Talanay, Jan Mikhail Date: June 15, 2022

Section: OTIS1 Subject: MOBDEVT

1. XML Layout (Code)

<?*xml version*="1.0" *encoding*="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout *xmlns:***android**="http://schemas.android.com/apk/res/android"  
 *xmlns:***app**="http://schemas.android.com/apk/res-auto"  
 *xmlns:***tools**="http://schemas.android.com/tools"  
 **android***:layout\_width*="match\_parent"  
 **android***:layout\_height*="match\_parent"  
 **tools***:context*=".MainActivity">  
  
 <ImageView  
 **android***:id*="@+id/imageView"  
 **android***:layout\_width*="236dp"  
 **android***:layout\_height*="220dp"  
 **android***:layout\_marginBottom*="8dp"  
 **android***:scaleType*="centerInside"  
 **app***:layout\_constraintBottom\_toTopOf*="@+id/linearLayout2"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintHorizontal\_bias*="0.497"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:srcCompat*="@drawable/empty" />

<Switch  
 **android***:id*="@+id/switchMode"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_marginBottom*="4dp"  
 **android***:minHeight*="48dp"  
 **android***:text*="@string/start\_game"  
 **app***:layout\_constraintBottom\_toBottomOf*="parent"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent" />  
  
<LinearLayout  
 **android***:id*="@+id/linearLayout2"  
 **android***:layout\_width*="394dp"  
 **android***:layout\_height*="57dp"  
 **android***:layout\_marginBottom*="16dp"  
 **android***:orientation*="horizontal"  
 **app***:layout\_constraintBottom\_toTopOf*="@+id/switchMode"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintHorizontal\_bias*="0.47"  
 **app***:layout\_constraintStart\_toStartOf*="parent">

<Button  
 **android***:id*="@+id/btnApple"  
 **android***:layout\_width*="102dp"  
 **android***:layout\_height*="48dp"  
 **android***:layout\_marginLeft*="5dp"  
 **android***:text*="@string/show\_apple"  
 **android***:textAppearance*="@style/TextAppearance.AppCompat.Small"  
 **android***:textSize*="12sp"  
 **app***:icon*="@drawable/ic\_apple" />

<Button  
 **android***:id*="@+id/btnGrape"  
 **android***:layout\_width*="102dp"  
 **android***:layout\_height*="48dp"  
 **android***:layout\_marginLeft*="35dp"  
 **android***:text*="@string/show\_grape"  
 **android***:textAppearance*="@style/TextAppearance.AppCompat.Small"  
 **android***:textSize*="12sp"  
 **app***:icon*="@drawable/ic\_grape" />  
  
<Button  
 **android***:id*="@+id/btnRandom"  
 **android***:layout\_width*="102dp"  
 **android***:layout\_height*="48dp"  
 **android***:layout\_marginLeft*="30dp"  
 **android***:text*="@string/random\_image"  
 **android***:textAppearance*="@style/TextAppearance.AppCompat.Small"  
 **android***:textSize*="12sp" />

</LinearLayout>  
<ImageView  
 **android***:id*="@+id/imageView2"  
 **android***:layout\_width*="253dp"  
 **android***:layout\_height*="210dp"  
 **android***:layout\_marginBottom*="36dp"  
 **app***:layout\_constraintBottom\_toTopOf*="@+id/txtguess"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:srcCompat*="@drawable/empty" />  
  
<TextView  
 **android***:id*="@+id/txtguess"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_marginBottom*="20dp"  
 **android***:text*="Your Guess Image"  
 **android***:textSize*="20sp"  
 **app***:layout\_constraintBottom\_toTopOf*="@+id/imageView"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent" />

<TextView  
 **android***:id*="@+id/txtrandom"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:text*="Random Image"  
 **android***:textSize*="20sp"  
 **app***:layout\_constraintBottom\_toTopOf*="@+id/imageView2"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintHorizontal\_bias*="0.498"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toTopOf*="parent"  
 **app***:layout\_constraintVertical\_bias*="0.526" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

1. Main Activity File Source Code (KOTLIN)

class MainActivity : AppCompatActivity() {  
 private lateinit var **binding**: ActivityMainBinding  
 private var **fruits** = *mutableListOf*(R.drawable.*apple*, R.drawable.*grapes*, R.drawable.*orange*)  
 private var **mode**: Boolean = true  
 private var **userschoice**: Int = 0  
  
 override fun onCreate(*savedInstanceState*: Bundle?) {  
 super.onCreate(*savedInstanceState*)  
 **binding** = ActivityMainBinding.inflate(*layoutInflater*)  
 setContentView(**binding**.*root*)  
  
 modeOff()  
 **binding**.**switchMode**.setOnCheckedChangeListener **{** *\_*, *isChecked* **->** ToggleGameModed(*isChecked*)  
 **}** }  
  
 private fun ToggleGameModed(*isChecked*: Boolean) {  
 if (*isChecked*) {  
 **binding**.**switchMode**.*text* = getString(R.string.*stop\_game*)  
 AppleClick()  
 GrapeClick()  
 RandomImage()  
  
 } else {  
 **binding**.**switchMode**.*text* = getString(R.string.*start\_game*)  
 **binding**.**imageView2**.setImageResource(R.drawable.*empty*)  
 **binding**.**imageView**.setImageResource(R.drawable.*empty*)  
  
 modeOff()  
 }  
 }

private fun GrapeClick() {  
 **binding**.**btnGrape**.setOnClickListener **{  
 userschoice** = R.drawable.*grapes* **binding**.**imageView**.setImageResource(**userschoice**)  
  
 **}**}

private fun AppleClick() {  
 **binding**.**btnApple**.setOnClickListener **{  
 userschoice** = R.drawable.*apple* **binding**.**imageView**.setImageResource(**userschoice**)  
 **}**}

private fun RandomImage() {  
 **binding**.**btnRandom**.setOnClickListener **{** val random = (**fruits**).*shuffled*().*first*()  
 **binding**.**imageView2**.setImageResource(random)  
  
 if(**userschoice** == (random)){  
 Snackbar.make(**it**, "Congratulations, You Win!!!", Snackbar.*LENGTH\_LONG*).show()  
 }  
 else{  
 Snackbar.make(**it**, "Sorry, You Lose...", Snackbar.*LENGTH\_LONG*).show()  
 }  
 **}** }  
 private fun modeOff() {  
 if (**mode**) {  
 **binding**.**btnApple**.setOnClickListener **{** Snackbar.make(**it**, "Start the game", Snackbar.*LENGTH\_LONG*).show()  
 **}  
 binding**.**btnGrape**.setOnClickListener **{** Snackbar.make(**it**, "Start the game", Snackbar.*LENGTH\_LONG*).show()  
 **}  
 binding**.**btnRandom**.setOnClickListener **{** Snackbar.make(**it**, "Start the game", Snackbar.*LENGTH\_LONG*).show()  
 **}** }  
 }  
}

B.1. Include a short discussion on how you were able to accomplished the task

In my short discussion on how I was able to accomplished the task is, first of all make an Boolean “mode” that whenever the app is off and when you try to press any of the buttons it will only show Snack Bar message “start the game” and it will only be remove when you turn the game on, and for the comparing of both images what I did was, based on the hint that was given to us, I make a variable to store the two R.ID of apple and grapes in that variable depending on what button was press, then compare it to the variable random that was provided if it is the same value.

1. Screen Record a short video demo (10-15 seconds) of your working app showing the accomplished functionalities ..

<https://www.youtube.com/watch?v=djhOW1msbQc>

1. your self-assessment (what have you learned?).

In my self-assessment, what I have learned is how to manipulate and use images in Android Kotlin and how you even compare it, also using List to randomize elements with combination of string interpolation to view the random element that was shown. The topic was very fun to actually learn, especially doing it on an actual application of android.