Mata Kuliah: Pemrograman Perangkat Bergerak – T1-S1

Pertemuan: 12

NIM : A11.2019.11695

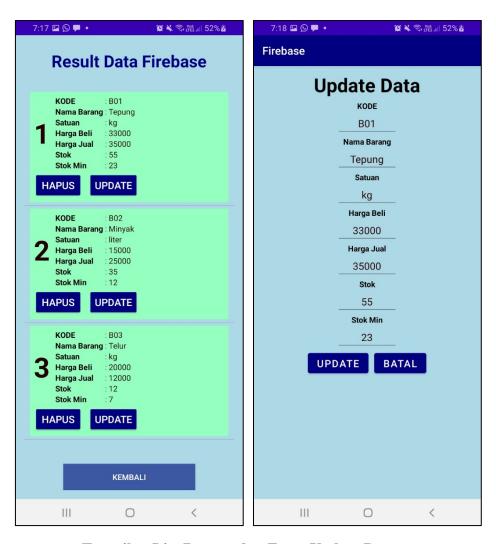
Nama : Krisostomos Abdixta Winarto

**Kelompok** : A11.4304

# 1. Aplikasi CRUD dengan Firebase Hasil Program :



Tampilan Awal Aplikasi dan Form Tambah Barang



Tampilan List Barang dan Form Update Barang

## **Code Program:**

## Layout-Android(activity main.xml):

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
   xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout width="match parent"
   android:layout height="match_parent"
   android:background="#ADD8E6"
   android:padding="10dp"
   android:orientation="vertical">
    <TextView
        android:layout margin="5dp"
        android:layout width="match parent"
        android:layout_height="wrap_content"
        android:gravity="center horizontal"
        android:textColor="@color/black"
        android:textSize="25sp"
        android:textStyle="bold"
        android:text="Firebase Realtime Database"/>
    <LinearLayout
        android:layout width="match parent"
        android:layout height="wrap content"
        android:gravity="center"
```

```
android:layout marginTop="10dp"
        android:orientation="horizontal">
        <Button
            android:layout margin="5dp"
            android:id="@+id/bt createdata"
            android:layout width="wrap content"
            android:layout height="wrap content"
            android:text="Tambah Data" />
        <Button
            android:layout margin="5dp"
            android:id="@+id/bt viewdata"
            android:layout width="wrap content"
            android:layout height="wrap content"
            android:text="Lihat Data" />
    </LinearLayout>
    <com.google.android.material.floatingactionbutton.FloatingActionButton</pre>
        android:id="@+id/fab"
        android:layout_width="wrap content"
        android:layout height="wrap content"
        android:src="@drawable/ic launcher foreground"
        android:layout marginBottom="20dp"
        android:layout_marginRight="20dp"
        android:layout_gravity="bottom|end"
        android:layout_alignParentBottom="true"
        android:layout alignParentRight="true"
</LinearLayout>
```

## activity firebase dbcreate.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout</pre>
   xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout width="match parent"
   android:layout height="match parent"
   android:background="#ADD8E6"
   android:layout gravity="center horizontal"
   android:gravity="center horizontal"
   android:orientation="vertical"
   android:padding="10dp">
   <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout margin="5dp"
        android:textSize="40sp"
        android:textStyle="bold"
       android:textColor="@color/black"
       android:text="Tambah Data" />
   <EditText
       android:id="@+id/et kdbrg"
        android:layout width="match parent"
        android:layout height="wrap content"
       android:hint="Kode Barang"
       android:inputType="text" />
    <EditText
        android:id="@+id/et nmbrg"
        android:layout width="match parent"
        android:layout height="wrap content"
        android:hint="Nama Barang"
```

```
android:inputType="text" />
    <EditText
        android:id="@+id/et satuan"
        android:layout width="match parent"
        android:layout height="wrap content"
        android:hint="Satuan"
        android:inputType="text" />
    <EditText
        android:id="@+id/et hrgbeli"
        android:layout_width="match_parent"
        android:layout height="wrap content"
        android:hint="Harga Beli"
        android:inputType="number" />
    <EditText
        android:id="@+id/et hrgjual"
        android:layout_width="match parent"
        android: layout height="wrap content"
        android:hint="Harga Jual"
        android:inputType="number" />
    <EditText
        android:id="@+id/et_stok"
        android:layout width="match parent"
        android:layout height="wrap content"
        android:hint="Stok"
        android:inputType="number" />
    <EditText
       android:id="@+id/et stok min"
        android:layout width="match parent"
        android:layout_height="wrap content"
        android:hint="Stok Min"
        android:inputType="number" />
    <Button
        android:id="@+id/bt submit"
        android:layout width="match parent"
        android:layout height="wrap content"
        android:text="Submit" />
</LinearLayout>
activity get firebase.xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout width="match parent"
    android:layout height="match parent"
    android:background="#ADD8E6"
    android:padding="16dp"
    android:gravity="center">
    <TextView
        android:id="@+id/title"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout_centerHorizontal="true"
        android:layout marginBottom="20dp"
```

android:padding="10dp"

android:textColor="#000080"
android:textSize="30sp"
android:textStyle="bold" />

android:text="Result Data Firebase"

```
<But.ton
       android:id="@+id/buttonBack"
        android:layout width="match parent"
        android:layout_height="wrap content"
        android:layout alignParentBottom="true"
        android:layout marginLeft="70dp"
        android:layout marginTop="24dp"
        android:layout marginRight="70dp"
        android:background="#dc304a9f"
        android:text="Kembali"
        android:textColor="#fff" />
   <ListView
        android:layout above="@id/buttonBack"
        android:id="@+id/listview"
        android:layout below="@id/title"
        android:layout_width="match_parent"
        android:layout height="wrap content">
    </ListView>
</RelativeLayout>
```

## activity update.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
   xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:tools="http://schemas.android.com/tools"
   android:id="@+id/item"
   android:layout width="match parent"
   android:layout height="match parent"
   android:background="#ADD8E6"
   android:paddingLeft="10dp"
   android:paddingTop="5dp"
   android:paddingRight="10dp"
   android:paddingBottom="5dp">
        <LinearLayout
            android:layout width="match parent"
            android:layout height="wrap content"
            android:orientation="vertical"
            android:gravity="center">
            <TextView
                android:layout width="wrap content"
                android:layout height="wrap content"
                android:layout_margin="5dp"
                android:layout marginBottom="5dp"
                android:textSize="35sp"
                android:textStyle="bold"
                android:textColor="@color/black"
                android:text="Update Data" />
                <TextView
                    android:textStyle="bold"
                    android:layout_width="wrap_content"
                    android:layout height="wrap content"
                    android:text="KODE"
                    android:textColor="@color/black"/>
                <EditText
                    android:id="@+id/editKode"
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:layout alignParentLeft="true"
```

```
android:text="Kode"
    android:minWidth="110dp"
    android:gravity="center"
    android:textColor="#250000" />
<TextView
    android:textStyle="bold"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:text="Nama Barang"
    android:textColor="@color/black"/>
<EditText
    android:id="@+id/editNama"
    android:layout_width="wrap content"
    android:layout_height="wrap content"
    android:layout_below="@id/textKode"
    android:layout alignParentLeft="true"
    android:text="Nama"
    android:minWidth="110dp"
    android:gravity="center"
   android:textColor="#250000" />
<TextView
   android:textStyle="bold"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:text="Satuan"
   android:textColor="@color/black"/>
<EditText
   android:id="@+id/editSatuan"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout below="@id/textNama"
    android:layout alignParentLeft="true"
    android:text="Satuan"
    android:minWidth="110dp"
   android:gravity="center"
   android:textColor="#250000" />
<TextView
    android:textStyle="bold"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:text="Harga Beli"
   android:textColor="@color/black"/>
<EditText
    android:id="@+id/editHargaBeli"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout_below="@id/textSatuan"
   android:layout alignParentLeft="true"
   android:text="Harga Beli"
   android:inputType="number"
    android:minWidth="110dp"
    android:gravity="center"
   android:textColor="#250000" />
<TextView
    android:textStyle="bold"
    android:layout_width="wrap content"
    android:layout height="wrap content"
    android:text="Harga Jual"
    android:textColor="@color/black"/>
<EditText
    android:id="@+id/editHargaJual"
```

```
android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout below="@id/textHargaBeli"
        android:layout alignParentLeft="true"
        android:text="Harga Jual"
        android:inputType="number"
        android:minWidth="110dp"
        android:gravity="center"
       android:textColor="#250000" />
   <TextView
        android:textStyle="bold"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text="Stok"
        android:textColor="@color/black"/>
   <EditText
        android:id="@+id/editStok"
        android:layout width="wrap content"
        android:layout_height="wrap_content"
        android:layout below="@id/textHargaJual"
       android:layout alignParentLeft="true"
       android:text="Stok"
       android:inputType="number"
       android:minWidth="110dp"
       android:gravity="center"
       android:textColor="#250000" />
   <TextView
       android:textStyle="bold"
        android:layout_width="wrap content"
        android:layout height="wrap content"
        android:text="Stok Min"
       android:textColor="@color/black"/>
   <EditText
       android:id="@+id/editStokMin"
        android:layout width="wrap content"
        android:layout height="wrap content"
       android:layout below="@id/textStok"
       android:layout alignParentLeft="true"
       android:text="Stok Min"
       android:inputType="number"
       android:minWidth="110dp"
       android:gravity="center"
       android:textColor="#250000" />
<LinearLayout
   android:id="@+id/btn layout"
   android:layout width="match parent"
   android:layout height="wrap content"
   android:gravity="center"
   android:orientation="horizontal">
   <Button
        android:id="@+id/act update"
        android:layout width="wrap content"
        android:layout height="wrap content"
       android:paddingTop="5dp"
        android:layout marginRight="5dp"
        android:text="update"
        android:textColor="#fcfafa"
        android:textSize="18sp"
        android:textStyle="normal" />
```

## list item.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/item"
    android:layout width="match parent"
    android:layout height="wrap content"
    android:background="@android:color/transparent"
    android:paddingLeft="10dp"
    android:paddingTop="5dp"
    android:paddingRight="10dp"
    android:paddingBottom="5dp">
    <LinearLayout</pre>
        android:layout width="match parent"
        android:layout height="wrap content"
        android:background="#95FFBF"
        android:orientation="vertical"
        android:padding="7dp">
        <RelativeLayout
            android:layout width="match parent"
            android:layout height="wrap content"
            android:gravity="left">
            <TextView
                android:id="@+id/nomor"
                android:layout width="wrap content"
                android:layout height="wrap content"
                android:layout centerInParent="true"
                android:paddingTop="5dp"
                android:paddingBottom="5dp"
                android:text="1"
                android:textColor="#250000"
                android:textSize="50sp"
                android:textStyle="bold" />
            <LinearLayout</pre>
                android:layout width="wrap content"
                android:layout height="wrap content"
                android:layout toRightOf="@id/nomor"
                android:orientation="horizontal"
                android:gravity="center horizontal"
                android:paddingLeft="10dp">
                <LinearLayout</pre>
                    android:layout width="wrap content"
                    android:layout height="wrap content"
```

```
android:orientation="vertical">
    <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text="KODE"
        android:textColor="@color/black"
        android:textStyle="bold" />
    <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text="Nama Barang"
        android:textColor="@color/black"
        android:textStyle="bold" />
    <TextView
        android:layout_width="wrap_content"
        android:layout height="wrap content"
        android:text="Satuan"
        android:textColor="@color/black"
        android:textStyle="bold" />
    <TextView
        android:layout_width="wrap_content"
        android:layout height="wrap content"
        android:text="Harga Beli"
        android:textColor="@color/black"
        android:textStyle="bold" />
    <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text="Harga Jual"
        android:textColor="@color/black"
        android:textStyle="bold" />
    <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text="Stok"
        android:textColor="@color/black"
        android:textStyle="bold" />
    <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text="Stok Min"
        android:textColor="@color/black"
        android:textStyle="bold" />
</LinearLayout>
<LinearLavout
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:orientation="vertical">
    <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text=" : "/>
    <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text=" : "/>
    <TextView
        android:layout width="wrap content"
        android:layout_height="wrap_content"
android:text=" : "/>
    <TextView
```

```
android:layout width="wrap content"
        android:layout height="wrap content"
        android:text=" : "/>
    <TextView
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:text=" : "/>
    <TextView
        android:layout width="wrap content"
        android:layout_height="wrap_content"
        android:text=" : "/>
    <TextView
        android:layout width="wrap content"
        android:layout_height="wrap_content"
android:text=" : "/>
</LinearLayout>
<LinearLayout
    android:layout width="wrap content"
    android:layout_height="wrap content"
    android:orientation="vertical">
    <TextView
        android:id="@+id/textKode"
        android:layout width="wrap content"
        android:layout_height="wrap_content"
        android:layout alignParentLeft="true"
        android:text="Kode"
        android:textColor="#250000" />
    <TextView
        android:id="@+id/textNama"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout below="@id/textKode"
        android:layout alignParentLeft="true"
        android:text="Nama"
        android:textColor="#250000" />
    <TextView
        android:id="@+id/textSatuan"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout below="@id/textNama"
        android:layout alignParentLeft="true"
        android:text="Satuan"
        android:textColor="#250000" />
    <TextView
        android:id="@+id/textHargaBeli"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout below="@id/textSatuan"
        android:layout alignParentLeft="true"
        android:text="Harga Beli"
        android:textColor="#250000" />
    <TextView
        android:id="@+id/textHargaJual"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout below="@id/textHargaBeli"
        android:layout alignParentLeft="true"
        android:text="Harga Jual"
        android:textColor="#250000" />
    <TextView
        android:id="@+id/textStok"
```

```
android:layout width="wrap content"
                        android:layout height="wrap content"
                        android:layout below="@id/textHargaJual"
                        android:layout alignParentLeft="true"
                        android:text="Stok"
                        android:textColor="#250000" />
                    <TextView
                        android:id="@+id/textStokMin"
                        android:layout width="wrap content"
                        android:layout_height="wrap_content"
                        android:layout_below="@id/textStok"
                        android:layout_alignParentLeft="true"
                        android:text="Stok Min"
                        android:textColor="#250000" />
                </LinearLayout>
            </LinearLayout>
        </RelativeLayout>
        <LinearLayout
            android:id="@+id/btn layout"
            android:layout width="match parent"
            android:layout_height="wrap_content"
            android:layout_alignParentRight="true"
            android:layout centerInParent="true"
            android:paddingTop="3dp"
            android:gravity="left"
            android:orientation="horizontal">
            <Button
                android:id="@+id/delete"
                android:layout width="wrap content"
                android:layout height="wrap content"
                android:layout_marginRight="5dp"
                android:text="hapus"
                android:textColor="@color/white"
                android:backgroundTint="#000080"
                android:textSize="18sp"
               android:textStyle="normal" />
            <Button
                android:id="@+id/btn update"
                android:layout width="wrap content"
                android:layout height="wrap content"
                android:layout marginLeft="5dp"
                android:text="update"
                android:textColor="@color/white"
                android:backgroundTint="#000080"
                android:textSize="18sp"
                android:textStyle="normal" />
        </LinearLayout>
    </LinearLayout>
</LinearLayout>
```

## Code MainActivity.java

```
package android.example.firebase;
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 com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import android.os.Bundle;
import android.example.firebase.Barang;
import javax.annotation.Nullable;
public class MainActivity extends AppCompatActivity {
    private Button btCreateDB;
   private Button btViewDB;
    @Override
    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        btCreateDB = (Button) findViewById(R.id.bt createdata);
        btViewDB = (Button) findViewById(R.id.bt viewdata);
        btCreateDB.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
startActivity(FirebaseDBCreate.getActIntent(MainActivity.this));
            }
        });
        btViewDB.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent i = new Intent(MainActivity.this,
GetFirebaseActivity.class);
                startActivity(i);
            }
        });
    @Override
   public void onBackPressed() {
       finishAffinity();
}
Barang.java
package android.example.firebase;
import com.google.firebase.database.IgnoreExtraProperties;
import java.io.Serializable;
@IgnoreExtraProperties
public class Barang implements Serializable{
   private String Kdbrg;
   private String Nmbrg;
   private String Satuan;
   private String Hrgbeli;
   private String Hrgjual;
    private String Stok;
    private String Stok min;
   private String key;
   public Barang(){}
```

```
public String getKdbrg() {
 return Kdbrg;
public void setKdbrg(String kdbrg) {
Kdbrg = kdbrg;
public String getNmbrg() {
return Nmbrg;
public void setNmbrg(String nmbrg) {
  Nmbrg = nmbrg;
public String getSatuan() {
return Satuan;
public void setSatuan(String satuan) {
Satuan = satuan;
public String getHrgbeli() {
return Hrgbeli;
}
public void setHrgbeli(String hrgbeli) {
  Hrgbeli = hrgbeli;
}
public String getHrgjual() {
  return Hrgjual;
}
public void setHrgjual(String hrgjual) {
  Hrgjual = hrgjual;
}
public String getStok() {
   return Stok;
public void setStok(String stok) {
   Stok = stok;
}
public String getStok min() {
  return Stok min;
}
public void setStok min(String stok min) {
   Stok min = stok min;
public String getKey() {
  return key;
public void setKey(String key) {
```

```
this.key = key;
    }
    @Override
    public String toString(){
        return " "+Kdbrg+"\n" +
                " "+Nmbrg +"\n" +
                " "+Satuan +"\n" +
                " "+Hrqbeli +"\n" +
                " "+Hrgjual +"\n" +
                " "+Stok +"\n" +
                " "+Stok min;
   public Barang (String Kd, String Nm, String satuan, String beli, String
jual, String stok, String stok min) {
       Kdbrg = Kd;
       Nmbrg = Nm;
        Satuan = satuan;
       Hrqbeli = beli;
       Hrgjual = jual;
       Stok = stok;
       Stok min = stok min;
    }
}
```

## FirebaseDBCreate.java

```
package android.example.firebase;
import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
import android.app.Activity;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.view.inputmethod.InputMethodManager;
import android.widget.Button;
import android.widget.EditText;
import com.google.android.gms.tasks.OnSuccessListener;
import android.os.Bundle;
import com.google.android.material.snackbar.Snackbar;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import android.example.firebase.Barang;
public class FirebaseDBCreate extends AppCompatActivity {
    private DatabaseReference database;
    private Button btSubmit;
    private EditText etKode;
    private EditText etNama;
    private EditText etSatuan;
   private EditText etHargaBeli;
   private EditText etHargaJual;
    private EditText etStok;
   private EditText etStokMin;
```

```
@Override
    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity firebase dbcreate);
        etKode = (EditText) findViewById(R.id.et kdbrg);
        etNama = (EditText) findViewById(R.id.et_nmbrg);
        etSatuan = (EditText) findViewById(R.id.et satuan);
        etHargaBeli = (EditText) findViewById(R.id.et hrgbeli);
        etHargaJual = (EditText) findViewById(R.id.et hrgjual);
        etStok = (EditText) findViewById(R.id.et stok);
        etStokMin = (EditText) findViewById(R.id.et stok min);
        btSubmit = (Button) findViewById(R.id.bt submit);
        database = FirebaseDatabase.getInstance().getReference();
        final Barang barang = (Barang)
getIntent().getSerializableExtra("data");
        if (barang != null) {
            etKode.setText(barang.getKdbrg());
            etNama.setText(barang.getNmbrg());
            etSatuan.setText(barang.getSatuan());
            etHargaBeli.setText(barang.getHrgbeli());
            etHargaJual.setText(barang.getHrgjual());
            etStok.setText(barang.getStok());
            etStokMin.setText(barang.getStok min());
            btSubmit.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View view) {
                    barang.setKdbrg(etKode.getText().toString());
                    barang.setNmbrg(etNama.getText().toString());
                    barang.setSatuan(etSatuan.getText().toString());
                    barang.setHrgbeli(etHargaBeli.getText().toString());
                    barang.setHrgjual(etHargaJual.getText().toString());
                    barang.setStok(etStok.getText().toString());
                    barang.setStok min(etStokMin.getText().toString());
                    updateBarang(barang);
            });
        } else {
            btSubmit.setOnClickListener(new View.OnClickListener() {
                public void onClick(View view) {
                    if (!isEmpty(etKode.getText().toString()) &&
!isEmpty(etNama.getText().toString()) &&
!isEmpty(etSatuan.getText().toString()) &&
!isEmpty(etHargaBeli.getText().toString()) &&
!isEmpty(etHargaJual.getText().toString()) &&
!isEmpty(etStok.getText().toString()) &&
!isEmpty(etStokMin.getText().toString()))
                        submitBarang(new
Barang(etKode.getText().toString(), etNama.getText().toString(),
etSatuan.getText().toString(), etHargaBeli.getText().toString(),
etHargaJual.getText().toString(), etStok.getText().toString(),
etStokMin.getText().toString());
                        Snackbar.make(findViewById(R.id.bt submit), "Data
barang tidak boleh kosong", Snackbar. LENGTH LONG).show();
                    InputMethodManager imm = (InputMethodManager)
getSystemService(Context.INPUT METHOD SERVICE);
```

```
imm.hideSoftInputFromWindow(etKode.getWindowToken(),
0);
            });
        }
    private boolean isEmpty(String s) {
        return TextUtils.isEmpty(s);
    private void updateBarang(Barang barang) {
        database.child("barang")
                .child(barang.getKey())
                .setValue(barang)
                .addOnSuccessListener(this, new OnSuccessListener<Void>() {
                    @Override
                    public void onSuccess(Void aVoid) {
                        Snackbar.make(findViewById(R.id.bt submit), "Data
berhasil diupdatekan", Snackbar. LENGTH LONG).setAction ("Oke", new
View.OnClickListener() {
                             @Override
                             public void onClick(View view) {
                                finish();
                             }
                         }).show();
                    }
                });
    private void submitBarang(Barang barang) {
database.child("barang").push().setValue(barang).addOnSuccessListener(
                this, new OnSuccessListener<Void>() {
                    @Override
                    public void onSuccess(Void aVoid) {
                        etKode.setText("");
                        etNama.setText("");
                        etSatuan.setText("");
                        etHarqaBeli.setText("");
                        etHarqaJual.setText("");
                        etStok.setText("");
                        etStokMin.setText("");
                        Snackbar.make(findViewById(R.id.bt submit), "Data
berhasil ditambahkan", Snackbar. LENGTH LONG). show();
                });
    public static Intent getActIntent(Activity activity) {
        return new Intent(activity, FirebaseDBCreate.class);
    }
}
GetFirebaseActivity.java
package android.example.firebase;
import android.app.Activity;
import android.content.Context;
import android.content.Intent;
```

```
import android.os.Bundle;
import android.os.Parcelable;
import android.util.Log;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.ListView;
import android.widget.SimpleAdapter;
import android.widget.TextView;
import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.Query;
import com.google.firebase.database.ValueEventListener;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
public class GetFirebaseActivity extends Activity implements
AdapterView.OnItemClickListener {
    Activity activity;
    ListView listView;
    ListAdapter adapter;
    private ArrayList<HashMap<String, String>> list = new
ArrayList<HashMap<String, String>>();
    Button btnBack;
    DatabaseReference rootRef, demoRef;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity get firebase);
        activity = this;
        btnBack = (Button) findViewById(R.id.buttonBack);
        listView = findViewById(R.id.listview);
        listView.setOnItemClickListener(this);
        listView.setOverScrollMode(View.OVER SCROLL NEVER);
        rootRef = FirebaseDatabase.getInstance().getReference();
        demoRef = rootRef.child("barang");
        btnBack.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(GetFirebaseActivity.this,
MainActivity.class);
                startActivity(i);
        });
        getDataValue();
    @Override
    public void onItemClick(AdapterView<?> parent, View view, int position,
long id) {
    }
    public void getDataValue(){
        list = new ArrayList<HashMap<String, String>>();
        rootRef.child("barang")
                .addListenerForSingleValueEvent(new ValueEventListener() {
                    @Override
```

```
public void onDataChange(DataSnapshot dataSnapshot) {
                         int i = 1;
                         for (DataSnapshot snapshot :
dataSnapshot.getChildren())
                             String id = (String) snapshot.getKey();
                             String Kdbrg = (String)
snapshot.child("kdbrg").getValue();
                             String Nmbrg = (String)
snapshot.child("nmbrg").getValue();
                             String Satuan = (String)
snapshot.child("satuan").getValue();
                             String Hrgbeli = (String)
snapshot.child("hrgbeli").getValue();
                            String Hrgjual = (String)
snapshot.child("hrgjual").getValue();
                            String Stok = (String)
snapshot.child("stok").getValue();
                            String Stok min = (String)
snapshot.child("stok min").getValue();
                            HashMap<String, String> data = new HashMap<>();
                             data.put("key", id);
                             data.put("nomor", ""+i++);
data.put("kdbrg", Kdbrg);
                             data.put("nmbrg", Nmbrg);
                             data.put("satuan", Satuan);
                             data.put("hrgbeli", Hrgbeli);
                             data.put("hrgjual", Hrgjual);
                             data.put("stok",Stok);
                             data.put("stok min",Stok min);
                            list.add(data);
                        adapter = new ListAdapter(activity, list,
R.layout.list item, new String[]{"nomor", "kdbrg", "nmbrg", "satuan",
"hrgbeli", "hrgjual", "stok", "stok min"}, new int[]{R.id.nomor,
R.id.textKode, R.id.textNama, R.id.textSatuan, R.id.textHargaBeli,
R.id.textHargaJual, R.id.textStok, R.id.textStokMin});
                        Parcelable state = listView.onSaveInstanceState();
                        listView.setAdapter(adapter);
                        listView.onRestoreInstanceState(state);
                        adapter.notifyDataSetChanged();
                    @Override
                    public void onCancelled(DatabaseError databaseError) {
                    }
                });
    public class ListAdapter extends SimpleAdapter {
        private Context mContext;
        public LayoutInflater inflater = null;
        public ListAdapter(Context context, List<? extends Map<String, ?>>
data, int resource, String[] from, int[] to) {
            super(context, data, resource, from, to);
            mContext = context;
            inflater = (LayoutInflater)
mContext.getSystemService(Context.LAYOUT_INFLATER SERVICE);
        }
        @Override
        public View getView(int position, View convertView, ViewGroup
parent) {
            View vi = convertView;
            if (convertView == null)
```

```
vi = inflater.inflate(R.layout.list item, null);
            HashMap<String, Object> data = (HashMap<String, Object>)
getItem(position);
            final Button btnDelete =vi.findViewById(R.id.delete);
            final Button btnUpdate =vi.findViewById(R.id.btn update);
            final TextView nomor = vi.findViewById(R.id.nomor);
            final TextView textKd = vi.findViewById(R.id.textKode);
            final TextView textNm = vi.findViewById(R.id.textNama);
            final TextView textSatuan = vi.findViewById(R.id.textSatuan);
            final TextView textHrgBeli =
vi.findViewById(R.id.textHargaBeli);
            final TextView textHrgJual =
vi.findViewById(R.id.textHargaJual);
            final TextView textStok = vi.findViewById(R.id.textStok);
            final TextView textStokMin = vi.findViewById(R.id.textStokMin);
            final String strKey = (String) data.get("key");
            final String strID = (String) data.get("nomor");
            final String strTextKode = (String) data.get("kdbrg");
            final String strTextNama = (String) data.get("nmbrg");
            final String strTextSatuan = (String) data.get("satuan");
            final String strTextHrgBeli = (String) data.get("hrgbeli");
            final String strTextHrgJual = (String) data.get("hrgjual");
            final String strTextStok = (String) data.get("stok");
            final String strTextStokMin = (String) data.get("stok min");
            nomor.setText(strID);
            textKd.setText(strTextKode);
            textNm.setText(strTextNama);
            textSatuan.setText(strTextSatuan);
            textHrgBeli.setText(strTextHrgBeli);
            textHrgJual.setText(strTextHrgJual);
            textStok.setText(strTextStok);
            textStokMin.setText(strTextStokMin);
            btnDelete.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View view) {
                    Delete(strKey);
            });
            btnUpdate.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View view) {
                    Bundle bundle = new Bundle();
                    bundle.putString("key", strKey);
                    bundle.putString("kdbrg", strTextKode);
                    bundle.putString("nmbrg", strTextNama);
                    bundle.putString("satuan", strTextSatuan);
                    bundle.putString("hrgbeli", strTextHrgBeli);
                    bundle.putString("hrgjual", strTextHrgJual);
                    bundle.putString("stok", strTextStok);
                    bundle.putString("stokmin", strTextStokMin);
                    Intent intent = new Intent(GetFirebaseActivity.this,
UpdateActivity.class);
                    intent.putExtras(bundle);
                    startActivity(intent);
            });
```

```
return vi;
        }
    public void Delete(String keyID) {
        Query applesQuery = demoRef.child(keyID);
        applesQuery.addListenerForSingleValueEvent(new ValueEventListener()
{
            @Override
            public void onDataChange(DataSnapshot dataSnapshot) {
                for (DataSnapshot dummySnapshot:
dataSnapshot.getChildren()) {
                    dummySnapshot.getRef().removeValue();
                getDataValue();
            @Override
            public void onCancelled(DatabaseError databaseError) {
                Log.e("delete", "onCancelled",
databaseError.toException());
            }
        });
    }
}
UpdateActivity.java
package android.example.firebase;
import androidx.appcompat.app.AppCompatActivity;
```

```
import android.content.Intent;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import com.google.android.gms.tasks.OnSuccessListener;
import com.google.android.material.snackbar.Snackbar;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import android.example.firebase.Barang;
public class UpdateActivity extends AppCompatActivity {
    private EditText kdBaru, namaBaru, satuanBaru, HrgBeliBaru,
HrgJualBaru, StokBaru, StokMinBaru;
    private Button update, batal;
    private DatabaseReference database;
    private FirebaseAuth auth;
    private String cekKd, cekNamaBaru, cekSatuanBaru, cekHrgBeli,
cekHrgJual, cekStok, cekStokMin;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity update);
        kdBaru = findViewById(R.id.editKode) ;
```

```
namaBaru = findViewById(R.id.editNama) ;
        satuanBaru = findViewById(R.id.editSatuan) ;
        HrgBeliBaru = findViewById(R.id.editHargaBeli) ;
        HrgJualBaru = findViewById(R.id.editHargaJual) ;
        StokBaru = findViewById(R.id.editStok) ;
        StokMinBaru = findViewById(R.id.editStokMin) ;
        update = findViewById(R.id.act update) ;
        batal = findViewById(R.id.btn batal2);
        auth = FirebaseAuth.getInstance();
        database = FirebaseDatabase.getInstance().getReference();
        getData();
        update.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                cekKd = kdBaru.getText().toString();
                cekNamaBaru = namaBaru.getText().toString();
                cekSatuanBaru = satuanBaru.getText().toString();
                cekHrgBeli = HrgBeliBaru.getText().toString();
                cekHrgJual = HrgJualBaru.getText().toString();
                cekStok = StokBaru.getText().toString();
                cekStokMin = StokMinBaru.getText().toString();
                if(isEmpty(cekKd) || isEmpty(cekNamaBaru) ||
isEmpty(cekSatuanBaru) || isEmpty(cekHrgBeli) || isEmpty(cekHrgJual) ||
isEmpty(cekStok) || isEmpty(cekStokMin)){
                        Toast.makeText(UpdateActivity.this, "Data tidak
boleh ada yang kosong", Toast. LENGTH SHORT). show();
                }else {
                    Barang brg = new Barang();
                    brg.setKdbrg(kdBaru.getText().toString());
                    brg.setNmbrg(namaBaru.getText().toString());
                    brg.setSatuan(satuanBaru.getText().toString());
                    brg.setHrgbeli(HrgBeliBaru.getText().toString());
                    brg.setHrgjual(HrgJualBaru.getText().toString());
                    brg.setStok(StokBaru.getText().toString());
                    brg.setStok min(StokMinBaru.getText().toString());
                    updateBarang(brg);
                    Intent intent = new Intent(UpdateActivity.this,
GetFirebaseActivity.class);
                    startActivity(intent);
                }
        });
        batal.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent = new Intent(UpdateActivity.this,
GetFirebaseActivity.class);
                startActivity(intent);
        });
    }
    private boolean isEmpty(String s){
        return TextUtils.isEmpty(s);
    private void getData() {
```

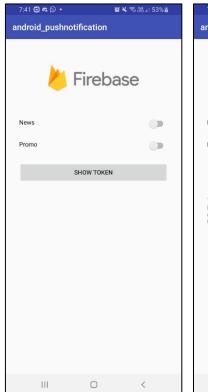
```
final String getKode = getIntent().getExtras().getString("kdbrg");
        final String getNama = getIntent().getExtras().getString("nmbrg");
        final String getSatuan =
getIntent().getExtras().getString("satuan");
        final String getHrgBeli =
getIntent().getExtras().getString("hrgbeli");
        final String getHrgJual =
getIntent().getExtras().getString("hrgjual");
        final String getStok = getIntent().getExtras().getString("stok");
        final String getStokMin =
getIntent().getExtras().getString("stokmin");
        kdBaru.setText(getKode);
        namaBaru.setText(getNama);
        satuanBaru.setText(getSatuan);
        HrgBeliBaru.setText(getHrgBeli);
        HrqJualBaru.setText(getHrqJual);
        StokBaru.setText(getStok);
        StokMinBaru.setText(getStokMin);
    }
    private void updateBarang(Barang barang){
        final String Key = getIntent().getExtras().getString("key");
database.child("barang").child(Key).setValue(barang).addOnSuccessListener(
                this, new OnSuccessListener<Void>() {
                    @Override
                    public void onSuccess(Void aVoid) {
                        kdBaru.setText("");
                        namaBaru.setText("");
                        satuanBaru.setText("");
                        HrgBeliBaru.setText("");
                        HrgJualBaru.setText("");
                        StokBaru.setText("");
                        StokMinBaru.setText("");
                        Snackbar.make(findViewById(R.id.act update), "Data
diupdate", Snackbar. LENGTH LONG) . show();
                    }
                });
   }
}
AndroidManifest.xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    package="android.example.firebase">
    <uses-permission android:name="android.permission.INTERNET" />
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic launcher"
        android:label="@string/app name"
        android:roundIcon="@mipmap/ic launcher round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Firebase">
```

```
<activity
            android:name=".UpdateActivity"
            android:exported="true" />
        <activity
            android:name=".GetFirebaseActivity"
            android:exported="true" />
        <activity
            android:name=".FirebaseDBCreate"
            android:exported="true" />
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER"</pre>
/>
            </intent-filter>
        </activity>
    </application>
</manifest>
colors.xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple 200">#FFBB86FC</color>
    <color name="purple 500">#000080</color>
    <color name="purple 700">#FF3700B3</color>
    <color name="teal 200">#FF03DAC5</color>
    <color name="teal 700">#FF018786</color>
    <color name="black">#FF000000</color>
    <color name="white">#FFFFFFF</color>
</resources>
Strings.xml
<resources>
```

<string name="app name">Firebase</string>

</resources>

## 2. Program Push Notification dengan Firebase Cloud Messaging Hasil Program :





## **Code Program:**

## Layout-Android(activity main.xml):

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/activity_main"
    android:layout width="match parent"
    android:layout_height="match_parent"
    android:paddingLeft="@dimen/activity horizontal margin"
    android:paddingRight="@dimen/activity horizontal margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity vertical margin"
    android:orientation="vertical"
    tools:context="com.example.user.android pushnotification.MainActivity">
    < ImageView
        android:layout_width="match_parent"
        android:layout height="wrap content"
        android:src="@drawable/firebase"
        tools:ignore="ContentDescription" />
    <Switch
        android:id="@+id/switchNews"
        android:layout width="match parent"
        android:layout height="wrap content"
        android:padding="16dp"
        android:gravity="start"
        android:checked="false"
        android:text="@string/news"/>
    <Switch
```

```
android:id="@+id/switchPromo"
        android:layout width="match parent"
        android:layout height="wrap content"
        android:padding="16dp"
        android:gravity="start"
        android:checked="false"
        android:text="@string/promo" />
    <Button
        android:id="@+id/btn token"
        android:layout_width="match_parent"
        android: layout height="wrap content"
        android:layout margin="16dp"
        android:text="@string/show token"/>
    <TextView
        android:id="@+id/tv token"
        android:layout width="wrap content"
        android:layout height="wrap content"
       android:padding="16dp" />
</LinearLayout>
```

## Code MainActivity.java

```
package com.example.user.android pushnotification;
import android.content.SharedPreferences;
import android.preference.PreferenceManager;
import android.support.v4.content.SharedPreferencesCompat;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.CompoundButton;
import android.widget.Switch;
import android.widget.TextView;
import android.widget.Toast;
import com.google.firebase.iid.FirebaseInstanceId;
{\tt import\ com.google.firebase.messaging.FirebaseMessaging;}
public class MainActivity extends AppCompatActivity {
    private static final String PREF SWITCH NEWS = "switch news";
    private static final String PREF_SWITCH_PROMO = "switch promo";
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        Switch News switch = (Switch) findViewById(R.id.switchNews);
        Switch Promo switch = (Switch) findViewById(R.id.switchPromo);
        Button Tokenbtn = (Button) findViewById(R.id.btn token);
        Tokenbtn.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view) {
                String token = FirebaseInstanceId.getInstance().getToken();
                TextView Tokenview = (TextView) findViewById(R.id.tv token);
                Tokenview.setText(getResources().getString(R.string.token, token));
                Log. i("TOKEN", token);
        });
```

```
News switch.setChecked(isSwitchChecked(PREF SWITCH NEWS));
        Promo switch.setChecked(isSwitchChecked(PREF SWITCH PROMO));
        News switch.setChecked(isSwitchChecked(PREF SWITCH NEWS));
        News_switch.setChecked(isSwitchChecked(PREF SWITCH PROMO));
        News switch.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(CompoundButton compoundButton, boolean
checked) {
                setSwitchChecked(PREF SWITCH NEWS, checked);
                if (checked) {
                    FirebaseMessaging.getInstance().subscribeToTopic("news");
                    Toast.makeText(getApplicationContext(), "Subscribe to News
Topic", Toast. LENGTH SHORT). show();
                }else{
                    FirebaseMessaging.getInstance().unsubscribeFromTopic("news");
                    Toast.makeText(qetApplicationContext(), "Unsubscribe from News
Topic", Toast. LENGTH SHORT). show();
        });
        Promo switch.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(CompoundButton compoundButton, boolean
checked) {
                setSwitchChecked(PREF SWITCH PROMO, checked);
                if (checked) {
                    FirebaseMessaging.getInstance().subscribeToTopic("promo");
                    Toast.makeText(getApplicationContext(), "Subscribe to Promo
Topic", Toast. LENGTH SHORT) . show();
                }else{
                    FirebaseMessaging.getInstance().unsubscribeFromTopic("promo");
                    Toast.makeText(getApplicationContext(), "Unsubscribe from Promo
Topic", Toast.LENGTH SHORT).show();
                }
            }
        });
    private void setSwitchChecked(String permission, boolean isChecked) {
        SharedPreferences preferences =
PreferenceManager.getDefaultSharedPreferences(this);
        SharedPreferences.Editor editor = preferences.edit();
        editor.putBoolean(permission, isChecked);
       editor.apply();
    private boolean isSwitchChecked(String permission) {
        SharedPreferences preferences =
PreferenceManager.getDefaultSharedPreferences(this);
       return preferences.getBoolean(permission, false);
}
Code MyFirebaseInstanceIDService.java
package com.example.user.android pushnotification;
import android.util.Log;
import com.google.firebase.iid.FirebaseInstanceId;
import com.google.firebase.iid.FirebaseInstanceIdService;
```

```
public class MyFirebaseInstanceIDService extends FirebaseInstanceIdService {
    private static final String TAG = "MyFirebaseIIDService";

    @Override
    public void onTokenRefresh() {
        String refreshedToken = FirebaseInstanceId.getInstance().getToken();
        Log.d(TAG, "Refreshed Token : " + refreshedToken);
        sendRegistrationToServer(refreshedToken);
    }

    private void sendRegistrationToServer(String token) {
     }
}
```

## Code MyFirebaseMessagingService.java

```
package com.example.user.android pushnotification;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.media.Ringtone;
import android.media.RingtoneManager;
import android.net.Uri;
import android.support.v4.app.NotificationCompat;
import android.util.Log;
import com.google.firebase.messaging.FirebaseMessagingService;
import com.google.firebase.messaging.RemoteMessage;
public class MyFirebaseMessagingService extends FirebaseMessagingService {
   private static final String TAG = "MyFirebaseMsgService";
    @Override
    public void onMessageReceived(RemoteMessage remoteMessage) {
        Log.d(TAG, "From : "+remoteMessage.getFrom());
        if (remoteMessage.getNotification() != null) {
            Log.d(TAG, "Message data payload: "+remoteMessage.getData());
        if (remoteMessage.getNotification() != null) {
           Log.d(TAG, "Message Notification Body: "+
remoteMessage.getNotification().getBody());
           sendNotification(remoteMessage.getNotification().getBody());
    }
    private void sendNotification(String messageBody) {
        Intent i = new Intent(this, MainActivity.class);
        i.addFlags(Intent.FLAG ACTIVITY CLEAR TOP);
        PendingIntent pendingIntent = PendingIntent.getActivity(this, 0, i,
PendingIntent.FLAG ONE SHOT);
        Uri defaultSoundUri =
RingtoneManager.getDefaultUri(RingtoneManager.TYPE NOTIFICATION);
        NotificationCompat.Builder notificationBuilder = new
NotificationCompat.Builder(this)
                .setSmallIcon(R.mipmap.ic launcher)
                .setContentTitle("FCM Message")
                .setContentText (messageBody)
                .setAutoCancel(true)
                .setSound(defaultSoundUri)
                .setContentIntent(pendingIntent);
        NotificationManager notificationManager = (NotificationManager)
getSystemService(Context.NOTIFICATION SERVICE);
        notificationManager.notify(0, notificationBuilder.build());
```

```
}
```

### AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   package="com.example.user.android pushnotification" >
    <application
       android:allowBackup="true"
        android:icon="@mipmap/ic launcher"
        android:label="@string/app_name"
        android:supportsRtl="true"
        android:theme="@style/AppTheme" >
        <activity android:name=".MainActivity" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <meta-data
            android:name="com.google.firebase.messaging.default notification icon"
            android:resource="@mipmap/ic launcher" />
        <meta-data
            android: name="com.google.firebase.messaging.default_notification_color"
            android:resource="@color/colorAccent" />
        Kservice
            android:name=".MyFirebaseMessagingService">
            <intent-filter>
                <action android:name="com.google.firebase.MESSAGING EVENT"/>
            </intent-filter>
        </service>
        <service
            android:name=".MyFirebaseInstanceIDService">
            <intent-filter>
                <action android:name="com.google.firebase.INSTANCE ID EVENT"/>
            </intent-filter>
        </service>
    </application>
</manifest>
colors.xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="colorPrimary">#3F51B5</color>
    <color name="colorPrimaryDark">#303F9F</color>
    <color name="colorAccent">#FF4081</color>
</resources>
Styles.xml
<resources>
    <!-- Base application theme. -->
    <style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar">
        <!-- Customize your theme here. -->
        <item name="colorPrimary">@color/colorPrimary</item>
```

## Strings.xml