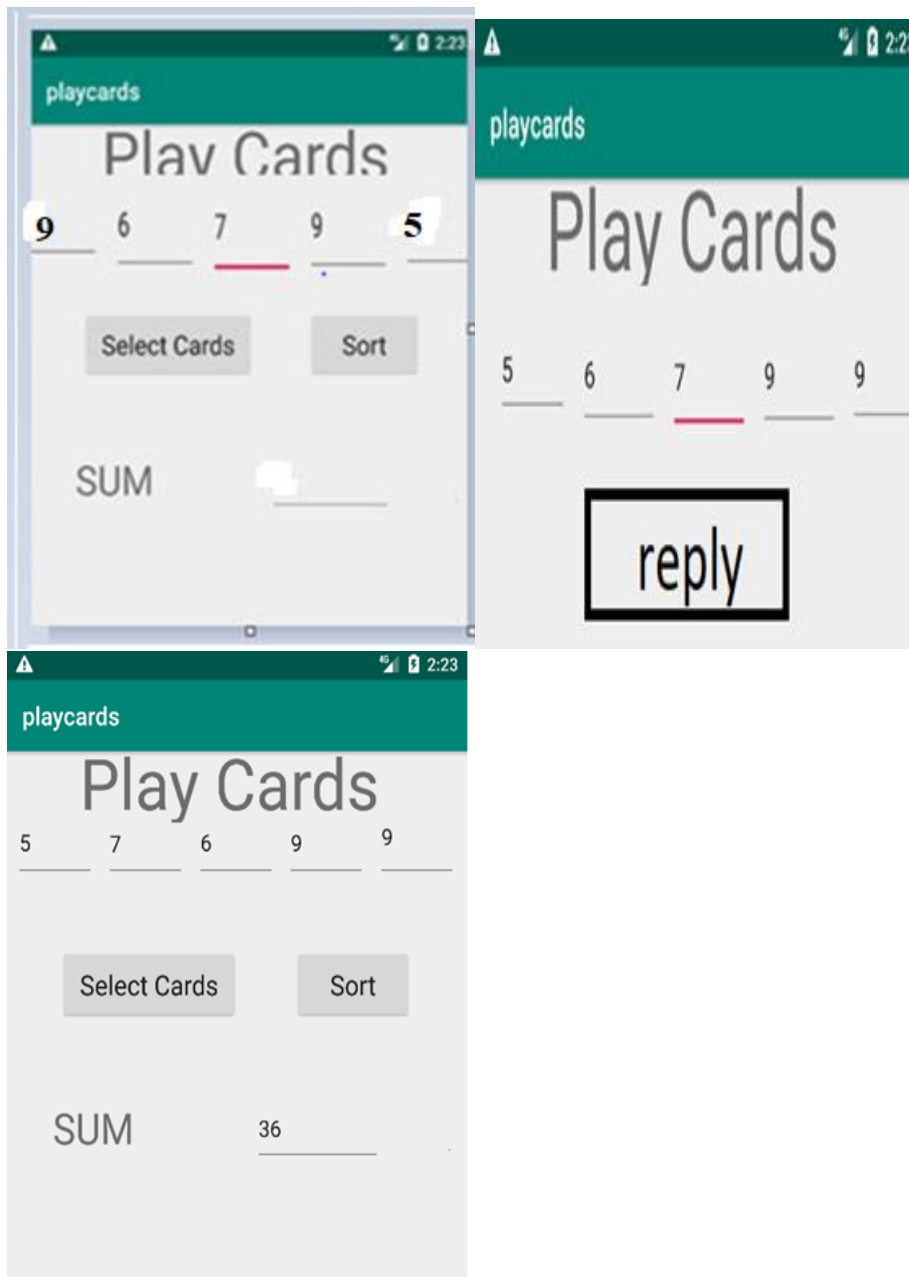


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**LAB: CSE4002Mobile Application Development LAB**

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:**

```
<?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">

    <EditText
```

```

        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
    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]) <
                    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:**

9:38



lab2.1

\_\_\_\_\_

SELECT CARDS

SORT

SUM

\_\_\_\_\_



9:38



lab2.1

5    6    7    9    9

SELECT CARDS

SORT

SUM    36



