Abstraction for ILT-MD-06-R

Name : Sahrial Ihsani Ishak

StudentID : A1891905

In this session, Mr Nurrahman Hadi is our instructor. This session talked about how to make UIUX Component in android studio. There are 2 topic, layouting and Navigation.

In layouting, he talked about attribute and layouts, such as Constraint, linear, and scrollview layout.

Attribute that used in android are layout width and layout height. There are

- Match constraint, that expand the elements to fill it's parent.
- Wrap constraint, that shrink element to enclose content.
- Fixed number of dp (density independent pixels)

Actually, there are many layout that used in android. The most used in android are

a. Constraint layout :
   - Constraint is the default layout while we create new project in android studio
   - Constraint has a flexibility for layout design
   - Constraint is responsive
   - Constraint is usually result a flatter view hierarchy than linear layout
b. Linear Layout
   - LinearLayout is a view group that aligns all children in a single direction, vertically or horizontally.
   - We can specify the layout direction with the android:orientation attribute.
   - All children of a LinearLayout are stacked one after the other, so a vertical list will only have one child per row, no matter how wide they are, and a horizontal list will only be one row high (the height of the tallest child, plus padding).
c. Scrollview
   - Make our layout can be scrolled.
   - It can only have one direct child
   - If you have list inside scrollview, use nestedscrollview instead.

In navigation, he talked about navigation components, appbar with menu, navigation drawer, bottom navigation bar, and tab layout with viewpager.

The advantages in using navigation are :

- Navigation can help our app flow easier
- Navigation can handles fragment
- Can handle up and back

- It standardized resources for animation and transitions
- Safe args

a. Navigation component
   Key parts of Nav component are
   - Navigation graph
     Is an xml resource that contains all navigation that related information in one centralized location. This includes all of the individual contents areas within our app, called destinations, that user can take through our app.
   - Navigation Host
     Is an empty container that displays destinations from your navigation graph. The navigation component contains a default navHost implementation, NavHost Fragment, that displays fragment destinations.
   - Navigation Controller
     Is an object that managed app navigation within navHost.

b. Appbar with menu
   The appbar is one part of the navigation on the android which is located at the very top of our application that displays information. Information here is usually displayed is the name of the layout, search menu, or other menu that is used as a link with other menu.

c. Navigation drawer
   The navigation drawer is a a navigation that is used to display a menu next to the application. Use it by sliding to the left of the screen. Logic of making it by providing a menu that is used to hold the existing fragments, then making navigation when the menu is pressed will move to the related fragment.

d. Bottom navigation bar
   Bottom navigation bar is one of navigation bar that located at bottom of our app.It can connect an activity with fragment and the other fragment. The logic for making it is the same as the logic for creating a navigation drawer where it provides a menu that is used to hold the existing fragments, then making navigation when the menu is pressed will move to the related fragment.

e. Tab layout with viewpager
   TabLayout is a navigation component that provides a horizontal layout that is used to display tabs which will later contain a viewpager component. The view pager here is used to store fragments that will be used to display existing data