PHINMA EDUCATION

ITE 301: Application Development and Emerging Technologies
SAS Module #7

Name: Claire Galang
Section: Block 2 Schedule: T 7:30 - 9:30
Class number: _____
Date: Sept 25

Lesson title: Notification and Dialogs

Lesson Objectives:

1. Differentiate notification and dialog
2. Create codes for AlertDialog statement
3. Evaluate Dialogs

Materials:

- Module
- Board

References:

- https://developer.android.com/training/basics/firstapp
- https://www.tutorialspoint.com/android/index.htm
- https://www.javatpoint.com/android-tutorial

Productivity Tip:

- You can take advantage of the mobile apps available for your phone model. You can download tutorials to make references available to you immediately. You can use Google suite or apps manage schedules, notes, communication, messaging, email and more at no cost. Take advantage of many Android apps that allows you to manage your time, records, etc.

A. LESSON PREVIEW/REVIEW

1) Introduction (2 mins)

Welcome to our new lesson!

Did you experience that you get no feedback from an application? You have no idea what is happening? It looks like the app has stopped working or lagging.

As a developer, you should anticipate many possible situations during the operation of your app. Be reminder that the app is not a person who can easily make reactions and talk back to the other person when needed.

With this, you should make your app more intelligent by making it communicate with the user whenever it is necessary to give the user important information or requiring users to respond or confirm something.

Dialog promotes better understanding on the part of the user. The timely information will help the user reduce misunderstandings and tensions and help ensure more successful interaction with your application.

Our lessons notification and dialog allow the app to be like a person talking to a client. So that the user feels comfortable that he/she got

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relevant information as the situation requires it.

2) **Activity 1: What I Know Chart, part 1 (3 mins)**

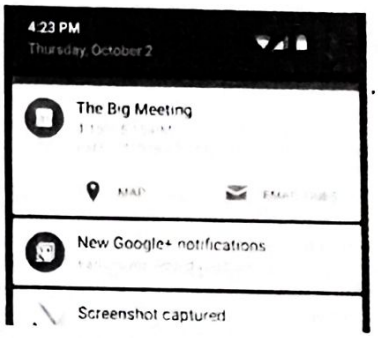
What I Know	Questions:	What I Learned (Activity 4)
A message from your app	1. What is notification?	A message that display outside your app's normal UI
A message where user make decisions	2. What is Dialog?	A message where users interact to it
Its a settings for user to choose what they wanna do w/ notifs	3. What is notification channel?	A settings where user can adjust their notif they receive

B.MAIN LESSON

1) **Activity 2: Content Notes (13 mins)**

Notifications

- A **message** your app displays to the user outside your app's normal UI.
- When an app tells the system to **issue a notification**, the notification appears to the user as an icon in the **notification area**, on the left side of the status bar.
- If the device is unlocked, the user opens the **notification drawer** to see the details of the notification. If the device is locked, the user views the notification on the lock screen. The notification area, lock screen, and notification drawer are system-controlled areas that the user can view at any time.



App icon badge

- Its appearance slightly when the app has a new notification to show to the user.
- The app icon shows a colored **badge**, also known as a **notification dot**, as shown on four of the five app icons in the screenshot below.

Notifcation menu

- To see the notification for an app with a **notification dot**, the user long-presses the app icon.
- The **notification menu** appears and the user dismisses the notification or acts on it from the menu.
- This is similar to the way the user interacts with a notification in the notification drawer.

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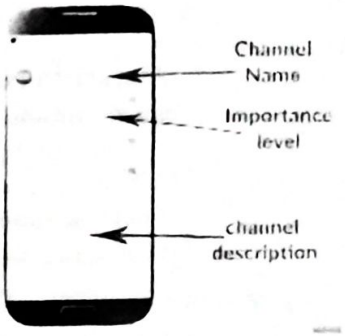
Notification channels

- In the **Settings** app, users can adjust the notifications they receive.
- Starting with **Android 8.0 (API level 26)**, you can assign each of your app's notifications to a **notification channel**.
- Each notification channel represents a **type of notification**, and you can **group several notifications** in each channel.
- Notification channels are called **Categories** in the user-visible Settings app.



Importance level

- The channel's importance determines the **instrusiveness of the notifications** posted in that channel.
- Types:
  - **Urgent** Notifications make a sound and appear as heads-up notifications.(IMPORTANCE_HIGH)
  - **High** Notifications make a sound (IMPORTANCE_DEFAULT)
  - **Medium** Notifications make no sound (IMPORTANCE_LOW)
  - **Low** Notifications make no sound and do not appear in the status bar (IMPORTANCE_MIN)

Initial settings

- Example:
```
notificationChannel.enableLights(true);
notificationChannel.setLightColor(Color.RED);
notificationChannel.enableVibration(true);
notificationChannel.setDescription("Notification from Mascot");
```

Notification channel

- Example:
```
if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.O) {
    NotificationManager mNotificationManager =  (NotificationManager)
    getSystemService(Context.NOTIFICATION_SERVICE);
     mNotifyManager.createNotificationChannel(notificationChannel);
}
```

Creating notifications

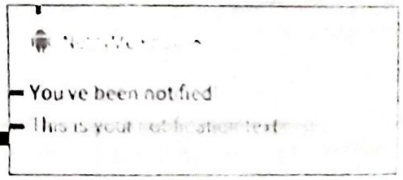
- Create a notification using the **NotificationCompat.Builder** class.
- Example:

```
NotificationCompat.Builder mBuilder = new NotificationCompat.Builder(this, CHANNEL_ID);
```

Set notification contents

- You can assign components to the notification like a **small icon**, a **title**, and the **notification message.**
- Example:

```
NotificationCompat.Builder mBuilder = new NotificationCompat.Builder(this, CHANNEL_ID)
        .setSmallIcon(R.drawable.android_icon)
        .setContentTitle("You've been notified!")
        .setContentText("This is your notification text.");
```



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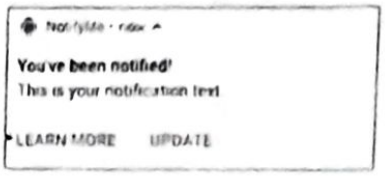
Set the intent for the notification's tap action

- Every notification must respond when it is tapped, usually by launching an Activity in your app.
- To launch an Activity in your app, set a content intent using the setContentIntent() method.
- Example:

```
// Create an explicit intent for an Activity in your app
Intent contentIntent = new Intent(this, ExampleActivity.class);
PendingIntent pendingContentIntent = PendingIntent.getActivity
(this, 0,  contentIntent, PendingIntent.FLAG_UPDATE_CURRENT);
// Set the intent that will fire when the user taps the notification
mBuilder.setContentIntent(pendingContentIntent);
```



Add notification action buttons

- Notification **action buttons** allow the user to perform an app-related task without launching the app.
- Example:

```
mBuilder.addAction(R.drawable.car, "Get Directions", mapPendingIntent);
```

Expandable notifications

- Notifications in the notification drawer appear in two main layouts, **normal view** and **expanded view**.
- To create notifications that appear in an expanded layout, use setStyle() method:
- Options:

NotificationCompat.BigTextStyle	- for large-format notifications that include a lot of text.
NotificationCompat.InboxStyle	- for displaying a list of summary lines
NotificationCompat.MediaStyle	- for media playback notifications.
NotificationCompat.MessagingStyle	- to display sequential messages in an ongoing conversation.
NotificationCompat.BigPictureStyle	- for large-format notifications that include large image

- Example:

```
NotificationCompat notif = new NotificationCompat.Builder(mContext, channelId)
        .setContentTitle("New photo from " + sender.toString())
        .setContentText(subject)
        .setSmallIcon(R.drawable.new_post)
        .setLargeIcon(aBitmap)
        .setStyle(new NotificationCompat.BigPictureStyle().bigPicture(aBigBitmap)
        .setBigContentTitle("Large Notification Title"))
        .setContentIntent(notificationPendingIntent)
        .setPriority(NotificationCompat.PRIORITY_HIGH)
        .build();
```

Dialogs

- It is a small window that prompts the user to make a decision or enter additional information.
- It does not fill the screen and is normally used for modal events that require users to take an action before they can proceed.

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AlertDialog

- A dialog that can show a **title**, up to **three buttons**, a **list of selectable items**, or a **custom layout**.

DatePickerDialog or **TimePickerDialog**

- A dialog with a pre-defined UI that allows the user to **select a date or time.**

DialogFragment

- It provides all the controls you need to create your dialog and manage its appearance, instead of calling methods on the Dialog object.

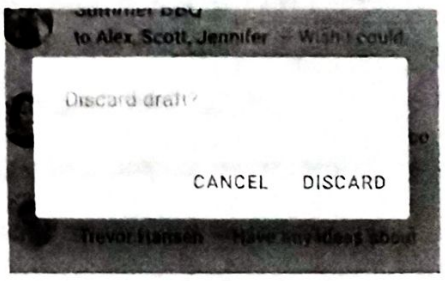
Building an Alert Dialog

- It allows you to build a variety of dialog designs and is often the only dialog class you'll need.

Creating a Dialog Fragment

- You can accomplish a wide variety of dialog designs by extending DialogFragment and creating a AlertDialog in the onCreateDialog() callback method.
- Example:

```
public class FireMissilesDialogFragment extends DialogFragment {
  @Override
  public Dialog onCreateDialog(Bundle savedInstanceState) {
    // Use the Builder class for convenient dialog construction
    AlertDialog.Builder builder = new AlertDialog.Builder(getActivity());
    builder.setMessage(R.string.dialog_icon)
        .setPositiveButton(R.string.fire, new DialogInterface.OnClickListener() {
          public void onClick(DialogInterface dialog, int id) {
            // Do something
          }
        })
        .setNegativeButton(R.string.cancel, new DialogInterface.OnClickListener() {
          public void onClick(DialogInterface dialog, int id) {
            // User cancelled the dialog
          }
        });
    // Create the AlertDialog object and return it
    return builder.create();
  }
}
```



There are three different action buttons you can add:

1. **Positive** - Use this to accept and continue with the action (the "**OK**" action).
2. **Negative** - Use this to **cancel** the action.
3. **Neutral** - Use this when the user may not want to proceed with the action, but doesn't necessarily want to cancel.

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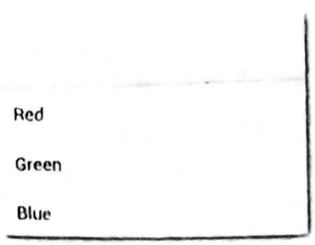
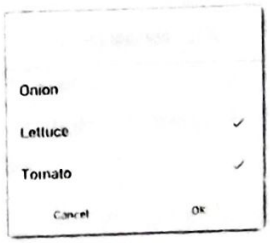
Adding a list

- A traditional **single-choice** list
- A persistent single-choice list (**radio buttons**)
- A persistent multiple-choice list (**checkboxes**)
- Example:

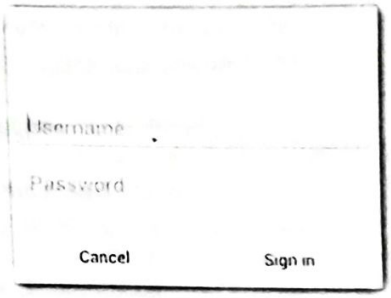





```
@Override
public Dialog onCreateDialog(Bundle savedInstanceState) {
    AlertDialog.Builder builder = new AlertDialog.Builder(getActivity());
    builder.setTitle(R.string.pick_color)
           .setItems(R.array.colors_array, new DialogInterface.OnClickListener() {
               public void onClick(DialogInterface dialog, int which) {
               // Do something here
           }
    });
    return builder.create();
}
```

Creating a Custom Layout

- Create a layout and add it to an **AlertDialog** by calling **setView()** on your **AlertDialog.Builder** object.
- Use **AlertDialog.Builder** methods to add buttons and a title.



2) Activity 3: Skill-building Activities (with answer key) (18 mins + 2 mins checking)

A. Identify the following (10 points)

Notification **1.** It is the message you app displayed to send feedback to user.
Notification Power **2.** It is contains details of the notification.
Notification Area **3.** It contains notifications recevied.
Notification Badge **4.** It is also called notification dot.
Notfection menu **5.** It show options for user to act on in the notification.
Notification channel **6.** It contains settings for an app's notification.
Dialog **7.** It is another to communicate with the user and make decision to act on it.
Alert Dialog **8.** It is used to show app's status/feedback with title, buttons, selectable items.
DatepickerDialog **9.** It is used to choose date.
DialogFragment **10.** It is used to manage dialog appearance, calling methods on the dialog..

B. Continue the given code to meet the following requirements(10 points)

NotificationCompat notif = new NotificationCompat.Builder(mContext, channelId)

1. Set the content title to"**Welcome to PHINMA!**": • setContentTitle(" Welcome to PHINMA")
2. Set the title to"**Hello" Big** Text: • setBigContentTitle(" Hello")

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3. Set the icon **myBitmap** to **Large**: . setLargeIcon(myBitmap)
4. Set the priority to **HIGH**: . setpriority(notificationCompat.PRIORITY_HIGH)
5. Set content intent: . setContentIntent(notificationPendingIntent)
6. Set the icon to small using **myicon** at drawable . setSmallIcon(R.drawable.new_post)
7. Set the text to **mymessage**: . setContentText(subject)
8. Set the icon to large using **myicon** at drawable . setLargeIcon(R.drawable.new_post)
9. Set the content title to"Android": . setContentTitle("Android")
10. Build: .build()

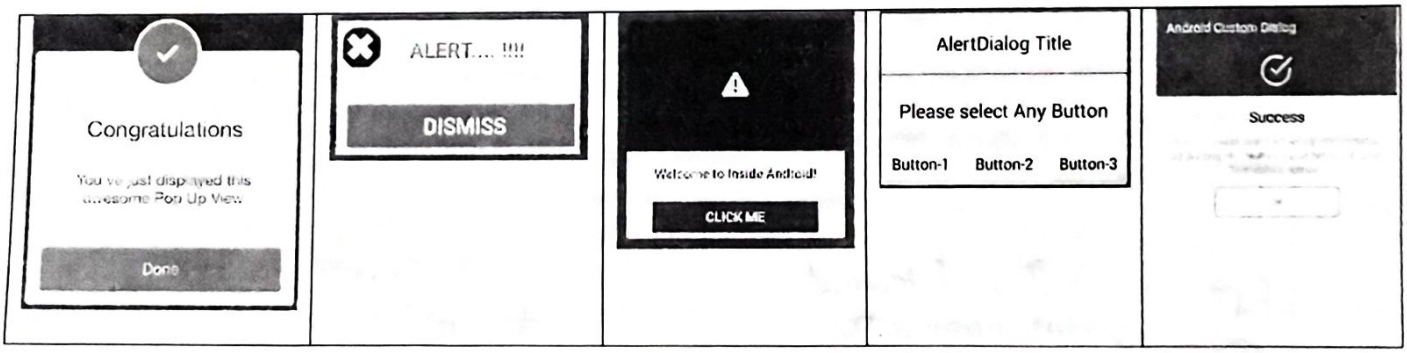
Check your answers against the **Key to Corrections** found at the end of this SAS. Write your score on the **top right of page #1**.

3) Activity 4: What I Know Chart, part 2 (2 mins)

Please visit the *What I Know Chart* from Activity 1 and write your answers to the questions based on what you now know in the third column of the chart.

4) Activity 5: Check for Understanding (5 mins)

A. Give your honest assessment on the following dialogs. (10 points)



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1.	2.	3.	4.	5.
Rate (1 worst to 5 best): 5 Reason: It is neat and user friendly and has a good Dialog for the users	Rate (1 worst to 5 best): 1 Reason: Unecessary Exclamation. there is already a close Icon and also Dismiss. Redundancy	Rate (1 worst to 5 best): 2 Reason: The Exclamation Image is taking all the space	Rate (1 worst to 5 best): 2 Reason: The placement of the buttons are next reverses users wouldn't know what they are clicking	Rate (1 worst to 5 best): 5 Reason: Very Nice UI super neat and Interactive as well

Check your answers against the **Key to Corrections** found at the end of this SAS. Write your score on the **top right of page #1**.

C. LESSON WRAP-UP

1) **Activity 6: Thinking about Learning (5 mins)**

You are done with this module! Track your progress. **Circle the day/s you are already done!**

Period 1									Period 2								Period 3								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

2) Think about your learning by filling up your "**My Learning Tracker**". Please write the learning targets, your scores, learning experience for this session and plan for the next session.

Date	**Learning Target/Topic**	**Scores**	**Action Plan**
What's the date today?	*What module# did you do? What were the learning targets? What activities did you do?*	*What were your scores **(out of 20 points)** in the activities?*	*What contributed to the quality of your performance today? What will you do next session to maintain your performance or improve it?*
Write your answer below (Use the back page for more space for your answer)			
Sept 25 2020	#7, I learned about notification and diff types of Set		I scanned my notes for references

FAQs

1. **Can I customize the dialog?** Yes.
2. **Can I connect the dialog to a method?** Yes.
3. **Can I add an image to a dialog?** Yes.

HOMEWORK (Performance Task):

1. Go to https://classroom.google.com/. Login using your **Gmail account**
2. Join and type the class code **xv2lu2q.** Go to **Classwork** Tab

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3. Perform at **least one** project in **Chapter 11 Homework** you have not yet developed. All the needed **homework (PDF)** and **project files (RAR)** are included. You can also download the files for offline viewing.

NOTE:

a. Additional points will be granted to every additional projects accomplished in the **homework**.
b. Compress your **project folder** and **APK** using **ZIP** or **RAR** using your section and last name and first name. For example **1BSIT –COC-1-leabres-john.rar**. **(THIS FORMAT IS REQUIRED)**
c. Send it to _____ (teacher's Email address or Google Drive address)

KEY TO CORRECTIONS

2) Activity 3: Skill-building Activities (with answer key) (18 mins + 2 mins checking)

A. Identify the following (10 points)

_____**1.** It is the message you app displayed to send feedback to user.**(Notification)**
_____**2.** It is contains details of the notification. **(Notification drawer)**
_____**3.** It contains notifications recevied. **(*Notification area*)**
_____**4.** It is also called notification dot. **(Notification badge)**
_____**5.** It show options for user to act on in the notification. **(Notification menu)**
_____**6.** It contains settings for an app's notification. **(Notification channel)**
_____**7.** It is another to communicate with the user and make decision to act on it. **(Dialog)**
_____**8.** It is used to show app's status/feedback with title, buttons, selectable items. **(AlertDialog)**
_____**9.** It is used to choose date. **(DatePickerDialog)**
_____**10.** It is used to manage dialog appearance, calling methods on the dialog.. **(DialogFragment)**

B. Continue the given code to meet the following requirements(10 points)

NotificationCompat notif = new NotificationCompat.Builder(mContext, channelId)

1. Set the content title to**"Welcome to PHINMA!"**: **.setContentTitle("Welcome to PHINMA!")**
2. Set the title to**"Hello" Big** Text: **.setBigContentTitle ("Hello")**
3. Set the icon **myBitmap** to **Large**: **.setLargeIcon(myBitmap)**
4. Set the priority to **HIGH**: **.setPriority(NotificationCompat.PRIORITY_HIGH)**
5. Set content intent: **.setContentIntent(notificationPendingIntent)**
6. Set the icon to small using **myicon** at drawable **.setSmallIcon(R.drawable.new_post)**
7. Set the text to **mymessage**: **.setContentText(subject)**
8. Set the icon to large using **myicon** at drawable **.setLargeIcon(R.drawable.new_post)**
9. Set the content title to"Android": **.setContentTitle("Android")**

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10. Build: .build()

Activity 5: Check for Understanding (5 mins)

A. Give your honest assessment on the following dialogs. (10 points)

No key answer. It is for teacher discretion to give the appropriate score based on the understanding of the student on what makes a good dialog thru assessing various dialogs existing.