

## Source Code:

### 7.1 Feature 1 (Adding Geofence)

➔ Geofence is like a round wall covering the given location. So parents can use them to mark the location where their children are going.

➔ Multiple Geofence can be added

```
1. package
    com.example.geofence;import
    android.app.PendingIntent;i
    mport
    android.content.Context;

import
    android.content.ContextWrapper;
import android.content.Intent;

import android.widget.Toast;

import
    com.google.android.gms.common.api.ApiException;import
    com.google.android.gms.location.Geofence;

import
    com.google.android.gms.location.GeofenceStatusCodes;import
    com.google.android.gms.location.GeofencingRequest;import
    com.google.android.gms.maps.model.LatLng;

public class GeofenceHelper extends ContextWrapper {

    private static final String TAG = "GeofenceHelper";
    PendingIntent pendingIntent;

    public GeofenceHelper(Context base)
    {super(base);
    }

    public GeofencingRequest getGeofencingRequest(Geofence geofence) {return new
        GeofencingRequest.Builder()

            .addGeofence(geofence)
```

```
.setInitialTrigger(GeofencingRequest.INITIAL_TRIGGER_ENTER)  
        .build();  
    }
```

```
    public Geofence getGeofence(String ID,LatLng latLng, float radius,int  
transitionTypes) {  
        return new Geofence.Builder()  
            .setCircularRegion(latLng.latitude, latLng.longitude,  
  
radius)
```

```
}
```

```
.setRequestId(ID)  
.setTransitionTypes(transitionTypes)  
.setLoiteringDelay(5000)  
.setExpirationDuration(Geofence.NEVER_EXPIRE)  
.build();
```

```
    public PendingIntent getPendingIntent() {if  
        (pendingIntent != null){  
            return pendingIntent;  
        }  
        Intent intent = new Intent(this, GeofenceBroadcastReceiver.class);  
        pendingIntent =PendingIntent.getBroadcast(this, 2607,intent,  
PendingIntent.FLAG_IMMUTABLE);
```

```

        return pendingIntent;
    }

    public String getErrorString(Exception e) {if(e
        instanceof ApiException) {

            ApiException apiException = (ApiException) e;
            switch(apiException.getStatusCode()) {

                case GeofenceStatusCodes

                    .GEOFENCE_NOT_AVAILA
                    BLE:return
                    "GEOFENCE_NOT_AVAILABLE";

                case GeofenceStatusCodes

                    .GEOFENCE_TOO_MANY_GEOF
                    ENCES:return
                    "GEOFENCE_TOO_MANY_GEOFENCE
                    S";

                case GeofenceStatusCodes

                    .GEOFENCE_TOO_MANY_PENDING_INTE
                    NTS:return
                    "GEOFENCE_TOO_MANY_PENDING_INTENTS";

            }

        }

        return e.getLocalizedMessage();
    }
}

```

## 7.2 Feature2 (Alert Notification)

- Once geofence is added, when the child enters the geofence a notification will be sent
- When the child leaves the geofence a notification will be sent.

```
import
android.util.Log;import
android.widget.Toast;
```

```
import com.google.android.gms.location.Geofence;import
com.google.android.gms.location.GeofencingEvent;
```

```
import
java.util.List;import
android.os.Handler;
```

```
public class GeofenceBroadcastReceiver extends BroadcastReceiver {

    private static final String TAG = "GeofenceBroadcastReceiv";@Override

    public void onReceive(Context context, Intent intent) {

        //TODO: This method is called when the BroadcastReceiver is receiving
        // an Intent broadcast
        //.

        /*Toast.makeText(context,
"GEOFENCE_ENTERED", Toast.LENGTH_SHORT).show();

        final Toast mToastToShow;

        int toastDurationInMilliseconds = 1200000;

        mToastToShow = Toast.makeText(context, "GEOFENCE_EXITED",
Toast.LENGTH_LONG);

        //Set the countdown to display the toast
        CountDownTimer toastCountDown;
```

```

        toastCountDown = new
CountDownTimer(toastDurationInMilliseconds,100000) {

        public void onTick(long millisUntilFinished) {
            mToastToShow.show();
        }

        public void
            onFinish() {
                mToastToShow
                .cancel();
            }
    };

```

```

// Show the toast and starts the countdown
mToastToShow.show();
toastCountDown.start();*/

```

```

NotificationHelper notificationHelper = new
NotificationHelper(context);

```

```

notificationHelper.sendHighPriorityNotification("GEOFENCE_TRANSITION_ENTER", "",
MapsActivity.class);

```

```

GeofencingEvent geofencingEvent = GeofencingEvent.fromIntent(intent);if
(geofencingEvent.hasError()) {

```

```

    Log.d(TAG,"onReceive: Errorreceiving geofence event...package
com.example.geofence;import android.app.PendingIntent;import
android.content.Context;

```

```

        break;

```

```

    }

```