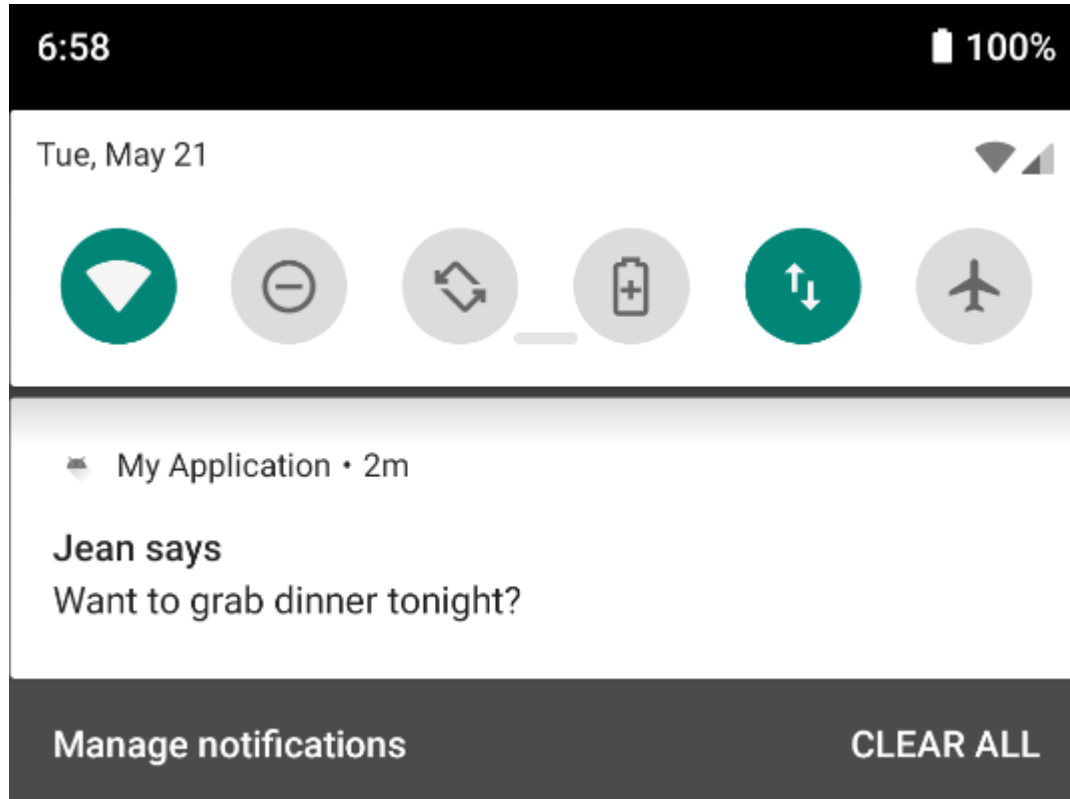# ANDROID DEVELOPMENT

NOTIFICATION

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Agenda

- Notification
  - Manager
  - Builder
  - Channel

- Pending Intent
  - Deferred activation

Notification

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Notification

- Application may leave notification with **Intent** for **deferred** activation

- Notifications allow for future execution (similar to event handlers but) across applications

```java
private void createNotification(String channelId) {
    Intent intent = new Intent(this, MainActivity.class);
    intent.setFlags(Intent.FLAG_ACTIVITY_NEW_TASK | Intent.FLAG_ACTIVITY_CLEAR_TASK);
    PendingIntent pendingIntent = PendingIntent.getActivity(this, 0, intent, 0);

    NotificationCompat.Builder builder = new NotificationCompat.Builder(this, channelId)
        .setSmallIcon(R.drawable.ic_launcher_foreground)
        .setContentTitle("Jean says")
        .setContentText("Want to grab dinner tonight?")
        .setPriority(NotificationCompat.PRIORITY_DEFAULT)
        // Set the intent that will fire when the user taps the notification
        .setContentIntent(pendingIntent)
        .setAutoCancel(true);

    NotificationManagerCompat notificationManager = NotificationManagerCompat.from(this);
    Notification notty = builder.build();
    notificationManager.notify(0, notty);
}
```

Notification

- Create a Notification Channel to group/classify your notifications

```java
private void createNotificationChannel(String channelId) {
    // Create the NotificationChannel, but only on API 26+ because
    // the NotificationChannel class is new and not in the support library
    if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.O) {
        NotificationChannel channel = new NotificationChannel(
                channelId,
                "My Channel Name",
                NotificationManager.IMPORTANCE_DEFAULT
        );
        channel.setDescription("My Channel Description");

        // Register the channel with the system
        NotificationManager notificationManager = getSystemService(NotificationManager.class);
        notificationManager.createNotificationChannel(channel);
    }
}
```

Notification

- Putting it together
  - Pick a Channel ID
  - Register Channel with system
  - Create Notification using Channel ID

```java
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    Button notifyBtn = findViewById(R.id.notifyBtn);
    notifyBtn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            String channelId = "0";
            createNotificationChannel(channelId);
            createNotification(channelId);
        }
    });
}
```