

RANDOM NUMBER CARD

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AN APP THAT PRINTS RANDOM NUMBERS:

Design an App that displays 5 random numbers of cards when select cards button is pressed in the TextView, on clicking sort button, these numbers need to be sent to second activity. The sorted numbers need to be displayed in TextView and sum of the numbers need to be displayed.

MainActivity.java

```
import android.content.Intent;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import java.util.Random;
public class MainActivity extends AppCompatActivity {
    EditText t1, t2, t3, t4, t5, sum;
    Button selectButton, sortButton;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        t1 = findViewById(R.id.t1);
        t2 = findViewById(R.id.t2);
        t3 = findViewById(R.id.t3);
        t4 = findViewById(R.id.t4);
        t5 = findViewById(R.id.t5);
        sum = findViewById(R.id.result);
        selectButton = findViewById(R.id.select);
        sortButton = findViewById(R.id.sort);
        final Random random = new Random();
        selectButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                t1.setText(String.valueOf(random.nextInt(14)));
                t2.setText(String.valueOf(random.nextInt(14)));
                t3.setText(String.valueOf(random.nextInt(14)));
                t4.setText(String.valueOf(random.nextInt(14)));
                t5.setText(String.valueOf(random.nextInt(14)));
            }
        });
        sortButton.setOnClickListener(new View.OnClickListener() {
            @Override
```

```

    public void onClick(View v) {
        Intent sortIntent = new Intent(getApplicationContext(),
            MainActivity2.class);
        Bundle bundle1 = new Bundle();
        bundle1.putString("num1", t1.getText().toString());
        bundle1.putString("num2", t2.getText().toString());
        bundle1.putString("num3", t3.getText().toString());
        bundle1.putString("num4", t4.getText().toString());
        bundle1.putString("num5", t5.getText().toString());
        sortIntent.putExtras(bundle1);
        startActivityForResult(sortIntent, 564);
    }
});
}
@Override
protected void onActivityResult(int requestCode, int resultCode, @Nullable
    Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
    if (requestCode == 564) {
        if (resultCode == RESULT_OK) {
            String result = data.getStringExtra("result");
            sum.setText(result);
        }
    }
}
}
}

```

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">

    <Button
        android:id="@+id/select"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="33dp"
        android:layout_marginEnd="27dp"
        android:text="select"
        app:layout_constraintEnd_toStartOf="@+id/sort"
        app:layout_constraintTop_toBottomOf="@+id/t2" />

    <Button

```

```
android:id="@+id/sort"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="33dp"
android:layout_marginEnd="94dp"
android:text="sort"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toBottomOf="@+id/t4" />
```

```
<EditText
    android:id="@+id/t5"
    android:layout_width="59dp"
    android:layout_height="61dp"
    android:layout_marginStart="20dp"
    android:layout_marginTop="138dp"
    android:ems="10"
    android:hint="0"
    android:inputType="number"
    android:textAlignment="center"
    app:layout_constraintStart_toEndOf="@+id/t4"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="107dp"
    android:layout_marginTop="49dp"
    android:layout_marginEnd="107dp"
    android:text="Play Cards"
    android:textAlignment="center"
    android:textSize="36sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText
    android:id="@+id/t4"
    android:layout_width="58dp"
    android:layout_height="61dp"
    android:layout_marginStart="10dp"
    android:layout_marginTop="40dp"
    android:ems="10"
    android:hint="0"
    android:inputType="number"
    android:textAlignment="center"
    app:layout_constraintStart_toEndOf="@+id/t3"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<EditText
    android:id="@+id/t3"
    android:layout_width="59dp"
    android:layout_height="60dp"
    android:layout_marginTop="40dp"
    android:ems="10"
    android:hint="0"
    android:inputType="number"
    android:textAlignment="center"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<EditText
    android:id="@+id/t2"
    android:layout_width="60dp"
    android:layout_height="62dp"
    android:layout_marginTop="39dp"
    android:layout_marginEnd="17dp"
    android:ems="10"
    android:hint="0"
    android:inputType="number"
    android:textAlignment="center"
    app:layout_constraintEnd_toStartOf="@+id/t3"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<EditText
    android:id="@+id/t1"
    android:layout_width="60dp"
    android:layout_height="60dp"
    android:layout_marginTop="138dp"
    android:layout_marginEnd="10dp"
    android:ems="10"
    android:hint="0"
    android:inputType="number"
    android:textAlignment="center"
    app:layout_constraintEnd_toStartOf="@+id/t2"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="33dp"
    android:layout_marginEnd="27dp"
    android:ems="10"
    android:hint="0"
```

```

        android:inputType="number"
        android:textAlignment="center"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/select" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="67dp"
    android:layout_height="47dp"
    android:layout_marginTop="33dp"
    android:layout_marginEnd="11dp"
    android:text="SUM"
    android:textAlignment="center"
    android:textSize="30sp"
    app:layout_constraintEnd_toStartOf="@+id/result"
    app:layout_constraintTop_toBottomOf="@+id/select" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

```

MainActivity2.java
package com.example.playcards;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import java.util.Arrays;
public class MainActivity2 extends AppCompatActivity {
    Button replyButton;
    EditText n1,n2,n3,n4,n5;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
        n1 = findViewById(R.id.num1);
        n2 = findViewById(R.id.num2);
        n3 = findViewById(R.id.num3);
        n4 = findViewById(R.id.num4);
        n5 = findViewById(R.id.num5);
        replyButton = findViewById(R.id.reply);
        Intent sortedIntent = getIntent();
        Bundle bundle = sortedIntent.getExtras();
        int a = Integer.parseInt(bundle.getString("num1"));
        int b = Integer.parseInt(bundle.getString("num2"));
        int c = Integer.parseInt(bundle.getString("num3"));
        int d = Integer.parseInt(bundle.getString("num4"));
        int e = Integer.parseInt(bundle.getString("num5"));
        final int[] arr = new int[5];
    }
}

```

```

arr[0] = a;
arr[1] = b;
arr[2] = c;
arr[3] = d;
arr[4] = e;
Arrays.sort(arr);
n1.setText(String.valueOf(arr[0]));
n2.setText(String.valueOf(arr[1]));
n3.setText(String.valueOf(arr[2]));
n4.setText(String.valueOf(arr[3]));
n5.setText(String.valueOf(arr[4]));
replyButton.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        int sum = arr[0] + arr[1] + arr[2] + arr[3] + arr[4];
        Intent replyIntent = new Intent();
        replyIntent.putExtra("result", String.valueOf(sum));
        setResult(RESULT_OK, replyIntent);
        finish();
    }
});
}
}

```

activity_main2.xml

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    xmlns:app="http://schemas.android.com/apk/res-auto">
    <EditText
        android:id="@+id/num5"
        android:layout_width="71dp"
        android:layout_height="50dp"
        android:layout_marginStart="10dp"
        android:layout_marginTop="152dp"
        android:ems="10"
        android:inputType="number"
        app:layout_constraintStart_toEndOf="@+id/num4"
        app:layout_constraintTop_toTopOf="parent" />
    <EditText
        android:id="@+id/num4"
        android:layout_width="70dp"
        android:layout_height="45dp"
        android:layout_marginStart="10dp"
        android:layout_marginTop="152dp"
        android:ems="10"

```

```

        android:inputType="number"
        app:layout_constraintStart_toEndOf="@+id/num3"
        app:layout_constraintTop_toTopOf="parent" />
<EditText
    android:id="@+id/num3"
    android:layout_width="72dp"
    android:layout_height="45dp"
    android:layout_marginStart="10dp"
    android:layout_marginTop="152dp"
    android:ems="10"
    android:inputType="number"
    app:layout_constraintStart_toEndOf="@+id/num2"
    app:layout_constraintTop_toTopOf="parent" />
<EditText
    android:id="@+id/num2"
    android:layout_width="65dp"
    android:layout_height="48dp"
    android:layout_marginStart="10dp"
    android:layout_marginTop="152dp"
    android:ems="10"
    android:inputType="number"
    app:layout_constraintStart_toEndOf="@+id/num1"
    app:layout_constraintTop_toTopOf="parent" />
<EditText
    android:id="@+id/num1"
    android:layout_width="62dp"
    android:layout_height="48dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="152dp"
    android:ems="10"
    android:inputType="number"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
<Button
    android:id="@+id/reply"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="144dp"
    android:layout_marginTop="282dp"
    android:text="reply"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="44dp"
    android:layout_marginStart="104dp"

```

```
        android:layout_marginTop="52dp"
        android:text="PLAY CARDS"
        android:textAlignment="center"
        android:textSize="30sp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

OUTPUT:

