Surprise Test
Chandigarh University

Subject-: Advanced MAD

Surprise test

Submission date: 8/April/2020

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Q1. Create Number Guessing Game in android.

XML file:

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:orientation="vertical">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/msg"
        android:textSize="22dp"
        android:textStyle="bold"
        android:layout_marginTop="60dp"
        />
    <EditText
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="50dp"
        android:inputType="number"
        android:id="@+id/number"/>
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/validate"
        android:layout_marginTop="40dp"
        android:text="Validate"/>

</LinearLayout>
```
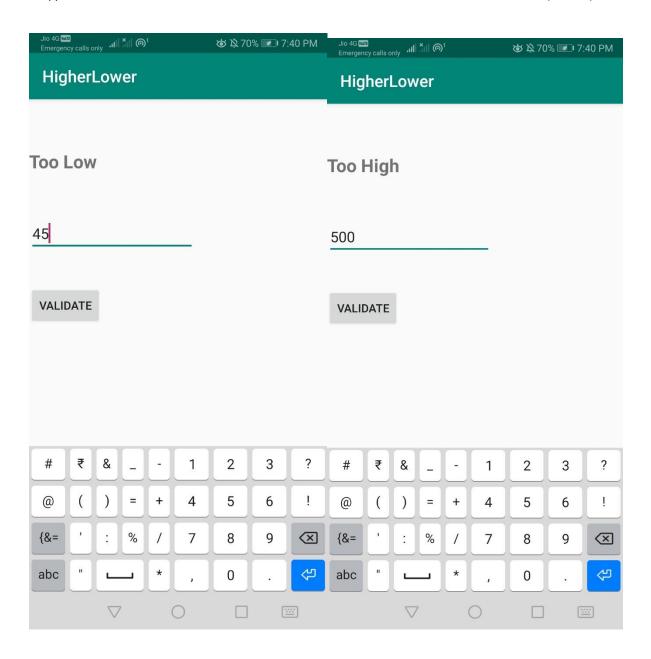
String file

```xml
<resources>
    <string name="app_name">HigherLower</string>
    <string name="start_msg">Guessing the number</string>
    <string name="too_high">Too High</string>
    <string name="too_low">Too Low</string>
</resources>
```

Java file:

```java
package com.example.guessingnumber;

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
{

    public static final int MAX_NUMBER=400;
    public static final Random RANDOM=new Random();
    private TextView msg;
    private EditText number;
    private Button validate;
    private int numberToFind, numberTries;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        msg=(TextView)findViewById(R.id.msg);
        number=(EditText)findViewById(R.id.number);
        validate=(Button)findViewById(R.id.validate);
        validate.setOnClickListener(this);
        newGame();
    }


    @Override
    public void onClick(View v) {
        if(v== validate)
        {
            validate();
        }
    }
    private void validate()
    {
        int n=Integer.parseInt(number.getText().toString());
        numberTries++;
        if(n==numberToFind)
        {
            Toast.makeText(this,"Congratulations| you found the number "+ numberToFind
```

```
+ "in " + numberTries + "tries", Toast.LENGTH_SHORT).show();
        newGame();
    }
    else
      if(n>numberToFind)
      {
        msg.setText(R.string.too_high);
      }
      else
        if(n<numberToFind)
        {
          msg.setText(R.string.too_low);
        }
  }

  private void newGame()
  {
    numberToFind=RANDOM.nextInt(MAX_NUMBER) +1;
    msg.setText(R.string.start_msg);
    number.setText("");
    numberTries=0;
  }
}
```

Output.

If the number is less than the actual number then it will display that number is low than the actual maximum number.

If the number is greater than the actual number then it will display that number is high than the actual maximum number.