Sprint 4

Date	16 November 2022
Team ID	PNT2022TMID47759
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" , "",
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 (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;
```

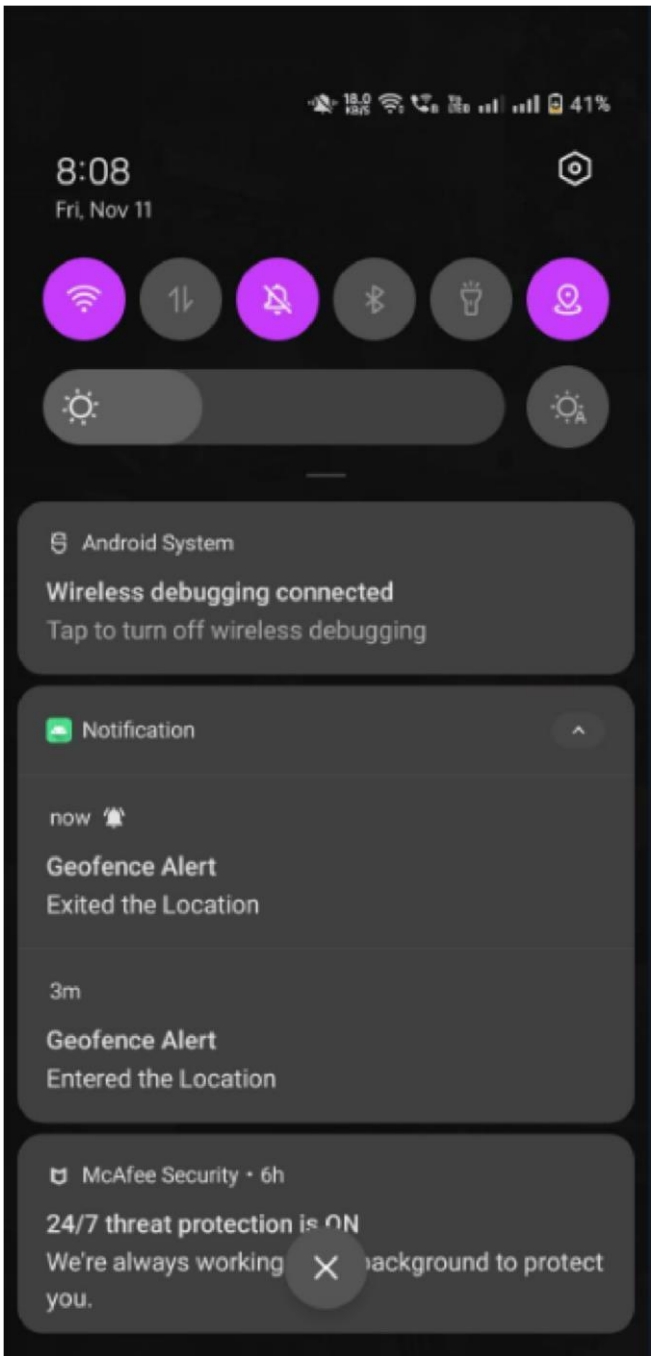
```
   @RequiresApi(api = Build.VERSION_CODES.O)     private void createChannels()
{
      NotificationChannel notificationChannel = new
NotificationChannel(CHANNEL_ID, CHANNEL_NAME, NotificationManager.IMPORTANCE_HIGH);
notificationChannel.enableLights(true);        notificationChannel.enableVibration(true);
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 :


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
background to protect
you.