Talanay, Jan Mikhail Date: July 13, 2022

Section: OTIS1 Subject: MOBDEVT

1. activity\_main.XML

<?*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">  
  
 <TextView  
 **android***:id*="@+id/txtmessage"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_marginTop*="16dp"  
 **android***:text*="Where is that Apple!"  
 **android***:textSize*="20sp"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toTopOf*="parent" />  
  
 <TextView  
 **android***:id*="@+id/txtcoins"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:text*="You have 10 Coins"  
 **android***:textSize*="20sp"  
 **app***:layout\_constraintBottom\_toBottomOf*="parent"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/img3"  
 **app***:layout\_constraintVertical\_bias*="0.195" />

<ImageView  
 **android***:id*="@+id/img1"  
 **android***:layout\_width*="183dp"  
 **android***:layout\_height*="158dp"  
 **android***:layout\_marginTop*="24dp"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/txtmessage"  
 **tools***:srcCompat*="@drawable/empty" />  
  
<ImageView  
 **android***:id*="@+id/img2"  
 **android***:layout\_width*="183dp"  
 **android***:layout\_height*="158dp"  
 **android***:layout\_marginTop*="24dp"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/img1"  
 **tools***:srcCompat*="@drawable/empty" />

<ImageView  
 **android***:id*="@+id/img3"  
 **android***:layout\_width*="183dp"  
 **android***:layout\_height*="158dp"  
 **android***:layout\_marginTop*="24dp"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/img2"  
 **tools***:srcCompat*="@drawable/empty" />  
  
<LinearLayout  
 **android***:layout\_width*="242dp"  
 **android***:layout\_height*="78dp"  
 **android***:layout\_marginTop*="16dp"  
 **android***:orientation*="horizontal"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/txtcoins">  
  
 <Button  
 **android***:id*="@+id/btndraw5"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_margin*="15dp"  
 **android***:text*="Draw 5"  
 **android***:textSize*="12sp"  
 **tools***:ignore*="TouchTargetSizeCheck" />

<Button  
 **android***:id*="@+id/btndraw10"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_margin*="15dp"  
 **android***:minHeight*="48dp"  
 **android***:text*="Draw 10"  
 **android***:textSize*="12sp"  
 **tools***:ignore*="TouchTargetSizeCheck" />  
  
 </LinearLayout>  
  
</androidx.constraintlayout.widget.ConstraintLayout>

A.1 activity\_main.XML (Landscape)

<?*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">  
  
 <TextView  
 **android***:id*="@+id/txtmessage"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_marginTop*="16dp"  
 **android***:text*="Where is that Apple!"  
 **android***:textSize*="20sp"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toTopOf*="parent" />

<TextView  
 **android***:id*="@+id/txtcoins"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_marginTop*="8dp"  
 **android***:text*="You have 10 Coins"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/img1" />

<ImageView  
 **android***:id*="@+id/img1"  
 **android***:layout\_width*="183dp"  
 **android***:layout\_height*="158dp"  
 **android***:layout\_marginStart*="72dp"  
 **android***:layout\_marginTop*="16dp"  
 **app***:layout\_constraintStart\_toEndOf*="@+id/img2"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/txtmessage"  
 **tools***:srcCompat*="@drawable/empty" />

<ImageView  
 **android***:id*="@+id/img2"  
 **android***:layout\_width*="183dp"  
 **android***:layout\_height*="158dp"  
 **android***:layout\_marginStart*="52dp"  
 **android***:layout\_marginTop*="16dp"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/txtmessage"  
 **tools***:srcCompat*="@drawable/empty" />

<ImageView  
 **android***:id*="@+id/img3"  
 **android***:layout\_width*="183dp"  
 **android***:layout\_height*="158dp"  
 **android***:layout\_marginTop*="16dp"  
 **android***:layout\_marginEnd*="52dp"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintHorizontal\_bias*="1.0"  
 **app***:layout\_constraintStart\_toEndOf*="@+id/img1"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/txtmessage"  
 **tools***:srcCompat*="@drawable/empty" />

<LinearLayout  
 **android***:layout\_width*="259dp"  
 **android***:layout\_height*="69dp"  
 **android***:orientation*="horizontal"  
 **app***:layout\_constraintBottom\_toBottomOf*="parent"  
 **app***:layout\_constraintEnd\_toEndOf*="parent"  
 **app***:layout\_constraintHorizontal\_bias*="0.502"  
 **app***:layout\_constraintStart\_toStartOf*="parent"  
 **app***:layout\_constraintTop\_toBottomOf*="@+id/txtcoins"  
 **app***:layout\_constraintVertical\_bias*="0.171">  
  
 <Button  
 **android***:id*="@+id/btndraw5"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_margin*="15dp"  
 **android***:text*="Draw 5"  
 **tools***:ignore*="TouchTargetSizeCheck" />  
  
 <Button  
 **android***:id*="@+id/btndraw10"  
 **android***:layout\_width*="wrap\_content"  
 **android***:layout\_height*="wrap\_content"  
 **android***:layout\_margin*="15dp"  
 **android***:minHeight*="48dp"  
 **android***:text*="Draw 10"  
 **tools***:ignore*="TouchTargetSizeCheck" />  
  
 </LinearLayout>  
  
</androidx.constraintlayout.widget.ConstraintLayout>

1. MainActivity.kt

class MainActivity : AppCompatActivity() {  
 private lateinit var **Rimage** :IntArray  
 private lateinit var **messages** :String  
 private var **coins**: Int = 10  
 *////////////////////////////////////////////////* private val **btnDraw5** by *lazy* **{ binding**.**btndraw5 }** private val **btnDraw10** by *lazy* **{ binding**.**btndraw10 }** private val **txtMessage** by *lazy* **{ binding**.**txtmessage}** private val **txtCoins** by *lazy* **{ binding**.**txtcoins}** private val **images** by *lazy* **{** *listOf*(**binding**.**img1**, **binding**.**img2**, **binding**.**img3**)  
 **}**

private lateinit var **binding**: ActivityMainBinding  
override fun onCreate(*savedInstanceState*: Bundle?) {  
 super.onCreate(*savedInstanceState*)  
 **binding** = ActivityMainBinding.inflate(*layoutInflater*)  
 setContentView(**binding**.*root*)  
  
 imageViews()  
 **messages** = *savedInstanceState*?.getString(*MESSAGE*) ?: "Show that APPLE"  
 **Rimage** = *savedInstanceState*?.getIntArray(*IMAGES*) ?: *intArrayOf*(R.drawable.*empty*,R.drawable.*empty*,R.drawable.*empty*)  
 displayRimages()  
 messages()

**btnDraw5**.setOnClickListener**{** if(**coins** > 0) {  
 **coins** -= 5  
 drawSlotMachine()  
 draw5()  
 }  
 else{  
 **txtCoins**.*text* = "YOU LOSE"  
 Snackbar.make(**it**, "No coins stop betting!", Snackbar.*LENGTH\_LONG*).show()  
 }  
 **}  
 btnDraw10**.setOnClickListener**{** if(**coins** > 5) {  
 **coins** -= 10  
 drawSlotMachine()  
 draw10()  
 }  
 else{  
 Snackbar.make(**it**, "No coins stop betting!", Snackbar.*LENGTH\_LONG*).show()  
 }  
 **}** if(*savedInstanceState* != null){  
 **coins** = *savedInstanceState*.getInt("COINS")  
 **txtCoins**.*text* = "You have $**coins** Coins"  
 }  
  
}

override fun onSaveInstanceState(*outState*: Bundle) {  
 *outState*.putIntArray(*IMAGES*, **Rimage**)  
 *outState*.putInt("COINS", **coins**)  
 *outState*.putString(*MESSAGE*, **messages**)  
 super.onSaveInstanceState(*outState*)  
}

private fun draw5(){  
 if(appleCount().equals(1)){  
 **coins** += 5  
 }  
 else if(appleCount().equals(2)){  
 **coins** += 10  
 }  
 else if(appleCount().equals(3)){  
 **coins** += 15  
 }  
 else{  
 **coins** += 0  
 }  
 **txtCoins**.*text* = "You have $**coins** Coins"  
}  
  
private fun draw10(){  
 if(appleCount().equals(1)){  
 **coins** += 10  
 }  
 else if(appleCount().equals(2)){  
 **coins** += 20  
 }  
 else if(appleCount().equals(3)){  
 **coins** += 30  
 }  
 else{  
 **coins** += 0  
 }  
 **txtCoins**.*text* = "You have $**coins** Coins"  
}

private fun messages(){  
 when(appleCount()){  
 1 -> **messages** = "Nice one"  
 2 -> **messages** = "You got two!"  
 3 -> **messages** = "wow you got 3"  
 else -> **messages** = "Give that Apple"  
 }  
 **txtMessage**.*text* = **messages**}  
  
private fun appleCount():Int{  
 var counterApple = 0  
 for (i in **Rimage**){  
 if (R.drawable.*apple* == i){  
 counterApple++  
 }  
 }  
 return counterApple  
}  
  
private fun randomImage():Int{  
 val r = Random.nextInt(3)  
 return when(r){  
 0 -> R.drawable.*apple* 1 -> R.drawable.*grapes* 2 -> R.drawable.*orange* else -> R.drawable.*empty* }  
}

private fun setRImage(){  
 **Rimage** = *intArrayOf*(randomImage(),randomImage(), randomImage())  
 }  
  
 private fun drawSlotMachine() {  
 setRImage()  
 displayRimages()  
 messages()  
 }  
  
 private fun displayRimages() {  
 for (i in 0 *until* **Rimage**.**size**) {  
 **images**[i].setImageResource(**Rimage**[i])  
 }  
 }  
  
 private fun imageViews() {  
 for(i in **images**) i.setImageResource(R.drawable.*empty*)  
 }  
}

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

In my way of accomplishing the latest lab activity was, first I created a variable that store 10 coins for the user to spend it on when using the application, and whenever the btnDraw5 or btnDraw10 is used minus it according to their number. I created a similar function that checks the apple count whether if its you will gain the same amount of the button that you used or double it. for the preserving part for the coins I search an online solution for it, because I was having a hard time when I was doing it, in the video that was provided for us (keeps resetting to 10).

1. Screen Record a short video demo (average of 20 seconds) of your working app showing the Portrait and Landscape Orientation in both Light and Dark mode. Create a YouTube channel (if you don't have one yet) and upload your video demo as unlisted. Make sure to include a clickable link of your YouTube video in this report

<https://youtu.be/4BqYetFhNh4>

1. Self-assessment (what have you learned?)

In what I have learned in this activity, is how to avoid and maintain the UI state when doing an orientation in my application and learn different approaches when random checking and displaying of images and how to properly use the lazy initializing and what is it used for.