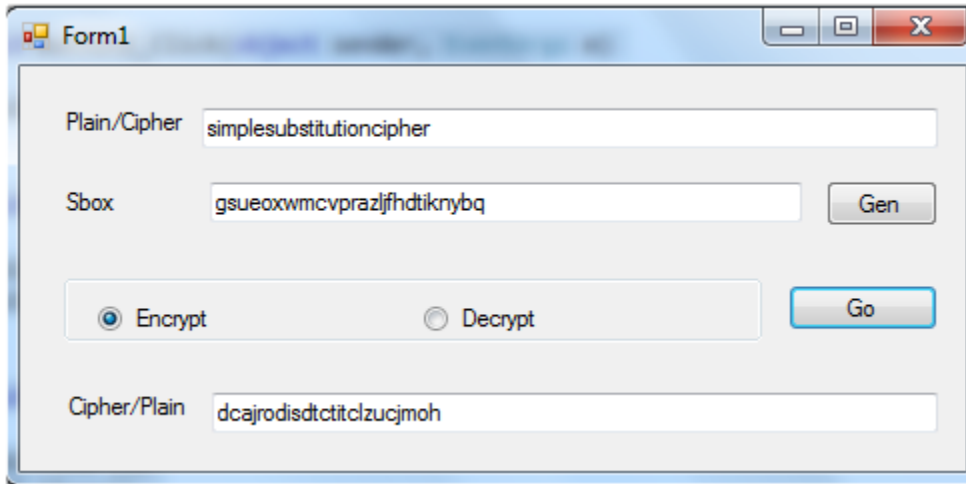


Information Security Lab 03 simple substitution cipher

simple substitution cipher



```

/*****
/***** mono alphabetic substitution *****/
/***** simple substitution cipher *****/
/*****
public char sbxEnc(char plain, string sbx)
{
    char[] csbox = sbx.ToArray();
    char cipher = (char)0;
    int pos = toDec(plain);
    cipher = csbox[pos];
    return cipher;
}
public char sbxDec(char cipher, string sbx)
{
    char plain = (char)0;
    char[] csbox = sbx.ToArray();
    int pos = -1;
    for (int n = 0; n < csbox.Length; n++)
    {
        if (cipher == csbox[n])
        {
            pos = n;
            break;
        }
    }
    plain = toChar(pos);
    return plain;
}

public string sbxGen()
{
    string sbx = new string(charSpace);
    char[] csbox = sbx.ToCharArray();
    Random r = new Random();

```



```
        for (int n = 0; n < 100; n++)
        {
            int pos1 = r.Next(26);
            int pos2 = r.Next(26);
            char swap = csbox[pos2];
            csbox[pos2] = csbox[pos1];
            csbox[pos1] = swap;
        }
        sbox = new string(csbox);
        return sbox;
    }

    /*****
    /*****
    /***** main form *****/
    /*****
    CipherLib c1 = new CipherLib();
private void button1_Click(object sender, EventArgs e)
{
    textBox1.Text = c1.formatAndRemoveCharsNotInCharSpace(textBox1.Text);
    if (radioButton1.Checked)
    {
        textBox3.Clear();
        for (int n = 0; n < textBox1.Text.Length; n++)
        {
            char cipher = c1.sboxEnc(textBox1.Text[n], textBox2.Text);

            textBox3.Text = textBox3.Text + cipher;
        }
    }
    else if (radioButton2.Checked)
    {
        textBox3.Clear();
        for (int n = 0; n < textBox1.Text.Length; n++)
        {
            char plain = c1.sboxDec(textBox1.Text[n], textBox2.Text);
            textBox3.Text = textBox3.Text + plain;
        }
    }
}

private void button2_Click(object sender, EventArgs e)
{
    textBox2.Text = c1.sboxGen();
}
```