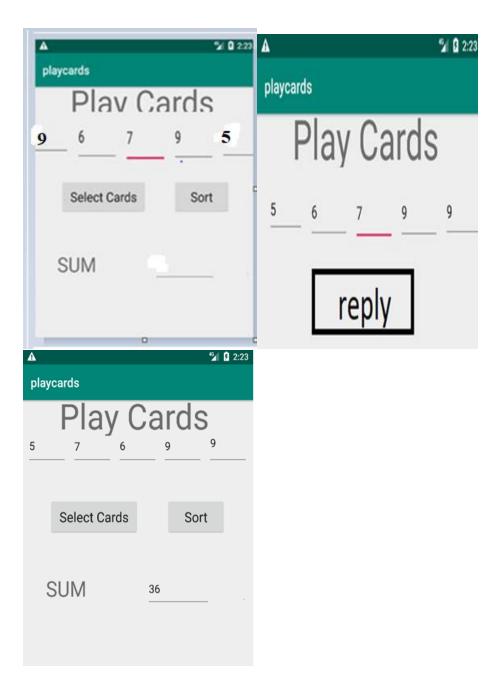
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LAB: CSE4002Mobile Application Development LAB

Design an App that displays 5 random numbers of cards when select cards button is pressed in the TextView, on clicking sortbutton, 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.



CODE:

XML 1:

<EditText

```
<?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">
```

```
android:id="@+id/T1"
   android:layout width="0dp"
   android:layout height="47dp"
   android:layout marginStart="16dp"
   android:layout_marginEnd="7dp"
   android:ems="10"
   android:inputType="textPersonName"
    app:layout constraintBaseline toBaselineOf="@+id/T2"
    app:layout constraintEnd toStartOf="@+id/T2"
    app:layout constraintStart toStartOf="parent" />
<EditText
   android:id="@+id/T2"
   android:layout width="0dp"
   android:layout height="47dp"
   android:layout marginTop="113dp"
   android:layout marginEnd="8dp"
   android:ems="10"
   android:inputType="textPersonName"
   app:layout constraintEnd toStartOf="@+id/T3"
    app:layout_constraintStart toEndOf="@+id/T1"
   app:layout_constraintTop_toTopOf="parent" />
<EditText
   android:id="@+id/T3"
   android:layout width="69dp"
   android:layout height="48dp"
   android:layout marginEnd="10dp"
   android:ems="10"
   android:inputType="textPersonName"
   app:layout constraintBaseline toBaselineOf="@+id/T2"
    app:layout constraintEnd toStartOf="@+id/T4"
   app:layout_constraintStart toEndOf="@+id/T2" />
<EditText
   android:id="@+id/T4"
   android:layout width="0dp"
   android:layout_height="0dp"
   android:layout marginEnd="9dp"
   android:ems="10"
    android:inputType="textPersonName"
    app:layout constraintBottom toBottomOf="@+id/T1"
   app:layout_constraintEnd toStartOf="@+id/T5"
    app:layout constraintStart toEndOf="@+id/T3"
   app:layout constraintTop toTopOf="@+id/T1" />
<EditText
   android:id="@+id/T5"
   android:layout width="0dp"
   android:layout height="47dp"
   android:layout marginEnd="16dp"
   android:ems="10"
   android:inputType="textPersonName"
   app:layout constraintBaseline toBaselineOf="@+id/T4"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintStart toEndOf="@+id/T4" />
```

```
<Button
    android:id="@+id/B1"
   android:layout width="wrap content"
   android:layout height="wrap content"
   android:layout marginStart="45dp"
   android:layout marginEnd="44dp"
   android:text="SELECT CARDS"
    app:layout constraintBaseline toBaselineOf="@+id/B2"
    app:layout constraintEnd toStartOf="@+id/T4"
    app:layout constraintStart toStartOf="@+id/T1" />
<Button
   android:id="@+id/B2"
   android:layout width="wrap content"
   android:layout height="wrap content"
   android:layout marginStart="26dp"
   android:layout_marginTop="101dp"
   android:layout marginBottom="101dp"
   android:text="SORT"
   app:layout constraintBottom toTopOf="@+id/T6"
    app:layout constraintStart toEndOf="@+id/B1"
   app:layout_constraintTop toBottomOf="@+id/T3" />
<TextView
   android:id="@+id/T6"
   android:layout width="wrap content"
   android:layout height="wrap content"
   android:layout marginEnd="33dp"
   android:text="_SUM_"
   android:textColor="@color/black"
   android:textSize="24sp"
    app:layout_constraintBottom toBottomOf="@+id/T7"
   app:layout_constraintEnd toStartOf="@+id/T7" />
<EditText
   android:id="@+id/T7"
   android:layout width="wrap content"
   android:layout_height="wrap content"
   android:layout marginEnd="40dp"
   android:layout marginBottom="291dp"
   android:ems="10"
   android:inputType="textPersonName"
   app:layout constraintBottom toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintTop toBottomOf="@+id/textView" />
<TextView
   android:id="@+id/textView"
    android:layout width="118dp"
   android:layout height="0dp"
   android:layout_marginTop="30dp"
   android:layout marginBottom="325dp"
   android:text="PlayCards"
   android:textAppearance="@style/TextAppearance.AppCompat.Body2"
    app:layout constraintBottom toTopOf="@+id/T7"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
```

```
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

XML 2:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
    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=".MainActivity2">
    <EditText
        android:id="@+id/C3"
        android:layout width="48dp"
        android:layout height="45dp"
       android:layout marginStart="2dp"
       android:layout marginTop="200dp"
       android:layout marginEnd="8dp"
       android:layout marginBottom="88dp"
        android:ems="10"
       android:inputType="textPersonName"
       app:layout constraintBottom toTopOf="@+id/B3"
        app:layout constraintEnd toStartOf="@+id/C4"
        app:layout constraintStart toEndOf="@+id/C2"
       app:layout constraintTop toTopOf="parent" />
    <EditText
        android:id="@+id/C4"
        android:layout width="48dp"
        android:layout height="45dp"
        android:layout marginStart="2dp"
       android:layout marginTop="168dp"
        android:layout marginEnd="14dp"
       android:layout marginBottom="518dp"
       android:ems="10"
       android:inputType="textPersonName"
        app:layout constraintBottom toBottomOf="parent"
        app:layout constraintEnd toStartOf="@+id/C5"
        app:layout constraintStart toEndOf="@+id/C3"
        app:layout constraintTop toTopOf="parent"
        app:layout constraintVertical bias="0.0" />
    <EditText
        android:id="@+id/C5"
        android:layout width="48dp"
       android:layout height="44dp"
        android:layout marginStart="10dp"
        android:layout marginTop="168dp"
       android:layout marginEnd="64dp"
       android:layout marginBottom="519dp"
       android:ems="10"
        android:inputType="textPersonName"
        app:layout constraintBottom toBottomOf="parent"
```

```
app:layout_constraintEnd toEndOf="parent"
        app:layout constraintStart toEndOf="@+id/C4"
        app:layout constraintTop toTopOf="parent"
        app:layout constraintVertical bias="0.0" />
    <EditText
        android:id="@+id/C2"
        android:layout width="48dp"
        android:layout height="45dp"
        android:layout marginStart="19dp"
        android:layout marginTop="168dp"
        android:layout marginEnd="12dp"
        android:layout marginBottom="160dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout constraintBottom toTopOf="@+id/B3"
        app:layout constraintEnd toStartOf="@+id/C3"
        app:layout constraintStart toEndOf="@+id/C1"
        app:layout constraintTop toTopOf="parent" />
    <EditText
        android:id="@+id/C1"
        android:layout width="48dp"
        android:layout height="44dp"
        android:layout marginStart="35dp"
        android:layout marginTop="168dp"
        android:layout marginEnd="19dp"
        android:layout marginBottom="519dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout constraintBottom toBottomOf="parent"
        app:layout_constraintEnd toStartOf="@+id/C2"
        app:layout constraintStart toStartOf="parent"
        app:layout constraintTop toTopOf="parent"
        app:layout constraintVertical bias="0.0" />
    <Button
        android:id="@+id/B3"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout marginStart="139dp"
        android:layout marginTop="70dp"
        android:layout marginEnd="184dp"
        android:layout marginBottom="350dp"
        android:text="REPLY"
        app:layout constraintBottom toBottomOf="parent"
        app:layout constraintEnd toEndOf="parent"
        app:layout constraintStart toStartOf="parent"
        app:layout constraintTop toBottomOf="@+id/C3" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

JAVA 1:

```
package com.example.lab21;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
```

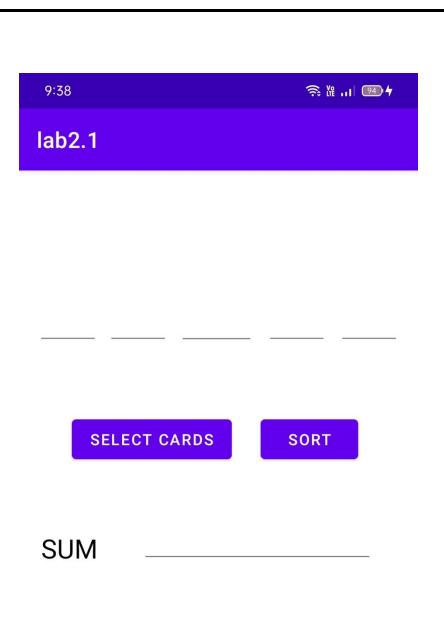
```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import java.util.Random;
public class MainActivity extends AppCompatActivity {
    EditText t1, t2, t3, t4, t5, t7;
    Button b1,b2;
    int[] cards = new int[5];
    Random rand = new Random();
    @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);
        t7 = findViewById(R.id.T7);
        b1 = findViewById(R.id.B1);
        b2 = findViewById(R.id.B2);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                for (int k = 0; k < 5; k++) {
                    cards[k] = rand.nextInt(14);
                t1.setText(String.valueOf(cards[0]));
                t2.setText(String.valueOf(cards[1]));
                t3.setText(String.valueOf(cards[2]));
                t4.setText(String.valueOf(cards[3]));
                t5.setText(String.valueOf(cards[4]));
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(getApplicationContext(),
                        MainActivity2.class);
                i.putExtra("Card1", t1.getText().toString());
                i.putExtra("Card2", t2.getText().toString());
                i.putExtra("Card3", t3.getText().toString());
                i.putExtra("Card4", t4.getText().toString());
                i.putExtra("Card5", t5.getText().toString());
                startActivityForResult(i, 2);
        });
    protected void onActivityResult(int requestCode, int resultCode, Intent
            data) {
        super.onActivityResult(requestCode, resultCode, data);
        if (requestCode == 2) {
            if (resultCode == RESULT OK) {
                t1.setText(data.getExtras().getString("c1"));
                t2.setText(data.getExtras().getString("c2"));
                t3.setText(data.getExtras().getString("c3"));
```

```
t4.setText(data.getExtras().getString("c4"));
                t5.setText(data.getExtras().getString("c5"));
                t7.setText(data.getExtras().getString("sum"));
        }
    }
}
JAVA 2:
package com.example.lab21;
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;
public class MainActivity2 extends AppCompatActivity {
    EditText c1, c2, c3, c4, c5;
    Button b3;
    String temp;
    int sum = 0;
    String[] sortedCards = new String[5];
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main2);
        Bundle extras = getIntent().getExtras();
        c1 = findViewById(R.id.C1);
        c2 = findViewById(R.id.C2);
        c3 = findViewById(R.id.C3);
        c4 = findViewById(R.id.C4);
        c5 = findViewById(R.id.C5);
        b3 = findViewById(R.id.B3);
        String card1 = extras.getString("Card1");
        String card2 = extras.getString("Card2");
        String card3 = extras.getString("Card3");
        String card4 = extras.getString("Card4");
        String card5 = extras.getString("Card5");
        sortedCards[0] = card1;
        sortedCards[1] = card2;
        sortedCards[2] = card3;
        sortedCards[3] = card4;
        sortedCards[4] = card5;
        for (int i = 0; i < 5; i++) {
            for (int j = 0; j < 5; j++) {
                if (Integer.parseInt(sortedCards[i]) <</pre>
                        Integer.parseInt(sortedCards[j])) {
                    temp = sortedCards[i];
                    sortedCards[i] = sortedCards[j];
                    sortedCards[j] = temp;
                }
        for (int i = 0; i < 5; i++) {
```

sum += Integer.parseInt(sortedCards[i]);

```
}
    c1.setText(sortedCards[0]);
    c2.setText(sortedCards[1]);
    c3.setText(sortedCards[2]);
    c4.setText(sortedCards[3]);
    c5.setText(sortedCards[4]);
    b3.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
              Intent i = new Intent(getApplicationContext(),
                       MainActivity.class);
              i.putExtra("c1", sortedCards[0]);
              i.putExtra("c2", sortedCards[1]);
              i.putExtra("c3", sortedCards[2]);
              i.putExtra("c4", sortedCards[3]);
i.putExtra("c5", sortedCards[4]);
i.putExtra("sum", String.valueOf(sum));
              setResult(RESULT OK, i);
              finish();
    });
}
```

OUTPUT:



 \equiv \bigcirc \triangleleft



5 6 7 9

SELECT CARDS SORT

36 SUM

