Adapun Aplikasi Sistem Informasi Geografis Kota Palembang Berbasis Android ini memiliki 3 menu utama dengan 2 bahasa pemrograman dimana setiap menu tersebut memiliki kelas atau *activity* yang terdiri dari *coding-coding* yang akan mengatur *user interface* antara pengguna dan aplikasi.

1. XML

a. Pemrograman pada Main Activity

```
// bagian dari activity_main
// recycler view di gunakan untuk menampung data2 pariwisata yg ada pada rowlist

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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:showIn="@layout/activity_main">

    <android.support.v7.widget.RecyclerView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/recycleview">
    </android.support.v7.widget.RecyclerView>
</RelativeLayout>
```

b. Pemrograman pada Rowlist

```
// tampilan content pariwisata => judul, alamat, dan gambar tempat

<?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="wrap_content">

    <android.support.v7.widget.CardView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/cardview"
        android:layout_gravity="center"
        android:layout_marginBottom="3dp">
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="vertical">
            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:id="@+id/teksjudul"
```

```
            android:textSize="15sp"
            android:textStyle="bold"
            android:layout_marginTop="10dp"
            android:layout_marginLeft="10dp"/>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:id="@+id/tekslokasi"
            android:textSize="12sp"
            android:layout_marginTop="5dp"
            android:textStyle="italic"
            android:layout_marginLeft="10dp"/>
        <ImageView
            android:layout_width="match_parent"
            android:layout_height="250dp"
            android:id="@+id/gambarampera"
            android:scaleType="fitXY"
            android:layout_marginTop="10dp"
            android:layout_marginBottom="10dp"/>
         <LinearLayout
             android:layout_width="match_parent"
             android:layout_height="wrap_content"
             android:layout_marginBottom="15dp"
             android:orientation="horizontal">
             <ImageView
                 android:layout_width="50dp"
                 android:layout_height="50dp"
                 android:id="@+id/imgDeskripsi"
                 android:layout_marginLeft="15dp"
                 android:background="@drawable/hdpi"/>
             <ImageView
                 android:layout_width="50dp"
                 android:layout_height="50dp"
                 android:id="@+id/imgHarga"
                 android:layout_marginLeft="15dp"
                 android:background="@drawable/rp1"/>
             <ImageView
                 android:layout_width="50dp"
                 android:layout_height="50dp"
                 android:id="@+id/imgMaps"
                 android:layout_marginLeft="15dp"
                 android:background="@drawable/maps1"/>
            </LinearLayout>
      </LinearLayout>
   </android.support.v7.widget.CardView>
</RelativeLayout>
```

c. Pemrograman pada Deskripsi Activity

```
// tampilan deskripsi dari tempat pariwisata yang dipilih
```

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
   xmlns:ext="http://schemas.android.com/apk/res-auto"
   xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="match_parent"
   android:layout_height="match_parent">

   // menampilkan gambar
   <ImageView
      android:layout_width="match_parent"
      android:layout_height="180dp"
      android:id="@+id/image"
      android:scaleType="fitXY"
      android:layout_centerHorizontal="true"/>

   // menampilkan text
   <TextView
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:id="@+id/teksampera"
      android:layout_below="@+id/image"
      android:textSize="30sp"
      android:textColor="@android:color/white"
      android:background="@color/colorPrimary"
      android:padding="10dp" />

   // agar dapat di scroll
   <ScrollView
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_below="@+id/teksampera">

      // menampilkan text rata kiri kanan
      <com.bluejamesbond.text.DocumentView
         android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:id="@+id/textdeskripsi"
         ext:documentView_insetPadding="15dp"
         ext:documentView_textAlignment="justified" />
      <!--<TextView-->
         <!--ext:documentView_text="@string/tentangkami"-->
         <!--android:layout_width="wrap_content"-->
         <!--android:layout_height="wrap_content"-->
         <!--android:id="@+id/textdeskripsi"-->
         <!--android:layout_margin="8dp"-->
         <!--android:paddingBottom="20dp"/>-->
   </ScrollView>

</RelativeLayout>
```

d. Pemrograman pada Harga Activity

// tampilan daftar harga dari tempat pariwisata yang dipilih

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
   xmlns:ext="http://schemas.android.com/apk/res-auto"
   xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="match_parent"
   android:layout_height="match_parent">

   // menampilkan gambar
   <ImageView
      android:layout_width="match_parent"
      android:layout_height="180dp"
      android:id="@+id/image"
      android:scaleType="fitXY"
      android:layout_centerHorizontal="true"
      android:layout_alignParentTop="true"/>

   // menampilkan text
   <TextView
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:id="@+id/teksampera"
      android:layout_below="@+id/image"
      android:textSize="30sp"
      android:textColor="@android:color/white"
      android:background="@color/colorPrimary"
      android:padding="10dp" />

   // agar dapat di scroll
   <ScrollView
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_below="@+id/teksampera">

      // menampilkan text rata kiri kanan
      <com.bluejamesbond.text.DocumentView
         android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:id="@+id/textdeskripsi"
         ext:documentView_insetPadding="15dp"
         ext:documentView_textAlignment="justified" />
      <!--<TextView-->
         <!--android:layout_width="wrap_content"-->
         <!--android:layout_height="wrap_content"-->
         <!--android:id="@+id/textdeskripsi"-->
         <!--android:layout_margin="8dp"-->
         <!--android:paddingBottom="20dp"/>-->
```

```
    </ScrollView>

</RelativeLayout>
```

e. Pemrograman pada Maps Activity

```
// tampilan maps

<fragment
   xmlns:android="http://schemas.android.com/apk/res/android"
   android:id="@+id/maps"
   android:name="com.google.android.gms.maps.SupportMapFragment"
   android:layout_width="match_parent"
   android:layout_height="match_parent" />
```

f. Pemrograman pada Maps Activity

```
// tampilan streetview 360deg

<fragment
   android:name="com.google.android.gms.maps.StreetViewPanoramaFragment"
   android:id="@+id/streetviewpanorama"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   xmlns:android="http://schemas.android.com/apk/res/android" />
```

2. Java

a. Database Helper

```
package com.example.celby.myapplication;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.LinearLayoutManager;
import android.support.v7.widget.RecyclerView;
import android.widget.Toast;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
```

```
//Deklarasi(penamaan) variabel yang akan digunakan

RecyclerView myRecyclerView;
RecyclerView.LayoutManager mLayoutManager;
RecycleViewAdapter mAdapter;
DatabaseHelper dbPariwisata;
SQLiteDatabase db;
long lastTM;

@Override
protected void onCreate(Bundle savedInstanceState) {
   super.onCreate(savedInstanceState);

   //set tampilan ke layout content_main
   setContentView(R.layout.content_main);

   //menghubungkan recycleview java dengan recycleview layout
   myRecyclerView=(RecyclerView)findViewById(R.id.recycleview);

   //set mLayoutManager sebagai LinearLayoutManager untuk
   MainActivity.java
   mLayoutManager=newLinearLayoutManager(MainActivity.this);

   //pengaturan recycleview
   myRecyclerView.setHasFixedSize(true);
   myRecyclerView.setLayoutManager(mLayoutManager);

   //atur dbPariwisata agar dapat digunakan pada MainActivity.java
   dbPariwisata=new DatabaseHelper(MainActivity.this);

   //baca database
   db=dbPariwisata.getReadableDatabase();

   //buat database
   dbPariwisata.onCreate(db);

   //set waktu sekarang(pertama kali buka aplikasi) untuk menghitung
   kecepatan aplikasi
   lastTM = System.currentTimeMillis();

   //kondisi jika data pd databasee kosong
   if (cekData()==0) {

      //masukan data baru
      insertData();
   }

   //ambil data yang sudah ada
   getData();
```

```
    }

    //pengisian data pada database
    public void insertData(){

 //DatabaseHelper.insertData(database, judul, alamat, nama foto, deskripsi, harga, longitude, latitude)
        dbPariwisata.insertData(db, "Jembatan Ampera", "Jl.", "ampera", getResources().getString(R.string.deskripsiampera), getResources().getString(R.string.hargaampera), "-2.991721", "104.763577");

        dbPariwisata.insertData(db, "Benteng Kuto Besak", "Jl.", "bkb", getResources().getString(R.string.deskripsibkb), getResources().getString(R.string.hargabkb), "-2.992113", "104.760236");

        dbPariwisata.insertData(db, "Monpera", "Jl.", "monpera", getResources().getString(R.string.deskripsimonpera), getResources().getString(R.string.hargamonpera), "-2.989737", "104.760703");

        dbPariwisata.insertData(db, "Masjid Agung", "Jl.", "msjdagung", getResources().getString(R.string.deskripsimasjidagung), getResources().getString(R.string.hargamasjidagung), "-2.987943", "104.760277");

        dbPariwisata.insertData(db, "Al-Qur'an Akbar", "Jl.", "alquran", getResources().getString(R.string.deskripsialquran), getResources().getString(R.string.hargaalquran), "-3.011126", "104.704082");

        dbPariwisata.insertData(db, "Pulau Kemarau", "Jl.", "kemaro", getResources().getString(R.string.deskripsikemaro), getResources().getString(R.string.hargakemaro), "-2.978615", "104.817500");

        dbPariwisata.insertData(db, "Amanzi", "Jl.", "amanzi", getResources().getString(R.string.deskripsiamanzi), getResources().getString(R.string.hargaamanzi), "-2.938031", "104.683742");

        dbPariwisata.insertData(db, "Opi Water Fun", "Jl.", "opi", getResources().getString(R.string.deskripsiopi), getResources().getString(R.string.hargaopi), "-3.035894", "104.789064");

        dbPariwisata.insertData(db, "Gasing", "Jl.", "gasing", getResources().getString(R.string.deskripsigasing), getResources().getString(R.string.hargagasing), "-2.807957", "104.731809");

        dbPariwisata.insertData(db, "Kambang Iwak", "Jl.", "ki", getResources().getString(R.string.deskripsiki), getResources().getString(R.string.hargaki), "-2.990035", "104.747240");
```

```
        dbPariwisata.insertData(db, "Puntikayu", "Jl.", "puntikayu",
getResources().getString(R.string.deskripsipuntikayu),
getResources().getString(R.string.hargapuntikayu), "-2.943730", "104.728276");
    }

    //pengambilan data
    public void getData(){

        //Deklarasi(penamaan) variabel yang akan digunakan
        SelectAdapter ambilData;
        ambilData=new SelectAdapter(MainActivity.this);
        Cursor c = ambilData.ambilData(db);
        ArrayList<MenuCustom> dataPariwisata=new ArrayList<>();

        //kondisi jika database tidak kosong
        if (c.getCount()!=0){

            //ubah posisi ke awal
            if (c.moveToFirst()){
                do {

             //simpan data pertama yang didapat dari database di variabel judul
                    String judul = c.getString(1);

             //simpan data kedua yang didapat dari database di variabel alamat dst
                    String alamat = c.getString(2);
                    String gambar = c.getString(3);
                    String sejarah = c.getString(4);
                    String harga = c.getString(5);
                    String latitude = c.getString(6);
                    String longitude = c.getString(7);

                //masukan data yang didapat dari database ke ArrayList dataPariwisata
                dataPariwisata.add(new
                MenuCustom(judul,alamat,gambar,sejarah,harga,latitude,longitude));
                  }while (c.moveToNext());

                  //ambil waktu sekarang
                  long nowTM = System.currentTimeMillis();

                  //kurankan waktu sekarang dengan waktu yang lalu
                  long timeResult = nowTM - lastTM;

                //tampilkan kecepatan waktu pengambilan data dari database
                Toast.makeText(MainActivity.this,
                String.valueOf(timeResult+"milidetik"),
                Toast.LENGTH_SHORT).show();

               //tampilkan data dari database ke recycleview
                mAdapter=new RecycleViewAdapter(MainActivity.this, dataPariwisata);
```

```
            myRecyclerView.setAdapter(mAdapter);
            }
        }
    }

    //cek status database (kosong atau ada data)
    public int cekData(){
        SelectAdapter ambilData;
        ambilData=new SelectAdapter(MainActivity.this);
        Cursor c = ambilData.ambilData(db);
        return c.getCount();
    }
}
```

b. Database Helper

```
package com.example.celby.myapplication;

import android.content.ContentValues;
import android.content.Context;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Locale;

/**
 * Created by ANGGRA on 24/03/2017.
 */
public class DatabaseHelper extends SQLiteOpenHelper {

    // deklarasi nama database
    public static String NAME_DATABASE ="Pariwisata";
    // deklarasi nama tabel
    public static String TABLE_PARIWISATA="tblPariwisata";
    // deklarasi nama kolom judul
    public static String KEY_JUDUL="judul";
    // deklarasi nama kolom alamat
    public static String KEY_ALAMAT="alamat";
    // deklarasi nama kolom gambar
    public static String KEY_GAMBAR="gambar";
    // deklarasi nama kolom sejarah
    public static String KEY_SEJARAH="sejarah";
    // deklarasi nama kolom harga
    public static String KEY_HARGA="harga";
    // deklarasi nama kolom latitude
    public static String KEY_LATITUDE="latitude";
    // deklarasi nama kolom longitude
    public static String KEY_LONGITUDE="longitude";

    public DatabaseHelper(Context context){
```

```
        super(context, NAME_DATABASE, null, 1);
    }

    // syntak (penulisan) untuk membuat tabel di database
    private static final String CREATE_PARIWISATA = "CREATE TABLE IF
NOT EXISTS " + TABLE_PARIWISATA
            + "(id INTEGER PRIMARY KEY AUTOINCREMENT," +
KEY_JUDUL + " TEXT,"
            + KEY_ALAMAT + " TEXT," + KEY_GAMBAR + " TEXT," +
KEY_SEJARAH + " TEXT,"
            + KEY_HARGA + " TEXT," + KEY_LATITUDE + " TEXT," +
KEY_LONGITUDE + " TEXT)";


    // perintah untuk membuat table
    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL(CREATE_PARIWISATA);
    }

    // perintah untuk memasukan data ke database
    public void insertData(SQLiteDatabase db, String judul, String alamat, String
gambar, String sejarah, String harga, String latitude, String longitude){
        ContentValues cv= new ContentValues();
        cv.put(KEY_JUDUL, judul);
        cv.put(KEY_ALAMAT, alamat);
        cv.put(KEY_GAMBAR, gambar);
        cv.put(KEY_SEJARAH, sejarah);
        cv.put(KEY_HARGA, harga);
        cv.put(KEY_LATITUDE, latitude);
        cv.put(KEY_LONGITUDE, longitude);
        db.insert(TABLE_PARIWISATA, null, cv);

    }

    // jika aplikasi versi baru diinstal
    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        // hapus tabel yang lama
        db.execSQL("DROP TABLE IF EXISTS " + TABLE_PARIWISATA);

        // buat tabel yang baru
        onCreate(db);
    }
}
```

c. Adapter Select

```
package com.example.celby.myapplication;

import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;

/**
 * Created by ANGGRA on 04/04/2017.
 */
public class SelectAdapter {

    // deklarasi variabel yang akan digunakan
    Context context;
    DatabaseHelper dbPariwisata;
    SQLiteDatabase db;

    public SelectAdapter (Context c){
        context = c;
    }

    public SelectAdapter open(){
        dbPariwisata = new DatabaseHelper(context);
        db = dbPariwisata.getWritableDatabase();
        return this;
    }

    public void close(){
        db.close();
    }

    // query untuk mengambil data pada database
    public Cursor ambilData(SQLiteDatabase db){
        open();
        Cursor c = db.rawQuery("SELECT * FROM "+
DatabaseHelper.TABLE_PARIWISATA,null);
        return  c;
    }

}
```

d. Menu Custom

```
package com.example.celby.myapplication;

/**
 * Created by ANGGRA on 11/04/2017.
 */
public class MenuCustom {
    public String judul, alamat, gambar, sejarah, harga, latitude, longitude;

    public String getJudul() {
        return judul;
    }

    public String getAlamat() {
        return alamat;
    }

    public String getGambar() {
        return gambar;
    }

    public String getSejarah() {
        return sejarah;
    }

    public String getHarga() {
        return harga;
    }

    public String getLatitude() {
        return latitude;
    }

    public String getLongitude() {
        return longitude;
    }

    public MenuCustom(String judul, String alamat, String gambar, String sejarah, String
harga, String latitude, String longitude){
        this.judul=judul;
        this.alamat=alamat;
        this.gambar=gambar;
        this.sejarah=sejarah;
        this.harga=harga;
        this.latitude=latitude;
        this.longitude=longitude;
    }
```

}

e. Adapter Tampilan Recycle

```
package com.example.celby.myapplication;

import android.content.Context;
import android.content.Intent;
import android.net.Uri;
import android.support.v7.widget.RecyclerView;
import android.util.Log;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ImageView;
import android.widget.TextView;

import com.bumptech.glide.Glide;

import java.util.ArrayList;

/**
 * Created by ANGGRA on 20/03/2017.
 */
public class RecycleViewAdapter extends
RecyclerView.Adapter<RecycleViewAdapter.DataObjectHolder>{
   public String LOG_TAG="MyRecyclerViewAdapter";
   public ArrayList<MenuCustom> mDataSet;
   Context context;

   public RecycleViewAdapter(Context context, ArrayList<MenuCustom> mDataSet){
      this.mDataSet=mDataSet;
      this.context=context;
   }

   @Override
         public DataObjectHolder onCreateViewHolder(ViewGroup parent, int
         viewType) {

      // set tampilan baris pada RecyclerView ke layout rowlist
         View view= LayoutInflater.from(parent.getContext()).inflate(R.layout.rowlist,
         parent, false);
      DataObjectHolder holder=new DataObjectHolder(view);
      return holder;
   }

   @Override
   public void onBindViewHolder(DataObjectHolder holder, final int position) {

      // tampilkan tempat pariwisaata (getJudul)
      holder.txtJudul.setText(mDataSet.get(position).getJudul());
```

```
// tampilkan alamat tempat pariwisaata (getAlamat)
holder.txtLokasi.setText(mDataSet.get(position).getAlamat());

// tampilkan gambar tempat pariwisaata (getGambar)
     int resId =
     context.getResources().getIdentifier(mDataSet.get(position).getGambar(),
     "drawable", context.getPackageName());
     Glide.with(context).load(resId).into(holder.gambar);

// jika tombol deskripsi diklik --> pindah ke Deskripsi_activity
     holder.deskripsi.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {

         // isi strjudul pada Deskripsi_activity dengan nama tempat pariwisaata
        Deskripsi_activity.strjudul=mDataSet.get(position).getJudul();

         // isi strdeskripsi pada Deskripsi_activity dengan sejarah tempat pariwisaata
       Deskripsi_activity.strdeskripsi=mDataSet.get(position).getSejarah();

         // isi intid pada Deskripsi_activity dengan gambar tempat pariwisata
         Deskripsi_activity.intid=context.getResources().getIdentifier(mDataSet.get(po
         sition).getGambar(),"drawable",context.getPackageName());
        Intent intent = new Intent(context, Deskripsi_activity.class);
        context.startActivity(intent);

    }
});

// jika tombol harga dilklik --> pindah ke Harga_activity
holder.harga.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {

         // pengisian judul, harga, intid(gambar) pada Harga_activity (sama dengan
         atas)
        Harga_activity.strjudul=mDataSet.get(position).getJudul();
        Harga_activity.strharga=mDataSet.get(position).getHarga();

     Harga_activity.intid=context.getResources().getIdentifier(mDataSet.get(position)
     .getGambar(), "drawable", context.getPackageName());
        Intent intent = new Intent(context, Harga_activity.class);
        context.startActivity(intent);

    }
});

// jika tombol map dilklik --> pindah ke maps
holder.maps.setOnClickListener(new View.OnClickListener() {
    @Override
```

```
        public void onClick(View v) {

            // pengisian judul, alamat, position latitude dan longitude
            maps.title = mDataSet.get(position).getJudul();
            maps.loc = mDataSet.get(position).getAlamat();
            maps.lati=mDataSet.get(position).getLatitude();
            maps.longi=mDataSet.get(position).getLongitude();
            Intent intent = new Intent(context, maps.class);
            context.startActivity(intent);
        }

    });

}

@Override
public int getItemCount() {
    return mDataSet.size();
}


public class DataObjectHolder extends RecyclerView.ViewHolder {

    // deklarasi variable yang akan digunakan
    TextView txtJudul;
    TextView txtLokasi;
    ImageView gambar, deskripsi, harga, maps;

    public DataObjectHolder(View itemView) {
        super(itemView);

         // hubungkan judul pada java dengan judul pada layout di layout (rowlist)
        txtJudul = (TextView) itemView.findViewById(R.id.teksjudul);

         // hubungkan alamat pada java dengan alamat pada layout di layout (rowlist)
        txtLokasi = (TextView) itemView.findViewById(R.id.tekslokasi);
        gambar = (ImageView) itemView.findViewById(R.id.gambarampera);
        deskripsi= (ImageView) itemView.findViewById(R.id.imgDeskripsi);
        harga= (ImageView) itemView.findViewById(R.id.imgHarga);
        maps= (ImageView) itemView.findViewById(R.id.imgMaps);
    }
  }
}
```

f. Activity Deskripsi

```
package com.example.celby.myapplication;

import android.graphics.Color;
import android.os.Bundle;
import android.support.annotation.Nullable;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;

import com.bluejamesbond.text.DocumentView;
import com.bumptech.glide.Glide;

/**
 * Created by ANGGRA on 4/20/2017.
 */
```

```
public class Deskripsi_activity extends AppCompatActivity {

    // deklarasi variable
    public static String strjudul;
    public static String strdeskripsi;
    public static int intid;
    long lastTM;

    @Override
    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        lastTM = System.currentTimeMillis();
        setContentView(R.layout.activity_deskripsi);

        // hubungkan gambar,judul, deskripsi java ke layout
        ImageView gambar = (ImageView)findViewById(R.id.image);
        TextView judul = (TextView) findViewById(R.id.teksampera);
         DocumentView deskripsi =   (DocumentView)findViewById(R.id.textdeskripsi);

        // tampilkan gambar
        Glide.with(this).load(intid).into(gambar);

        // tampilkan judul
        judul.setText(strjudul);

        // tampilkan deskripsi
        deskripsi.setText(strdeskripsi);

        long nowTM = System.currentTimeMillis();
        long timeResult = nowTM - lastTM;

        // tampilkan kecepatan respons
         Toast.makeText(Deskripsi_activity.this, String.valueOf(timeResult + " milidetik"),
         Toast.LENGTH_SHORT).show();
    }
}
```

g. Activity Harga

```
package com.example.celby.myapplication;

import android.os.Bundle;
import android.support.annotation.Nullable;
import android.support.v7.app.AppCompatActivity;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;

import com.bluejamesbond.text.DocumentView;
import com.bumptech.glide.Glide;

/**
 * Created by ANGGRA on 5/1/2017.
 */

public class Harga_activity extends AppCompatActivity{

    //deklarasi(penamaan) variabel yang akan digunakan
    //public static --> agar dapat digunakan pada .java yang lain
    public static String strjudul;
    public static String strharga;
    public static int intid;
```

```
    long lastTM;

    @Override
    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        lastTM = System.currentTimeMillis();

        //set tampilan ke activity_harga
        setContentView(R.layout.activity_harga);

        //hubungkan ImageView gambar di java dengan ImageView pada layout
        ImageView gambar = (ImageView)findViewById(R.id.image);
        TextView judul = (TextView) findViewById(R.id.teksampera);
        DocumentView deskripsi = (DocumentView)findViewById(R.id.textdeskripsi);

        //tampilkan gambar
        Glide.with(this).load(intid).into(gambar);

        //tampilkan nama tampat pariwisata
        judul.setText(strjudul);

        //tampilkan daftar harga
        deskripsi.setText(strharga);

        long nowTM = System.currentTimeMillis();
        long timeResult = nowTM - lastTM;

        //tampilkan kecepatan waktu respons
          Toast.makeText(Harga_activity.this, String.valueOf(timeResult + " milidetik"),
          Toast.LENGTH_SHORT).show();
    }
}
```

h. Activity Map/Peta

```
package com.example.celby.myapplication;

import android.app.ProgressDialog;
import android.content.Context;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.graphics.Color;
import android.location.Criteria;
import android.location.Location;
import android.location.LocationListener;
import android.location.LocationManager;
import android.os.AsyncTask;
import android.os.Bundle;
import android.support.annotation.Nullable;
import android.support.v4.app.ActivityCompat;
import android.support.v7.app.AppCompatActivity;
import android.util.Log;
import android.widget.Toast;

import com.google.android.gms.common.api.GoogleApiClient;
import com.google.android.gms.location.LocationServices;
import com.google.android.gms.maps.CameraUpdateFactory;
import com.google.android.gms.maps.GoogleMap;
import com.google.android.gms.maps.MapView;
import com.google.android.gms.maps.OnMapReadyCallback;
import com.google.android.gms.maps.SupportMapFragment;
```

```
import com.google.android.gms.maps.model.BitmapDescriptorFactory;
import com.google.android.gms.maps.model.CameraPosition;
import com.google.android.gms.maps.model.LatLng;
import com.google.android.gms.maps.model.Marker;
import com.google.android.gms.maps.model.MarkerOptions;
import com.google.android.gms.maps.model.PolylineOptions;

import org.json.JSONObject;

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStream;
import java.io.InputStreamReader;
import java.net.HttpURLConnection;
import java.net.URL;
import java.text.DecimalFormat;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.List;

/**
 * Created by ANGGRA on 5/15/2017.
 */

public class maps extends AppCompatActivity implements OnMapReadyCallback {

    // deklarasi
    public static String lati, longi, title, loc;
    long lastTM;
    DatabaseHelper dbPariwisata;
    SQLiteDatabase db;
    private GoogleMap mMap;
    double currentLongitude, currentLatitude;
    ProgressDialog pd;

    @Override
    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        lastTM = System.currentTimeMillis();
        setContentView(R.layout.activity_maps);

        // hubungkan java dengan layout maps
          SupportMapFragment mapFragment = (SupportMapFragment)
          getSupportFragmentManager().findFragmentById(R.id.maps);
        mapFragment.getMapAsync(this);

        // tampilkan loading pengambilan lokasi
        pd=new ProgressDialog(maps.this);
        pd.setTitle("Mengambil lokasi...");
        pd.setIndeterminate(false);
```

```
    pd.setCancelable(false);
    pd.show();
}

@Override
public void onMapReady(final GoogleMap googleMap) {

    // proses pengambilan data longitude dan latitude (sama dengan pada
    MainActivity.java)
    dbPariwisata=new DatabaseHelper(maps.this);
    db=dbPariwisata.getReadableDatabase();
    mMap=googleMap;

    SelectAdapter ambilData;
    ambilData=new SelectAdapter(maps.this);
    Cursor c = ambilData.ambilData(db);
    if (c.getCount()!=0){
        if (c.moveToFirst()){
            do {
                String judul = c.getString(1);
                String alamat = c.getString(2);
                double latitude = Double.valueOf(c.getString(6));
                double longitude = Double.valueOf(c.getString(7));
                LatLng temp = new LatLng(latitude, longitude);

                // tampilkan marker pada setiap lokasi pariwisata
                    googleMap.addMarker(new
                    MarkerOptions().position(temp).title(judul).snippet(alamat));
            }while (c.moveToNext());
        }
    }

    // cek permission untuk GPS
     if (ActivityCompat.checkSelfPermission(maps.this,
     android.Manifest.permission.ACCESS_FINE_LOCATION) !=
     PackageManager.PERMISSION_GRANTED &&
     ActivityCompat.checkSelfPermission(maps.this,
     android.Manifest.permission.ACCESS_COARSE_LOCATION) !=
     PackageManager.PERMISSION_GRANTED) {
       pd.dismiss();
     Toast.makeText(maps.this, "Cek GPS permission",
     Toast.LENGTH_SHORT).show();
   }

   else {
        LocationManager locationManager = (LocationManager)
        getApplication().getSystemService(Context.LOCATION_SERVICE);

       // kondisi jika GPS tidak aktif
        if (!locationManager.isProviderEnabled(LocationManager.GPS_PROVIDER)){
```

```
  pd.dismiss();
 Toast.makeText(maps.this, "Turn on your GPS",
 Toast.LENGTH_SHORT).show();
  onBackPressed();
  finish();
}else {

 locationManager.requestLocationUpdates(LocationManager.GPS_PROVIDER,
 2000, 10, new LocationListener() {
     @Override
     public void onLocationChanged(Location location) {

         // ambil posisi dengan GPS
        currentLongitude = location.getLongitude();
        currentLatitude = location.getLatitude();
          LatLng origin = new LatLng(currentLatitude, currentLongitude);

        // tampilkan marker posisi GPS
        MarkerOptions options = new MarkerOptions();
        options.position(origin);
          options.icon(BitmapDescriptorFactory.defaultMarker(BitmapDescriptorF
          actory.HUE_GREEN));
          googleMap.addMarker(options.title("Your
          Location")).showInfoWindow();
          googleMap.moveCamera(CameraUpdateFactory.newLatLngZoom(origin
          , 12));

        // posisi tujuan (tempat pariwisata yg dituju)
        double doublat=Double.valueOf(lati);
        double doublong=Double.valueOf(longi);
        LatLng dest = new LatLng(doublat, doublong);
          googleMap.addMarker(new
          MarkerOptions().position(dest).title(title).snippet(loc)).showInfoWindow
          ();

         // cari jalur tercepat ke tempat pariwisata tujuan
        String url = getDirectionsUrl(origin, dest);
        DownloadTask downloadTask = new DownloadTask();
        downloadTask.execute(url);
     }

     @Override
       public void onStatusChanged(String provider, int status, Bundle extras) {

     }

     @Override
     public void onProviderEnabled(String provider) {

     }
```

```
            @Override
            public void onProviderDisabled(String provider) {

            }
          });
      }
    }

    // tampilkan StreetView jika klik salah satu marker tempat pariwisata
        mMap.setOnMarkerClickListener(new GoogleMap.OnMarkerClickListener() {

        @Override
        public boolean onMarkerClick(Marker marker) {

            // isi latitude, longitude pada StreetView.java dengan posisi longitude dan
            latitude tempat pariwisata yang diklik
          StreetView.lati=marker.getPosition().latitude;
          StreetView.longi=marker.getPosition().longitude;
          Intent intent = new Intent(maps.this, StreetView.class);
          startActivity(intent);
          return false;
        }
    });
}

public double calculationByDistance(LatLng StartP, LatLng EndP) {
    int Radius = 6371;// radius of earth in Km
    double lat1 = StartP.latitude;
    double lat2 = EndP.latitude;
    double lon1 = StartP.longitude;
    double lon2 = EndP.longitude;
    double dLat = Math.toRadians(lat2 - lat1);
    double dLon = Math.toRadians(lon2 - lon1);
    double a = Math.sin(dLat / 2) * Math.sin(dLat / 2)
          + Math.cos(Math.toRadians(lat1))
          * Math.cos(Math.toRadians(lat2)) * Math.sin(dLon / 2)
          * Math.sin(dLon / 2);
    double c = 2 * Math.asin(Math.sqrt(a));
    double valueResult = Radius * c;
    double km = valueResult / 1;
    double meter = valueResult * 1000;
    DecimalFormat newFormat = new DecimalFormat("####");
    int kmInDec = Integer.valueOf(newFormat.format(km));

    newFormat = new DecimalFormat("###.#");
    String strKmInDec = newFormat.format(km);
    String meterInDec = newFormat.format(meter);
    Log.e("Radius Value", "" + valueResult + "   KM  " + strKmInDec
          + " Meter   " + meter);
```

```
    if (kmInDec<1)

        // tampilkan Jarak ke tempat pariwisata tujuan dalam meter
         Toast.makeText(maps.this, "Jarak ke tempat tujuan "+meterInDec+" m",
         Toast.LENGTH_LONG).show();
    else

        // tampilkan Jarak ke tempat pariwisata tujuan dalam kilometer
         Toast.makeText(maps.this, "Jarak ke tempat tujuan "+strKmInDec+" km",
         Toast.LENGTH_LONG).show();

    return Radius * c;
}

private class DownloadTask extends AsyncTask<String, Void, String> {

    @Override
    protected String doInBackground(String... url) {

        String data = "";

        try {
            data = downloadUrl(url[0]);
        } catch (Exception e) {
            Log.d("Background Task", e.toString());
        }
        return data;
    }

    @Override
    protected void onPostExecute(String result) {
        super.onPostExecute(result);
        pd.dismiss();
        long nowTM = System.currentTimeMillis();
        long timeResult = nowTM - lastTM;
         Toast.makeText(maps.this, String.valueOf(timeResult + " milidetik"),
         Toast.LENGTH_SHORT).show();
        ParserTask parserTask = new ParserTask();
        parserTask.execute(result);

        LatLng origin = new LatLng(currentLatitude, currentLongitude);
        double doublat=Double.valueOf(lati);
        double doublong=Double.valueOf(longi);
        LatLng dest = new LatLng(doublat, doublong);
        calculationByDistance(origin, dest);
    }
}
```

```
/**
 * A class to parse the Google Places in JSON format
 */
private class ParserTask extends AsyncTask<String, Integer,
List<List<HashMap<String, String>>>> {

    // Parsing the data in non-ui thread
    @Override
        protected List<List<HashMap<String, String>>> doInBackground(String...
        jsonData) {

        JSONObject jObject;
        List<List<HashMap<String, String>>> routes = null;

        try {
            jObject = new JSONObject(jsonData[0]);
            DirectionsJSONParser parser = new DirectionsJSONParser();

            routes = parser.parse(jObject);
        } catch (Exception e) {
            e.printStackTrace();
        }
        return routes;
    }

    @Override
        protected void onPostExecute(List<List<HashMap<String, String>>> result) {
        ArrayList points = null;
        PolylineOptions lineOptions = null;
        MarkerOptions markerOptions = new MarkerOptions();

        for (int i = 0; i < result.size(); i++) {
            points = new ArrayList();
            lineOptions = new PolylineOptions();

            List<HashMap<String, String>> path = result.get(i);

            for (int j = 0; j < path.size(); j++) {
                HashMap<String, String> point = path.get(j);

                double lat = Double.parseDouble(point.get("lat"));
                double lng = Double.parseDouble(point.get("lng"));
                LatLng position = new LatLng(lat, lng);

                points.add(position);
            }
```

```
            lineOptions.addAll(points);
            lineOptions.width(12);
            lineOptions.color(Color.RED);
            lineOptions.geodesic(true);

        }

// Drawing polyline in the Google Map for the i-th route
      mMap.addPolyline(lineOptions);
       }
   }

  private String getDirectionsUrl(LatLng origin, LatLng dest) {

      // Origin of route
      String str_origin = "origin=" + origin.latitude + "," + origin.longitude;

      // Destination of route
      String str_dest = "destination=" + dest.latitude + "," + dest.longitude;

      // Sensor enabled
      String sensor = "sensor=false";
      String mode = "mode=driving";

      // Building the parameters to the web service
        String parameters = str_origin + "&" + str_dest + "&" + sensor +"&" + mode;

      // Output format
      String output = "json";

      // Building the url to the web service
        String url = "https://maps.googleapis.com/maps/api/directions/" +output + "?" +
        parameters;


      return url;
   }









   /**
    * A method to download json data from url
    */
```

```
   private String downloadUrl(String strUrl) throws IOException {
      String data = "";
      InputStream iStream = null;
      HttpURLConnection urlConnection = null;
      try {
         URL url = new URL(strUrl);

         urlConnection = (HttpURLConnection) url.openConnection();

         urlConnection.connect();

         iStream = urlConnection.getInputStream();

          BufferedReader br = new BufferedReader(new InputStreamReader(iStream));

         StringBuffer sb = new StringBuffer();

         String line = "";
         while ((line = br.readLine()) != null) {
            sb.append(line);
         }

         data = sb.toString();

         br.close();

      } catch (Exception e) {
         Log.d("Exception", e.toString());
      } finally {
         iStream.close();
         urlConnection.disconnect();
      }
      return data;
   }
}
```

i. Panorama Jalanan

```
package com.example.celby.myapplication;

import android.os.Bundle;
import android.support.v4.app.FragmentActivity;
```

```
import com.google.android.gms.maps.OnStreetViewPanoramaReadyCallback;
import com.google.android.gms.maps.StreetViewPanorama;
import com.google.android.gms.maps.StreetViewPanoramaFragment;
import com.google.android.gms.maps.StreetViewPanoramaOptions;
import com.google.android.gms.maps.StreetViewPanoramaView;
import com.google.android.gms.maps.model.LatLng;

/**
 * Created by ANGGRA on 14/06/2017.
 */
public class StreetView extends FragmentActivity implements
OnStreetViewPanoramaReadyCallback {

    // deklarasi variabel yang digunakan
    public static double lati, longi;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        // set tampilan ke layout activity_streetview
        setContentView(R.layout.activity_streetview);
        StreetViewPanoramaFragment streetViewPanoramaFragment =
                (StreetViewPanoramaFragment) getFragmentManager()
                        .findFragmentById(R.id.streetviewpanorama);
        streetViewPanoramaFragment.getStreetViewPanoramaAsync(this);

    }

    @Override
     public void onStreetViewPanoramaReady(StreetViewPanorama streetViewPanorama)
     {

        // set streetviewpanorama di posisi tempat pariwisata yang dipilih
        streetViewPanorama.setPosition(new LatLng(lati, longi));
}
```