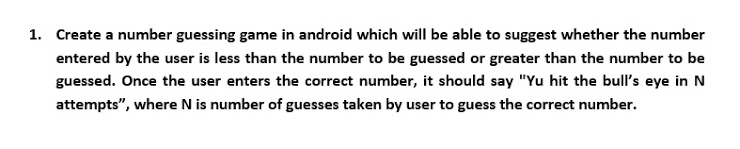
**Q1:** 

**Sol:**

**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"  
 android:background="@drawable/crop"  
 tools:context=".MainActivity"**>  
  
 <**TextView  
 android:id="@+id/textView2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="20dp"  
 android:layout\_marginLeft="20dp"  
 android:text="Guess the Number"  
 android:textSize="45dp"  
 android:textColor="#0D0D0D"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.141"** />  
  
  
 <**TextView  
 android:id="@+id/textView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="96dp"  
 android:layout\_marginLeft="96dp"  
 android:text="Between 1 to 30"  
 android:textSize="25dp"  
 android:textColor="#141313"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView2"  
 app:layout\_constraintVertical\_bias="0.055"** />  
  
 <**EditText  
 android:id="@+id/guesset"  
 android:layout\_width="300dp"  
 android:layout\_height="50dp"  
 android:textColor="#FBF9F9"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.495"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView"  
 app:layout\_constraintVertical\_bias="0.333"** />  
  
  
 <**Button  
 android:id="@+id/chkbntn"  
 android:layout\_width="250dp"  
 android:layout\_height="wrap\_content"  
 android:text="CHECK"  
 android:textSize="25dp"  
 android:textColor="#111010"  
 app:layout\_constraintBottom\_toTopOf="@+id/msgtv"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/guesset"** />  
  
 <**TextView  
 android:id="@+id/msgtv"  
 android:layout\_width="250dp"  
 android:layout\_height="23dp"  
 android:textColor="#FEFAFA"  
 android:textSize="15dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/guesset"** />  
  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**Java**

**package** com.example.myapplication;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
**import** java.util.Random;  
  
**public class** MainActivity **extends** AppCompatActivity **implements** View.OnClickListener {  
  
 EditText **guess**;  
 **private static final int *MAX\_NUMBER*** = 30;  
 **public static final** Random ***r*** = **new** Random();  
 TextView **msg**;  
 Button **chkbtn**;  
 **private int number** , **tries**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
 **msg** = findViewById(R.id.***msgtv***);  
 **chkbtn**= findViewById(R.id.***chkbntn***);  
 **guess** = findViewById(R.id.***guesset***);  
 **chkbtn**.setOnClickListener(**this**);  
  
 newGame();  
 }  
  
 @Override  
 **public void** onClick(View v) {  
 **if** (v == **chkbtn**)  
 validate();  
 }  
 **private void** validate() {  
 **int** n = Integer.*parseInt*(**guess**.getText().toString());  
 **tries**++;  
 **if**(n == **number**)  
 {  
 Toast.*makeText*(**this**,**"you hit the bulls eye "**+**number**+**" in "**+**tries**+**" attempts"**,Toast.***LENGTH\_LONG***).show();  
 newGame();  
 }  
 **else if**(n > **number**)  
 {  
 **msg**.setText(**"It is Greater"**);  
 }  
 **else if**(n < **number**)  
 {  
 **msg**.setText(**"It is Lower"**);  
 }  
 }  
  
 **private void** newGame() {  
  
 **number** = ***r***.nextInt(***MAX\_NUMBER***)+1;  
 **guess**.setText(**""**);  
 **msg**.setText(**""**);  
 **tries** = 0;  
 }  
 }

**Output**