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import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.*;
import android.view.View;
public class MainActivity extends AppCompatActivity {
    private Button encriptar;
    private Button clear;
    private EditText salida;
    private EditText entrada;
    private Button decrypt;
    private TextView key;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        setupUIViews();
        setTitle("Programa");

        encriptar.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                salida.setText(codificacion(entrada.getText().toString()));
            }
        });
        clear.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                salida.setText("Message");
                entrada.setText("Input");
            }
        });
        decrypt.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                salida.setText(decodificacion(entrada.getText().toString()));
            }
        });
    }

    private void setupUIViews() {
        encriptar=(Button)findViewById(R.id.encriptar);
        clear=(Button)findViewById(R.id.clc);
        salida=(EditText)findViewById(R.id.output);
        entrada=(EditText)findViewById(R.id.entrada);
        decrypt=(Button)findViewById(R.id.decrpt);
        key=(TextView)findViewById(R.id.key);
    }

    private String codificacion(String word){
        int value;
        char[] w=word.toCharArray();
        try {
            for (int i = 0; i < w.length; i++) {
                value = (int) w[i] + Integer.valueOf(key.getText().toString());
                w[i] = (char) value;
            }
        } catch (Exception e){
            return ("Key must be an integer.");
        }
        return new String(w);
    }

    private String decodificacion(String word){
        int value;

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char[] w=word.toCharArray();
try{
for(int i=0;i<w.length;i++){
    value=(int)w[i]-Integer .valueOf(key.getText().toString());
    w[i]=(char)value;
}
}
catch (Exception e){
    return ("Key must be a number.");
}
return new String(w);
}
}
```