

## FINAL CODE

Date	24 November 2022
Team ID	PNT2022TMID47921
Project Name	Project- IoT based safety gadget for child safety monitoring and notification

### Alert Notification code

```
package com.example.geofence;

import
    android.content.BroadcastReceiver;
    android.content.Context;
import
    android.content.Intent;
    android.location.Location;
    android.os.CountDownTimer;
    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 =
        "GeofenceBroadcastReceiver";

    @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
```

```

toastCountDownTimertoastCountDo
wn;
toastCountDown=newCountDownTimer(toastDurationInMilliseconds,100000)
{
publicvoidonTick(longmillisUntilFinished)
{
mToastToShow.show();
}
publicvoidonFinish()
{
mToastToShow.cancel();
}
};
// Show the toast and starts the
countdownmToastToShow.show();toast
CountDown.start();*/
NotificationHelper notificationHelper = new
NotificationHelper(context);notificationHelper.sendHighPriorityNotification("GEOFENCE_T
RANSITION_ENTER","",MapsActivity.class);
GeofencingEvent geofencingEvent =
GeofencingEvent.fromIntent(intent);if(geofencingEvent.hasError()){
Log.d(TAG, "onReceive: Error receiving geofence
event...");return;
}
List<Geofence> geofenceList =
geofencingEvent.getTriggeringGeofences();for(Geofencegeofence:
geofenceList)
{
Log.d(TAG,"onReceive:"+geofence.getRequestId());
}
// Location location =
geofencingEvent.getTriggeringLocation();int
transitionType =
geofencingEvent.getGeofenceTransition();switch(transitio
nType)

```

```

{
    case Geofence.GEOFENCE_TRANSITION_ENTER:
        notificationHelper.sendHighPriorityNotification("Entered the
        Location", "", MapsActivity.class);
        break;
    case
        Geofence.GEOFENCE_TRANSITION_EXIT: notificationHelper.sendHi
        ghPriorityNotification("Exited the Location ", "", MapsActivity.class);
        break;
}
}

```

### **Geofence:**

Package

```
com.example.geofence;import
```

```
android.app.PendingIntent;impo
```

```
rtandroid.content.Context;
```

```
import
```

```
android.content.ContextWrapper;impo
```

```
rtandroid.content.Intent;
```

```
import android.widget.Toast;
```

```
import
```

```
com.google.android.gms.common.api.ApiException;i
```

```
mport com.google.android.gms.location.Geofence;
```

```
import
```

```
com.google.android.gms.location.GeofenceStatusCodes;i
```

```
mport
```

```
com.google.android.gms.location.GeofencingRequest;imp
```

```
ort 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_AVAILABLE:

                return "GEOFENCE_NOT_AVAILABLE";
            case GeofenceStatusCodes
                .GEOFENCE_TOO_MANY_GEOFENCES:
                return "GEOFENCE_TOO_MANY_GEOFENCES";
            case GeofenceStatusCodes
                .GEOFENCE_TOO_MANY_PENDING_INTENTS:
                return "GEOFENCE_TOO_MANY_PENDING_INTENTS";
        }
    }
    return e.getLocalizedMessage();
}
}

```