new
                            public void onCancelled(@NonNull DatabaseError
                        incomeQuery =
mIncomeDatabase.orderByChild("date").startAt(dateTarget).endAt(mDate);
mOutcomeDatabase.orderByChild("date").startAt(dateTarget).endAt(mDate);
                        incomeQuery.addValueEventListener(new
                            public void onDataChange(@NonNull DataSnapshot
snapshot) {
dataSnapshot.getValue(Data.class);
ProgressBarAnimation(incomeProgress, incomeText, 0,
```

```
calculatePercentage(totIncome, totOutcome));
                        outcomeQuery.addValueEventListener(new
snapshot) {
                            public void onCancelled(@NonNull DatabaseError
```

```
for (DataSnapshot dataSnapshot:snapshot.getChildren()) {
mOutcomeDatabase.addValueEventListener(new ValueEventListener() {
        Log.i("Outcome", String.valueOf(sumOutcome));
        currentBalance.setText(stTotalValue);
```

```
@Override
        Log.i("Percentage", String.valueOf(percentage));
        ProgressBarAnimation anim1 = new
        ProgressBarAnimation anim2 = new
ProgressBarAnimation(outcomeProgress, outcomeText,
```

History.java

```
import androidx.annotation.Nullable;
import androidx.recyclerview.widget.LinearSnapHelper;
import androidx.recyclerview.widget.SnapHelper;
import android.widget.TextView;
import com.google.firebase.database.Query;
   public void onCreate(Bundle savedInstanceState) {
```

```
public View onCreateView (LayoutInflater inflater, ViewGroup container,
FirebaseDatabase.getInstance().getReference().child("OutcomeData").child(ui
        layoutManagerOutcome.setStackFromEnd(true);
        snapHelperOutcome.attachToRecyclerView(mRecyclerOutcome);
       mRecyclerOutcome.setNestedScrollingEnabled(false);
ContextThemeWrapper(getActivity().getApplicationContext(),
        PopupMenu popupMenu = new PopupMenu(wrapper, showFilterBtn);
        popupMenu.setOnMenuItemClickListener(new
PopupMenu.OnMenuItemClickListener() {
            public boolean onMenuItemClick(MenuItem item) {
```

```
IncomeViewHolder>
                        protected void populateViewHolder(IncomeViewHolder
incomeViewHolder.setIncomeType(model.getType());
incomeViewHolder.setIncomeAmount(model.getAmount());
                            incomeViewHolder.setIncomeDate(formattedDate);
                        protected void populateViewHolder(OutcomeViewHolder
outcomeViewHolder, Data model, int
```

```
outcomeViewHolder.setOutcomeAmount(model.getAmount());
                    incomeQuery =
                    outcomeQuery =
                                    incomeQuery
                        protected void populateViewHolder(IncomeViewHolder
                            SimpleDateFormat inFormat = new
```

```
OutcomeViewHolder>
                        protected void populateViewHolder(OutcomeViewHolder
SimpleDateFormat("MMM dd, yyyy");
outcomeViewHolder.setOutcomeDate(formattedDate);
                    mRecyclerOutcome.setAdapter(outcomeAdapter);
                    outcomeQuery =
IncomeViewHolder>
```

```
incomeQuery
SimpleDateFormat("yyyy-MM-dd");
SimpleDateFormat("MMM dd, yyyy");
                        protected void populateViewHolder(OutcomeViewHolder
                            SimpleDateFormat inFormat = new
outcomeViewHolder.setOutcomeType(model.getType());
```

```
outcomeViewHolder.setOutcomeDate(formattedDate);
                        protected void populateViewHolder(IncomeViewHolder
                                e.printStackTrace();
                            SimpleDateFormat outFormat = new
incomeViewHolder.setIncomeType(model.getType());
                            incomeViewHolder.setIncomeDate(formattedDate);
```

```
protected void populateViewHolder(OutcomeViewHolder
                            SimpleDateFormat outFormat = new
outcomeViewHolder.setOutcomeType(model.getType());
outcomeViewHolder.setOutcomeAmount(model.getAmount());
outcomeViewHolder.setOutcomeDate(formattedDate);
    public void onStart() {
        super.onStart();
            protected void populateViewHolder(IncomeViewHolder
```

```
incomeViewHolder.setIncomeType(model.getType());
    incomeViewHolder.setIncomeDate(formattedDate);
            History.OutcomeViewHolder.class,
protected void populateViewHolder(OutcomeViewHolder
        e.printStackTrace();
    outcomeViewHolder.setOutcomeType(model.getType());
    outcomeViewHolder.setOutcomeAmount(model.getAmount());
    outcomeViewHolder.setOutcomeDate(formattedDate);
```

```
public void setIncomeType(String type) {
    TextView mtype = mIncomeView.findViewById(R.id.IncomeTitle);
   mtype.setText(type);
public OutcomeViewHolder(View itemView) {
public void setOutcomeType(String type) {
   mtype.setText(type);
public void setOutcomeDate(String date) {
   mDate.setText(date);
```

HomeActivity.java

```
adapter.addFrag(new Outcome());
setCustomTabs();
```

```
public void onTabSelected(TabLayout.Tab tab)
       if(tab.getPosition() == 3) {
       if(tab.getPosition() == 4) {
            Fragment outcome = adapter.getItem(4);
   public void onTabReselected(TabLayout.Tab tab) {
tabLayoutHome.getTabAt(0).setCustomView(view1);
```

Income.java

```
package id.ac.umn.leleair.kelompok.smallchange;
import android.app.Dialog;
import android.graphics.Color;
import android.os.Bundle;
import android.os.Bundle;
import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.constraintlayout.widget.ConstraintLayout;
import androidx.fragment.app.Fragment;
import androidx.recyclerview.widget.LinearLayoutManager;
import android.vrecyclerview.widget.RecyclerView;
import android.view.LayoutInflater;
import android.view.View;
import android.view.View;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageView;
import android.widget.TmageView;
import android.widget.TextView;
import android.widget.Toast;
```

```
import com.google.firebase.database.Query;
   private String type;
   public void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
```

```
FirebaseUser mUser = mAuth.getCurrentUser();
LinearLayoutManager(getActivity());
        initializeFilter();
        fabAddIncome.setOnClickListener(new View.OnClickListener() {
           @Override
   @Override
AdapterView.OnItemSelectedListener() {
                Query incomeQuery;
                String dateTarget;
                SimpleDateFormat df = new SimpleDateFormat("yyyy-MM-dd");
                Calendar cal = Calendar.getInstance();
                Date date = cal.getTime();
                                    MyViewHolder.class,
```

```
@Override
                                e.printStackTrace();
                            SimpleDateFormat outFormat = new
                            viewHolder.setDate(formattedDate);
                            viewHolder.setAmount(model.getAmount());
View.OnClickListener() {
                                @Override
                    mIncomeDatabase.addChildEventListener(new
ChildEventListener() {
                        @Override
                        public void onChildAdded(@NonNull DataSnapshot
                        @Override
                        @Override
```

```
public void onChildMoved(@NonNull DataSnapshot
@Override
        e.printStackTrace();
   SimpleDateFormat outFormat = new
   viewHolder.mView.setOnClickListener(new
        @Override
```

```
snapshot, @Nullable String previousChildName) {
                        @Override
snapshot, @Nullable String previousChildName) {
                    cal.add(Calendar.DATE, -7);
                                    incomeQuery
```

```
String formattedDate = outFormat.format(date);
                            viewHolder.setDate(formattedDate);
                            viewHolder.setAmount(model.getAmount());
                                    updateIncomeData();
ChildEventListener() {
                        public void onChildChanged(@NonNull DataSnapshot
snapshot, @Nullable String previousChildName) {
```

```
@Override
                            SimpleDateFormat outFormat = new
                            viewHolder.mView.setOnClickListener(new
View.OnClickListener() {
                                @Override
```

```
snapshot, @Nullable String previousChildName) {
snapshot, @Nullable String previousChildName) {
snapshot) {
                        @Override
snapshot, @Nullable String previousChildName) {
        Dialog mdialog = new Dialog(getActivity());
```

```
EditText editType = myviewm.findViewById(R.id.editTransactionName);
        String note = editNote.getText().toString().trim();
        if (TextUtils.isEmpty(amount)) {
        if (TextUtils.isEmpty(type)) {
           editType.setError("Required Field");
            Date date = Calendar.getInstance().getTime();
            Data data = new Data(ouramountint, type, note, id,
mdialog.show();
```

```
backgroundBox.animate().translationY(300).alpha(0).setDuration(200);
                TextView text = (TextView)view.findViewById(R.id.tvFilter);
```

```
editType.setText(type);
editNote.setText(note);
editAmount.setText(String.valueOf(amount));
        type = editType.getText().toString().trim();
        amountValue = editAmount.getText().toString().trim();
        if (TextUtils.isEmpty(amountValue)) {
            editAmount.setError("Required Field");
            editType.setError("Required Field");
```

```
mdialog.dismiss();
```

Login.java

```
import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.FragmentManager;
import androidx.viewpager2.widget.ViewPager2;

import android.content.Context;
import android.content.Intent;
import android.net.ConnectivityManager;
import android.os.Bundle;
import android.provider.Settings;
import android.widget.Toast;

import com.google.android.material.tabs.TabLayout;
import com.google.firebase.auth.FirebaseAuth;
import java.lang.reflect.Method;
```

```
protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
       FragmentManager fm = getSupportFragmentManager();
       tabLayoutLogin.addTab(tabLayoutLogin.newTab().setText("Sign In"));
TabLayout.OnTabSelectedListener() {
            public void onTabUnselected(TabLayout.Tab tab) {
            public void onTabReselected(TabLayout.Tab tab) {
ViewPager2.OnPageChangeCallback() {
           public void onPageSelected(int position) {
tabLayoutLogin.selectTab(tabLayoutLogin.getTabAt(position));
            startActivity(intent);
```

```
}
}
}
```

LoginFragmentAdapter.java

```
package id.ac.umn.leleair.kelompok.smallchange;
import androidx.annotation.NonNull;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.lifecycle.Lifecycle;
import androidx.viewpager2.adapter.FragmentStateAdapter;

public class LoginFragmentAdapter extends FragmentStateAdapter {
    public LoginFragmentAdapter(@NonNull FragmentManager fragmentManager,
@NonNull Lifecycle lifecycle) {
        super(fragmentManager, lifecycle);
    }

    @NonNull
    @Override
    public Fragment createFragment(int position) {
        if (position == 1) {
            return new SignUp();
        }
        return for SignIn();
    }

    @Override
    public int getItemCount() {
        return 2;
    }
}
```

MainActivity.java

```
package id.ac.umn.leleair.kelompok.smallchange;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

MyViewHolder.java

```
package id.ac.umn.leleair.kelompok.smallchange;
import android.view.View;
```

```
import android.widget.TextView;
import androidx.recyclerview.widget.RecyclerView;
public class MyViewHolder extends RecyclerView.ViewHolder {
    View mView;

    public MyViewHolder(View itemView) {
        super(itemView);
        mView = itemView;
    }

    public void setType(String type) {
        TextView mType = mView.findViewById(R.id.tvType);
        mType.setText(type);
    }

    public void setNote(String note) {
        TextView mNote = mView.findViewById(R.id.tvNote);
        mNote.setText(note);
    }

    public void setDate(String date) {
        TextView mDate = mView.findViewById(R.id.tvDate);
        mDate.setText(date);
    }

    public void setAmount(int amount) {
        TextView mAmount = mView.findViewById(R.id.tvAmount);
        String stamount = String.valueOf(amount);
        mAmount.setText(stamount);
    }
}
```

Outcome.java

```
import android.app.Dialog;
import android.graphics.Color;
import android.graphics.drawable.ColorDrawable;
import android.os.Bundle;
import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.constraintlayout.widget.ConstraintLayout;
import androidx.fragment.app.Fragment;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;
import android.text.TextUtils;
import android.view.LayoutInflater;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageView;
import android.widget.ImageView;
import android.widget.Spinner;
```

```
import com.google.firebase.database.Query;
   private FirebaseAuth mAuth;
   public void onCreate(Bundle savedInstanceState) {
```

```
initializeFilter();
           @Override
                insertOutcomeData();
   public void onStart() {
        super.onStart();
        filter.setOnItemSelectedListener(new
AdapterView.OnItemSelectedListener() {
            public void onItemSelected(AdapterView<?> parentView, View
                SimpleDateFormat df = new SimpleDateFormat("yyyy-MM-dd");
```

```
R.layout.income item,
View.OnClickListener() {
                                    updateOutcomeData();
                    mOutcomeDatabase.addChildEventListener(new
ChildEventListener() {
                        @Override
```

```
incomeQuery =
                                     incomeQuery
                            SimpleDateFormat inFormat = new
                                e.printStackTrace();
                            SimpleDateFormat outFormat = new
SimpleDateFormat("MMM dd, yyyy");
```

```
updateOutcomeData();
ChildEventListener() {
snapshot, @Nullable String previousChildName) {
snapshot, @Nullable String previousChildName) {
                        @Override
```

```
@Override
                                e.printStackTrace();
                            SimpleDateFormat outFormat = new
                            viewHolder.setDate(formattedDate);
                            viewHolder.setAmount(model.getAmount());
View.OnClickListener() {
                                @Override
                    mOutcomeDatabase.addChildEventListener(new
ChildEventListener() {
                        @Override
                        public void onChildAdded(@NonNull DataSnapshot
                        @Override
                        @Override
```

```
public void onChildMoved(@NonNull DataSnapshot
                    incomeQuery =
                                    incomeQuery
                                e.printStackTrace();
                            SimpleDateFormat outFormat = new
SimpleDateFormat("MMM dd, yyyy");
```

```
updateOutcomeData();
ChildEventListener() {
snapshot, @Nullable String previousChildName) {
snapshot, @Nullable String previousChildName) {
snapshot) {
snapshot, @Nullable String previousChildName) {
                        @Override
error) {
        Dialog mdialog = new Dialog(getActivity());
```

```
LayoutInflater inflater = LayoutInflater.from(getActivity());
        mdialog.setContentView(myviewm);
        mdialog.getWindow().setBackgroundDrawable(new
ColorDrawable(Color.TRANSPARENT));
        Button btnSave = myviewm.findViewById(R.id.btnSaveTransaction);
                String note = editNote.getText().toString().trim();
                if (TextUtils.isEmpty(amount)) {
                    if (!validateTitle(type)) {
                    if (!validateNote(note)) {
                    mOutcomeDatabase.child(id).setValue(data);
                    mdialog.dismiss();
```

```
backgroundBox.animate().translationY(300).alpha(0).setDuration(200);
fabAddOutcome.animate().translationY(100).alpha(0).setDuration(200);
            @Override
                TextView text = (TextView)view.findViewById(R.id.tvFilter);
                text.setTextColor(getResources().getColor(R.color.biru));
                TextView text = (TextView)view.findViewById(R.id.tvFilter);
```

```
Dialog mdialog = new Dialog(getActivity());
btnUpdate.setOnClickListener(new View.OnClickListener() {
        type = editType.getText().toString().trim();
        note = editNote.getText().toString().trim();
        String amountValue = String.valueOf(amount);
        Date date = Calendar.getInstance().getTime();
        if (TextUtils.isEmpty(type)) {
            if (!validateTitle(type)) {
           (TextUtils.isEmpty(note)) {
```

```
Data data = new Data (myAmount, type, note, post key,
@Override
```

ProgressBarAnimation.java

```
package id.ac.umn.leleair.kelompok.smallchange;
import android.view.animation.Animation;
import android.widget.ProgressBar;
import android.widget.ProgressBar;
import android.widget.TextView;

public class ProgressBarAnimation extends Animation {
    private ProgressBar progressBar;
    private TextView textView;
    private float from;
    private float to;

    public ProgressBarAnimation(ProgressBar progressBar, TextView textView,
float from, float to) {
        super();
        this.progressBar = progressBar;
        this.textView = textView;
}
```

```
this.from = from;
this.to = to;
}

@Override
protected void applyTransformation(float interpolatedTime,
Transformation t) {
    super.applyTransformation(interpolatedTime, t);
    float value = from + (to - from) * interpolatedTime;
    progressBar.setProgress((int) value);
    textView.setText((int)value + "%");
}
```

SignIn.java

```
import android.text.TextUtils;
import android.view.LayoutInflater;
import java.util.regex.Pattern;
```

```
private Pattern EmailPattern = Pattern.compile(EMAIL PATTERN);
        mAuth = FirebaseAuth.getInstance();
        mDialog = new ProgressDialog(getActivity());
view.findViewById(R.id.editEmailSignInWrapper);
        mPassSignInWrapper = (TextInputLayout)
view.findViewById(R.id.editPasswordSignInWrapper);
        mPassSignInWrapper.setHint("Password");
                String emailSignIn =
mEmailSignInWrapper.getEditText().getText().toString().trim();
mPassSignInWrapper.getEditText().getText().toString().trim();
!TextUtils.isEmpty(passSignIn)){
                        mPassSignInWrapper.setError("Not a valid
```

```
mEmailSignInWrapper.setErrorEnabled(false);
                        mPassSignInWrapper.setErrorEnabled(false);
                                    mDialog.dismiss();
                                    moveToHome();
Toast.makeText(getActivity().getApplicationContext(), "Sign In Succesfull",
                    if (TextUtils.isEmpty(emailSignIn)) {
                        mEmailSignInWrapper.setError("Email Required...");
        mForgetPassword.setOnClickListener(new View.OnClickListener() {
        Dialog forgotPassDialog = new Dialog(getActivity());
```

```
btnSend.setOnClickListener(new View.OnClickListener() {
            @Override
                String ConfirmEmail =
editConfirmEmail.getText().toString().trim();
FirebaseAuth.getInstance().sendPasswordResetEmail(ConfirmEmail)
                            @Override public void onFailure(@NonNull
Exception e) {
    public boolean validateEmail(String email) {
```

```
matcherEmail = EmailPattern.matcher(email);
    return matcherEmail.matches();
}

public boolean validatePassword(String password) {
    matcherPass = PassPattern.matcher(password);
    return matcherPass.matches();
}

private void moveToHome() {
    Intent intent = new Intent(getActivity(), HomeActivity.class);

intent.setFlags(Intent.FLAG_ACTIVITY_CLEAR_TASK|Intent.FLAG_ACTIVITY_NEW_TASK);
    startActivity(intent);
}
```

SignUp.java

```
import android.view.LayoutInflater;
```

```
public void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
            public void onClick(View v) {
mPassSignUpWrapper.getEditText().getText().toString().trim();
                if(!TextUtils.isEmpty(emailSignUp) &&
```

```
public void onComplete(@NonNull
                                    FirebaseUser mUser =
mAuth.getCurrentUser();
FirebaseDatabase.getInstance().getReference().child("Username").child(uid);
                                    moveToHome();
```

SplashScreen.java

```
package id.ac.umn.leleair.kelompok.smallchange;
import androidx.appcompat.app.AppCompatActivity;
import androidx.appcompat.app.AppCompatDelegate;
import android.content.Intent;
import android.os.Bundle;
import android.os.Handler;

public class SplashScreen extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_splash_screen);

AppCompatDelegate.setDefaultNightMode(AppCompatDelegate.MODE_NIGHT_NO);
    final Handler handler = new Handler();
    handler.postDelayed(new Runnable()) {
        @Override
        public void run() {
            startActivity(new
```

UserPanel.java

ViewPagerAdapter.java

```
package id.ac.umn.leleair.kelompok.smallchange;
import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentPagerAdapter;
import androidx.lifecycle.Lifecycle;
import androidx.viewpager2.adapter.FragmentStateAdapter;
import java.util.ArrayList;
import java.util.List;

public class ViewPagerAdapter extends FragmentPagerAdapter {
    private final List<Fragment> mFragmentList = new ArrayList<>();

    public ViewPagerAdapter(FragmentManager manager) {
        super(manager);
    }
}
```

```
@Override
public Fragment getItem(int position) {
    return mFragmentList.get(position);
}

@Override
public int getCount() {
    return mFragmentList.size();
}

public void addFrag(Fragment fragment) {
    mFragmentList.add(fragment);
}
```

tab_color_selector.xml

Background_icon.xml

Bordered box.xml

Bordered box2.xml

```
<solid
    android:color="#f2f3fd" />

    <corners
    android:topLeftRadius="40sp"
    android:topRightRadius="40sp" />
</shape>
```

Bordered_box3.xml

Bordered box4.xml

Bordered_box_transparent.xml

Bordered_edit_text.xml

Circle.xml

Circle_progress_income.xml

Circle_progress_outcome.xml

Circle_white.xml

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="oval">

    <solid
        android:color="@color/white" />

    <size
        android:width="2000dp"
        android:height="2000dp"/>
```

Ic baseline add 24.xml

Ic_baseline_arrow_drop_down_24.xml

```
<vector android:autoMirrored="true" android:height="24dp"
    android:tint="#FFFFFFF" android:viewportHeight="24"
    android:viewportWidth="24" android:width="24dp"

xmlns:android="http://schemas.android.com/apk/res/android">
    <path android:fillColor="@android:color/white"
android:pathData="M7,1015,5 5,-5z"/>
</vector>
```

Ic_changephotobtn_18.xml

```
<vector android:autoMirrored="true" android:height="20dp"
    android:viewportHeight="87.95" android:viewportWidth="87.95"</pre>
```

Ic dashboardicon 13.xml

Ic_default_img_white_01.xml

Ic_default_user_photo_01.xml

Activity_home.xml

```
<androidx.viewpager.widget.ViewPager</pre>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
```

Activity_login.xml

```
<androidx.constraintlayout.widget.ConstraintLayout</pre>
    android:foregroundGravity="center horizontal"
    <ImageView
```

Activity_main.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_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity splash screen.xml

```
</attr>
</attr>
</attr>
</attr>
</attr>
</attr>
</attr>
```

```
</attr>
</attr>
</attr>
</attr>
</attr>
</attr>
</attr>
```

```
</attr>
```

```
</attr>
</attr>
</attr>
</attr>
```

```
<enum name="top" value="0"/>
                </attr>
                </attr>
               </attr>
name="layout_constraintCircleAngle"/><attr
name="layout_constraintGuide_begin"/><attr
name="layout_constraintGuide_end"/><attr
name="layout_constraintGuide_percent"/><attr
name="layout_constraintLeft_toLeftOf"/><attr
name="layout_constraintLeft_toRightOf"/><attr
name="layout_constraintLeft_toRightOf"/><attr</pre>
```

```
name="barrierDirection"/><attr name="barrierMargin"/><attr
name="constraint referenced ids"/><attr</pre>
name="flow verticalStyle"/><attr name="flow verticalAlign"/><attr
name="flow horizontalAlign"/><attr name="flow verticalBias"/><attr
name="flow horizontalBias"/><attr name="flow wrapMode"/><attr
name="flow verticalGap"/><attr name="flow firstHorizontalStyle"/><attr
name="layout constraintTag"/><attr name="motionStagger"/></declare-</pre>
```

```
name="layoutDescription"/><attr name="constraintSet"/><attr</pre>
name="android:paddingEnd"/><attr name="flow_verticalAlign"/><attr
```

```
<declare-styleable name="KeyAttribute"><attr</pre>
```

```
name="android:rotationY"/><attr name="android:scaleX"/><attr
name="android:translationY"/><attr name="android:translationZ"/></declare-
name="motion triggerOnCollision"/></declare-styleable>
     <declare-styleable name="Layout"><attr</pre>
name="layout_constraintTop_toTopOf"/><attr
name="layout_constraintTop_toBottomOf"/><attr
name="layout_constraintBottom_toTopOf"/><attr</pre>
```

```
name="mock showLabel"/></declare-styleable>
    <declare-styleable name="Motion"><attr name="animate relativeTo"/><attr</pre>
name="drawPath"/></declare-styleable>
    <declare-styleable name="MotionHelper"><attr format="boolean"</pre>
    <declare-styleable name="MotionLayout"><attr</pre>
        </attr></declare-styleable>
```

```
</attr><attr format="color" name="telltales_tailColor"/><attr
format="float" name="telltales_tailScale"/></declare-styleable>

name="defaultState"/></declare-styleable>
```

Change pass form.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.cardview.widget.CardView
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:id="@+id/changePassPopUp"
android:layout_width="match_parent"
android:layout_height="wrap_content"
xmlns:app="http://schemas.android.com/apk/res-auto"
app:cardCornerRadius="20dp"
app:cardElevation="5dp"
app:cardElevation="5dp"
app:cardPreventCornerOverlap="true"
app:cardUseCompatPadding="true">
<androidx.constraintlayout.widget.ConstraintLayout
android:layout_midth="wrap_content"
android:layout_height="wrap_content"
android:layout_width="wrap_content"
android:layout_width="wrap_content"
android:layout_midth="wrap_content"
android:layout_height="wrap_content"
android:layout_height="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="210dp"
android:fontFamily="@font/bold"
android:textSize="20sp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />

<EditText
android:id="@+id/tvOldPass"
android:layout_width="match_parent"</pre>
```

```
android:inputType="textPassword"
       <EditText
           android:inputType="textPassword"
       <com.google.android.material.button.MaterialButton</pre>
           android:textAppearance="@style/button text"
   </androidx.constraintlayout.widget.ConstraintLayout>
</androidx.cardview.widget.CardView>
```

Customview_spinner.xml

```
<?xml version="1.0" encoding="utf-8"?>
<TextView
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:id="@+id/tvFilter"
    android:textAlignment="center"
    android:fontFamily="@font/semibold"
    android:textSize="16dp"
    android:textColor="@color/white"
    android:padding="10dp">
```

Forgot_password.xml

```
<?xml version="1.0" encoding="utf-8"?>
   app:cardUseCompatPadding="true">
       <EditText
           android:inputType="textEmailAddress"
```

```
android:textAlignment="center"
android:textSize="18sp"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView3" />

<com.google.android.material.button.MaterialButton
android:id="@+id/btnSend"
android:layout_width="match_parent"
android:layout_height="60sp"
android:layout_marginTop="20dp"
android:fontFamily="@font/bold"
android:text="Send"
android:textAppearance="@style/button_text"
app:cornerRadius="18sp"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/tvEmailConfirm" />
</androidx.cardview.widget.CardView></androidx.cardview.widget.CardView></androidx.cardview.widget.CardView></androidx.cardview.widget.CardView>
```

Fragment dashboard.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_width="match_parent"
android:layout.pashboard">

<ImageView
    android:id="@+id/backgroundBox"
    android:layout_width="match_parent"
    android:layout_width="match_parent"
    android:layout_width="watch_parent"
    android:layout_beight="400dp"
    android:translationY="400dp"
    android:alpha="0"
    android:alpha="0"
    android:alpha="0"
    android:background="@drawable/bordered_box2"
    app:layout_constraintBottom_toBottomof="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent" />

<ImageView
    android:layout_width="wrap_content"
    android:layout_onstraintBottom_toBottomof="parent"
    app:layout_constraintBottom_toBottomof="parent"
    app:layout_constraintBottom_toBottomof="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_onstraintStart_toStartOf="parent"
    android:layout_width="match_parent"
    android:layout_marginBottom="lodd"
    android:scrollbarThumbHortzontal="@null"
    android:scrollbarThumbHortzontal="@null"
    android:scrollbarThumbHortzontal="@null"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintBott
```

```
android:textColor="@drawable/radio button text" />
<androidx.cardview.widget.CardView</pre>
```

```
app:layout constraintTop toTopOf="parent">
<androidx.constraintlayout.widget.ConstraintLayout</pre>
```

```
<ImageView</pre>
<ProgressBar
```

```
<TextView
app:layout constraintStart toEndOf="@+id/imageView2"
                            android:fontFamily="@font/bold"
                            android:text="0%"
                            android:textColor="@color/hijau"
app:layout constraintEnd toEndOf="@+id/income progressBar"
```

```
<ImageView</pre>
    <ImageView</pre>
    <TextView
</androidx.constraintlayout.widget.ConstraintLayout>
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
</ScrollView>
    <ImageView</pre>
</androidx.constraintlayout.widget.ConstraintLayout>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
    <ImageView</pre>
        app:layout constraintTop toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

```
<androidx.constraintlayout.widget.ConstraintLayout</pre>
            < ImageView
        </androidx.cardview.widget.CardView>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
        app:layout constraintTop toTopOf="parent" />
```

Fragment_history.xml

```
<?xml version="1.0" encoding="utf-8"?>
    <ImageView</pre>
    <ImageView</pre>
    <androidx.constraintlayout.widget.ConstraintLayout</pre>
        <ImageView</pre>
         <ImageView
```

```
<TextView
</androidx.constraintlayout.widget.ConstraintLayout>
<androidx.cardview.widget.CardView</pre>
    app:cardUseCompatPadding="true"
    app:layout constraintTop toTopOf="parent">
        <com.google.android.material.button.MaterialButton</pre>
            app:elevation="10dp"
<ScrollView
```

```
<androidx.recyclerview.widget.RecyclerView</pre>
    <androidx.recyclerview.widget.RecyclerView</pre>
</androidx.constraintlayout.widget.ConstraintLayout>
```

```
</scrollView>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Fragment_sign_in.xml

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    <androidx.constraintlayout.widget.ConstraintLayout</pre>
        <TextView
             android:textColor="@color/biru"
             app:layout constraintTop toTopOf="parent" />
        <com.google.android.material.textfield.TextInputLayout</pre>
             <EditText
                 android:paddingStart="18sp"
android:paddingEnd="18sp"
        </com.google.android.material.textfield.TextInputLayout>
```

```
<TextView
<com.google.android.material.button.MaterialButton</pre>
<TextView
```

```
android:layout_marginTop="10dp"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:fontFamily="@font/semibold"
android:gravity="center"
android:text="Forgot Password ?"
android:textColor="@color/biru"
android:textSize="18sp"
app:layout_constraintTop_toBottomOf="@+id/btnSignIn"
tools:layout_editor_absoluteX="50dp" />
</androidx.constraintlayout.widget.ConstraintLayout>
</frameLayout>
```

Fragment sign up.xml

```
<?xml version="1.0" encoding="utf-8"?>
   <androidx.constraintlayout.widget.ConstraintLayout</pre>
           app:layout constraintTop toTopOf="parent" />
                android:inputType="textEmailAddress"
```

```
app:boxStrokeWidthFocused="0dp"
    <EditText
        android:inputType="textPersonName"
        android:paddingStart="18sp"
</com.google.android.material.textfield.TextInputLayout>
    android:textColor="@color/biru"
```

```
<com.google.android.material.textfield.TextInputLayout</pre>
            <EditText
        </com.google.android.material.textfield.TextInputLayout>
        <com.google.android.material.button.MaterialButton</pre>
   </androidx.constraintlayout.widget.ConstraintLayout>
</FrameLayout>
```

Google_services.json

```
{
    "project_info": {
        "project_number": "436512616830",
        "project_id": "small-change-ac678",
        "storage_bucket": "small-change-ac678.appspot.com"
```

```
},
  "client": [
      "client_info": {
        "mobilesdk_app_id": "1:436512616830:android:c0630a6c1b0a51664d032f",
        "android_client_info": {
          "package_name": "id.ac.umn.effendi.andrio.smallchange"
      },
      "oauth_client": [
          "client id": "436512616830-
dlodqmm1j6bf72ng5r00s03cbp4k83n3.apps.googleusercontent.com",
          "client_type": 3
      ],
      "api_key": [
          "current_key": "AIzaSyChprqRBcaXwOxTw6eOMPA6PsJBb3kj4q4"
      ],
      "services": {
        "appinvite_service": {
          "other_platform_oauth_client": [
              "client_id": "436512616830-
dlodqmm1j6bf72ng5r00s03cbp4k83n3.apps.googleusercontent.com",
              "client_type": 3
  "configuration_version": "1"
```

Screenshot



Fig 1: Splash Screen

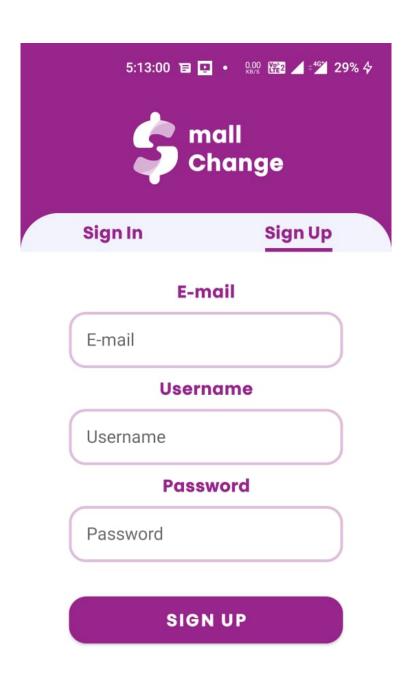


Fig 2 : SignUp Screen

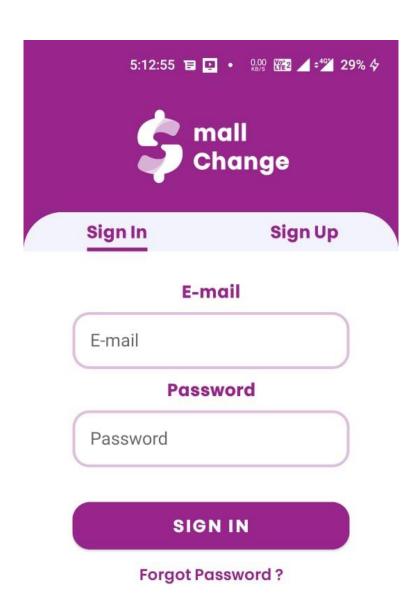
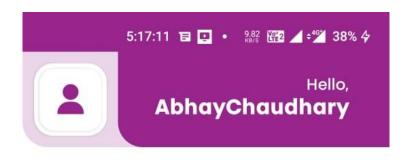


Fig 3 : SignIn Screen



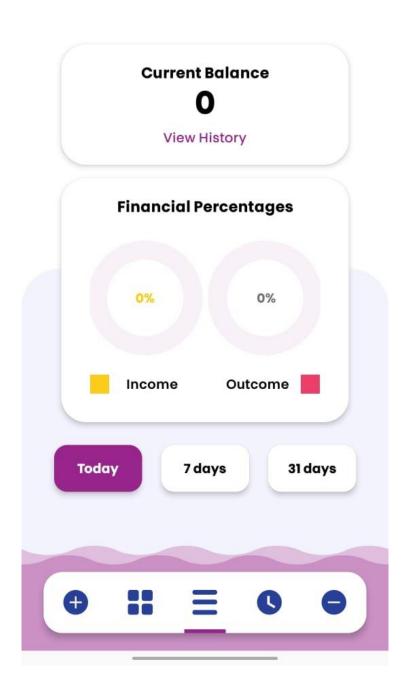


Fig 4: Initial Dashboard upon SignUp

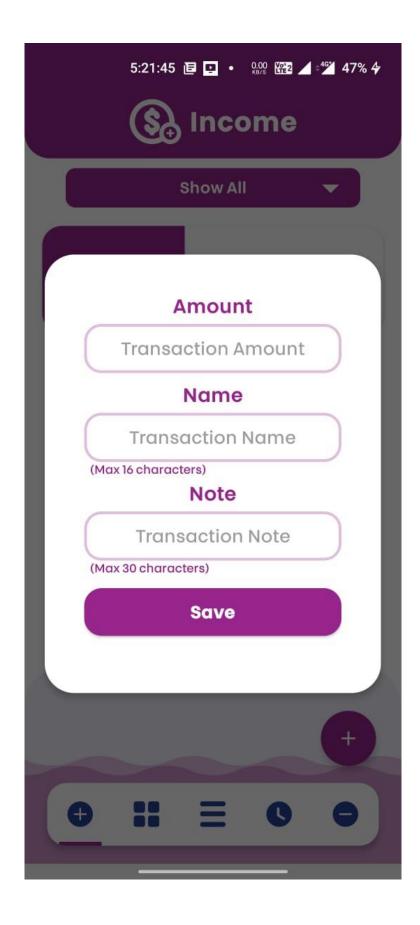


Fig 5 : Income/Outcome Fields

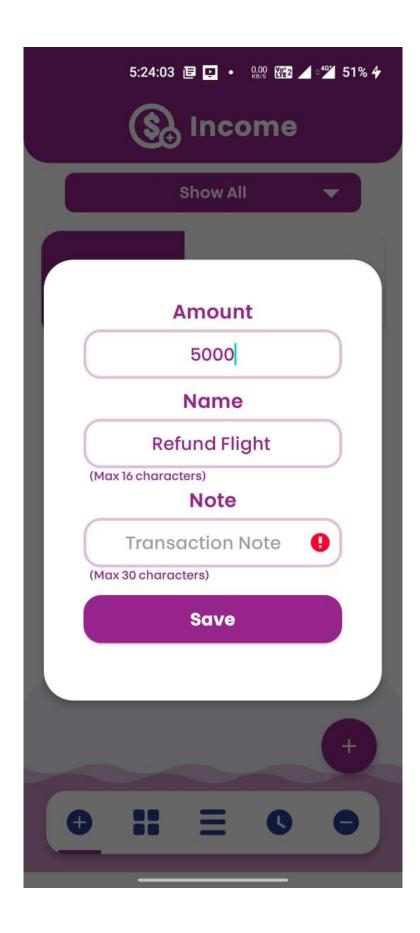


Fig 6 : Income/Outcome Properties

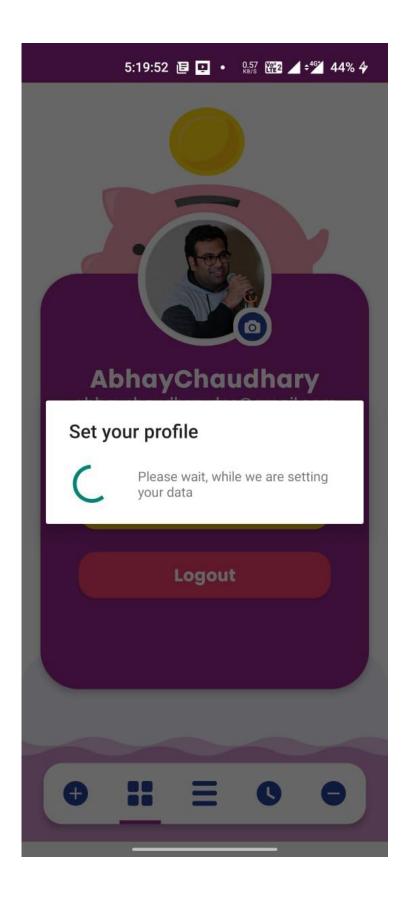
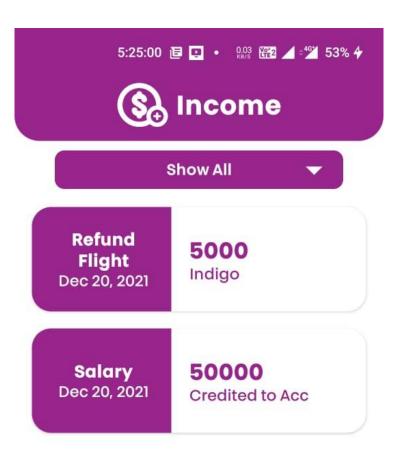


Fig 7 : Profile Pic SetUp



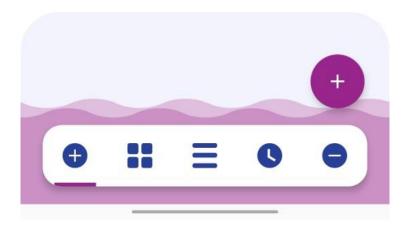
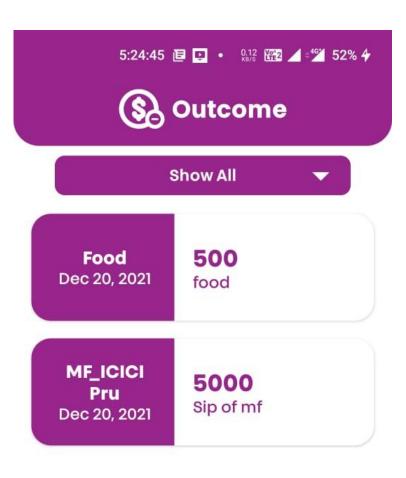


Fig 8 : Income Summary



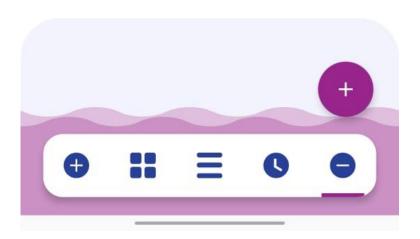


Fig 9 : Outcome Summary



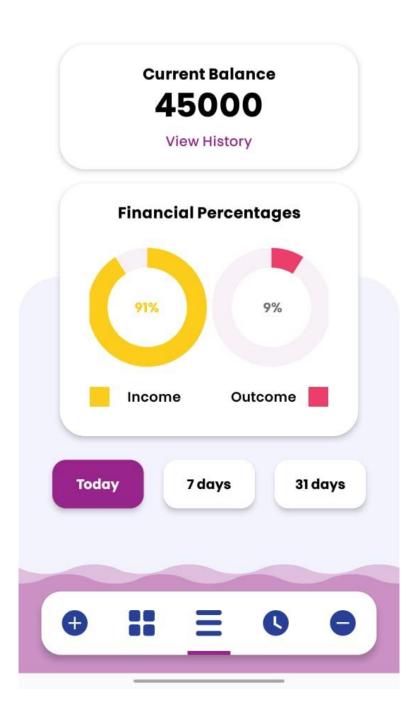


Fig 10: Dashboard



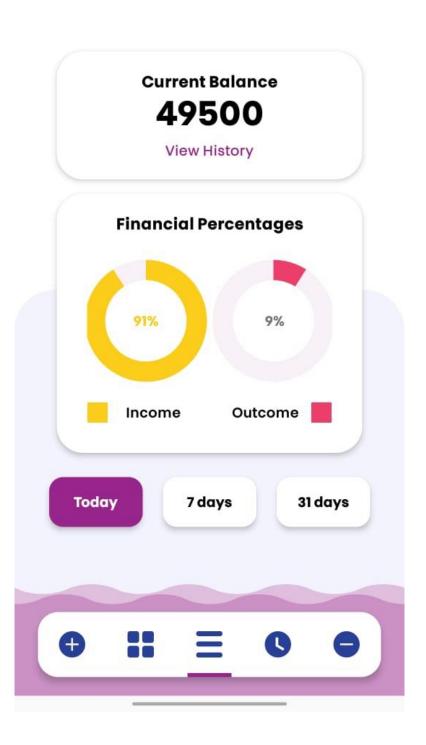


Fig 11: Dashboard 2



Fig 12: Transaction History



Fig 13: Transaction History 2

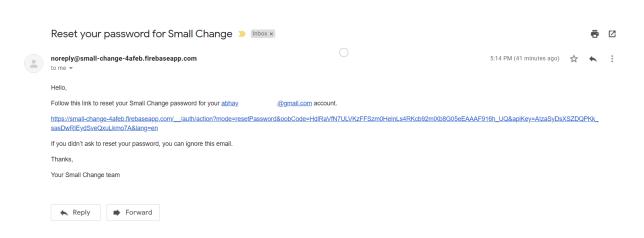


Fig 14: Password Reset