**Navigation bar:**  
1. Tạo BottomNavigationView  
2. Setting android:layout\_alignParentBottom="true" để setting hiển thị ở bottom  
3. Tạo custom menu  
4. Import menu vào BottomNavigationView : app:menu="@menu/menu\_bottom\_nav"  
5. Xử lý event khi select vào item  
6. Tạo color cho xử lý đổi màu item khi selected  
7. Setting vào activity  
  
Navigation bar sử dụng Fragment + ViewPager:  
1. Add ViewPager vào Activity  
2. Setting bottom\_nav nằm dưới ViewPager: android:layout\_above="@id/bottom\_nav"  
3. Tạo 3 Fragment để hiển thị ứng với mỗi item của menu  
4. Tạo adapter để truyền từng Fragment vào từng page của ViewPager  
5. Xử lý để setup ViewPager  
  
**Get all videos from Gallery:**1. Add dependencies cho recyclerview: implementation "androidx.recyclerview:recyclerview:1.1.0"  
link: <https://developer.android.com/jetpack/androidx/releases/recyclerview>  
2. Add dependencies cho cardview cho từng item: implementation "androidx.cardview:cardview:1.0.0"  
link: <https://developer.android.com/jetpack/androidx/releases/cardview>  
3. Add dependencies permission: implementation 'gun0912.ted:tedpermission:2.2.3'  
link: <https://github.com/ParkSangGwon/TedPermission>  
4. Add dependencies để load image: implementation 'com.github.bumptech.glide:glide:4.12.0'  
link: <https://github.com/bumptech/glide>  
4. Tạo xml cho CardView  
5. Tạo Video Object  
6. Tạo VideoAdapter  
6.1 Tạo VideoViewHolder extends RecyclerView.ViewHolder  
6.2 Extends adapter cho VideoAdapter(VideoAdapter extends RecyclerView.Adapter<VideoAdapter.VideoViewHolder>)  
7. Sử dụng   
8. Add dependencies để play video: compile 'com.henryblue.mxvideoplayer:xvideoplayer:1.2.1'  
link: <https://github.com/henryblue/MxVideoPlayer>

**Slide image:**  
1. Add dependencies cho CircleIndicator: implementation 'me.relex:circleindicator:2.1.6'  
link: <https://github.com/ongakuer/CircleIndicator>  
2. Add dependencies để load image: implementation 'com.github.bumptech.glide:glide:4.12.0'  
link: <https://github.com/bumptech/glide>

**ArcMenu:**1. Add dependencies cho recyclerview: implementation "androidx.recyclerview:recyclerview:1.1.0"  
link: <https://developer.android.com/jetpack/androidx/releases/recyclerview>  
2. Add dependencies cho cardview cho từng item: implementation "androidx.cardview:cardview:1.0.0"  
link: <https://developer.android.com/jetpack/androidx/releases/cardview>  
3. Add dependencies cho MaterialArcMenu: implementation 'com.sa90.materialarcmenu:library:2.0.0'  
link: <https://github.com/saurabharora90/MaterialArcMenu>  
4. Add dependencies cho buttons-floating-action-button: implementation 'com.google.android.material:material:<version>'  
link: <https://material.io/develop/android/docs/getting-started>

**Room database:**  
- Tạo @Entity(tableName = "user"): Entity  
- Tạo @Dao: xử lý truy vấn tới database  
- Tạo @Database(entities = User.class, version = 1): Tạo database, Nếu có sự thay đổi Entity trong database thì cần phải thực hiện migrate  
   
**Navigation Drawer + Toolbar + Fragment:**-

Q/A: Trong seri khoa phạm thì có đoạn xử lý   
  
Data binding:  
  
1. Enabled trong gradle module  
dataBinding{

enabled = true

}  
2. Tạo class ViewModel extends