

Report – Kotlin Notifications Project

1. Topic

Kotlin Notifications – How to implement and request notification permission in Android.

This project demonstrates how to:

- Request notification permission (Android 13+).
- Create simple and interactive notifications.
- Manage notification channels and actions.

It is designed to help classmates understand how notifications work in a real Android app and practice completing missing code parts.

2. Research Summary ("How To")

Notifications are messages displayed outside the app's UI to inform users of important events.

They can be simple (title + text) or interactive (buttons for actions).

Component	Role
NotificationChannel	Groups notifications by category (Android 8+)
NotificationCompat.Builder	Builds the notification (title, text, icon, actions)
NotificationManagerCompat	Displays or cancels notifications
PendingIntent	Defines what happens when the user interacts with the notification

Since Android 13 (API 33), apps must request the permission ``android.permission.POST_NOTIFICATIONS`` at runtime.

3. Demo Project

Goal: A working Kotlin app demonstrating:

1. Permission request for notifications
2. Display of both simple and interactive notifications
3. Reaction to user actions (via BroadcastReceiver)

Main Files:

- MainActivity.kt → UI + notification triggers

- NotificationActionReceiver.kt → Handles actions (YES/NO buttons)
- NotificationUtils.kt → Centralized constants (IDs, actions)

4. Unfinished Project (for classmates)

What's Missing:

1. Implement the code that creates the NotificationChannel
2. Complete the interactive notification section (addAction buttons)
3. Handle BroadcastReceiver actions

Expected Output:

- When pressing "Send Notification", a simple notification should appear.
- When pressing "Send Interactive Notification", two buttons ("YES" / "NO") should appear and trigger a Toast message when clicked.

5. Deliverables

Item	Description	Platform
Report	This file	Moodle
Complete Project (ZIP)	Fully working demo app	Moodle
Unfinished Project (UP)	Version with missing code for classmates	Public GitHub
Presentation (PPT)	Technical explanation with slides	Moodle + GitHub

6. GitHub Repository

Repository link: https://github.com/Clashix/IL3510_2526_Skills_G1_Notif

Contains:

- /correction → Full working project
- /master → Version for classmates
- /report → This document

7. Conclusion

This project introduces the essential mechanisms of Android notifications in Kotlin:

- Handling runtime permissions
- Building different notification types
- Managing user interaction from the system tray

It also serves as a hands-on exercise for peers to practice modern Android development concepts such as permissions, PendingIntent, and BroadcastReceiver.