

Sprint 4

Date	11 November 2022
Team ID	PNT2022TMID16715
Project Name	IoT Based Safety Gadget for Child Safety Monitoring and Notification

Sprint 4 is send alert notification when entered and exited the geofence **Coding:**

```
package com.example.geofence;

import
    android.content.BroadcastReceiver;
    import android.content.Context; import
    android.content.Intent; import
    android.location.Location; import
    android.os.CountDownTimer; 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" , "",
MainActivity.class);

GeofencingEvent geofencingEvent = GeofencingEvent.fromIntent(intent);

if (geofencingEvent.hasError()) {
    Log.d(TAG, "onReceive: Error receiving geofence event...");    return;
}

List<Geofence> geofenceList =
geofencingEvent.getTriggeringGeofences();    for (Geofence
geofence: geofenceList) {
    Log.d(TAG, "onReceive: " + geofence.getRequestId());    }
//    Location location = geofencingEvent.getTriggeringLocation();    int transitionType =
geofencingEvent.getGeofenceTransition();
    switch (transitionType) {        case
Geofence.GEOFENCE_TRANSITION_ENTER:

```

```

        notificationHelper.sendHighPriorityNotification("Entered the Location", "", MapsActivity.class);
break;
        case Geofence.GEOFENCE_TRANSITION_EXIT:

            notificationHelper.sendHighPriorityNotification("Exited the Location", "",
MapsActivity.class);
            break;
    }

}

}
}

```

Notification Class:

```

package com.example.geofence;

import android.app.Notification; import
android.app.NotificationChannel; import
android.app.NotificationManager; import
android.app.PendingIntent; import
android.content.Context; import
android.content.ContextWrapper; import
android.content.Intent; import android.graphics.Color;
import android.os.Build;

import androidx.annotation.RequiresApi; import
androidx.core.app.NotificationCompat;
import androidx.core.app.NotificationManagerCompat;

import java.util.Random;

public class NotificationHelper extends ContextWrapper {

    private static final String TAG = "NotificationHelper";

    public NotificationHelper(Context base) {
        super(base);
        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.O) {
            createChannels();
        }
    }

    private String CHANNEL_NAME = "High priority channel";
    private String CHANNEL_ID = "com.example.geofence" + CHANNEL_NAME;

```

```

@RequiresApi(api = Build.VERSION_CODES.O) private void createChannels()
{
    NotificationChannel notificationChannel = new
NotificationChannel(CHANNEL_ID, CHANNEL_NAME, NotificationManager.IMPORTANCE_HIGH);
notificationChannel.enableLights(true);    notificationChannel.enableVibration(true);
notificationChannel.setDescription("this is the description of the channel.");
notificationChannel.setLightColor(Color.RED);

notificationChannel.setLockscreenVisibility(Notification.VISIBILITY_PUBLIC) ;
NotificationManager manager = (NotificationManager)
getSystemService(Context.NOTIFICATION_SERVICE);
    manager.createNotificationChannel(notificationChannel); }

public void sendHighPriorityNotification(String title, String body, Class activityName) {

    Intent intent = new Intent(this, activityName);
    PendingIntent pendingIntent = PendingIntent.getActivity(this, 267, intent,
PendingIntent.FLAG_UPDATE_CURRENT);
    Notification notification = new NotificationCompat.Builder(this, CHANNEL_ID)
//        .setContentTitle(title)
//        .setContentText(body)
        .setSmallIcon(R.drawable.ic_launcher_background)
        .setPriority(NotificationCompat.PRIORITY_HIGH) .setStyle(new
NotificationCompat.BigTextStyle().setSummaryText("summary").setBigContentTi
tle(title).bigText(body))
        .setContentIntent(pendingIntent)
        .setAutoCancel(true)
        .build();

    NotificationManagerCompat.from(this).notify(new Random().nextInt(), notification);
}
}

```

Output :

18.0 Kbps 41%

8:08

Fri, Nov 11



Android System

Wireless debugging connected

Tap to turn off wireless debugging

Notification



now



Geofence Alert

Exited the Location

3m

Geofence Alert

Entered the Location

McAfee Security · 6h

24/7 threat protection is ON

We're always working in the background to protect you.

