A.   activity_main.XML

```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" />
```

```xml
<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="Bet 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="Bet 10"
            android:textSize="12sp"
            tools:ignore="TouchTargetSizeCheck" />

    </LinearLayout>

</androidx.constraintlayout.widget.ConstraintLayout>
```

A.1 activity_main.XML (Landscape)

```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: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" />
```

```xml
    <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="Bet 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="Bet 10"
            tools:ignore="TouchTargetSizeCheck" />

    </LinearLayout>

</androidx.constraintlayout.widget.ConstraintLayout>
```

```kotlin
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) {
            drawSlotMachine()
            draw5()
        }
        else{
            txtCoins.text = "YOU LOSE"
            Snackbar.make(it, "No coins stop betting!",
Snackbar.LENGTH_LONG).show()
        }
    }
    btnDraw10.setOnClickListener{
        if(coins > 5) {
            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)
}
```

```kotlin
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 -= 5
    }
    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 -= 10
    }
    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)
    }
}
```

C. 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).

D. 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

E. 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.