4. Create an Android application which examine, that a phone number, which a user has entered is in the given format. * Area code should be one of the following: 040, 041, SPPU M.Sc. Computer Science Syllabus 2023-24 54 050, 0400, 044 * There should 6- 8 numbers in telephone number (+ area code)

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/andr
oid"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/phoneNumberEditText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter phone number"
        android:inputType="phone" />

    <Button
        android:id="@+id/checkButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/phoneNumberEditText"
        android:layout_marginTop="16dp"
        android:text="Check" />

    <TextView
        android:id="@+id/resultTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/checkButton"
        android:layout_marginTop="16dp"
        android:text=""
        android:textSize="18sp" />

</RelativeLayout>
```

```
package com.example.phonenumber;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState)
{
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        final EditText phoneNumberEditText =
findViewById(R.id.phoneNumberEditText);
        Button checkButton =
findViewById(R.id.checkButton);
        final TextView resultTextView =
findViewById(R.id.resultTextView);

        checkButton.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String phoneNumber =
phoneNumberEditText.getText().toString().trim();

                if (isValidPhoneNumber(phoneNumber)) {
                    resultTextView.setText("Valid
phone number!");
                } else {
                    resultTextView.setText("Invalid
phone number format!");
                }
            }
        });
    }
```

```
    private boolean isValidPhoneNumber(String
phoneNumber) {
        // Define the valid area codes
        String[] validAreaCodes = {"040", "041",
"050", "0400", "044"};

        // Check if the phone number starts with a
valid area code
        String areaCode = phoneNumber.substring(0, 3);
        boolean isValidAreaCode = false;
        for (String code : validAreaCodes) {
            if (code.equals(areaCode)) {
                isValidAreaCode = true;
                break;
            }
        }
        if (!isValidAreaCode) {
            return false;
        }

        // Check if the length of the phone number is
between 6 and 8 characters
        String phoneNumberWithoutAreaCode =
phoneNumber.substring(3);
        if (phoneNumberWithoutAreaCode.length() < 6 ||
phoneNumberWithoutAreaCode.length() > 8) {
            return false;
        }

        // Check if all characters in the phone number
(excluding the area code) are digits
        for (char c :
phoneNumberWithoutAreaCode.toCharArray()) {
            if (!Character.isDigit(c)) {
                return false;
            }
        }
        return true;
```

```
        }
}
```