Web

玩蛇(签到)

用 burp

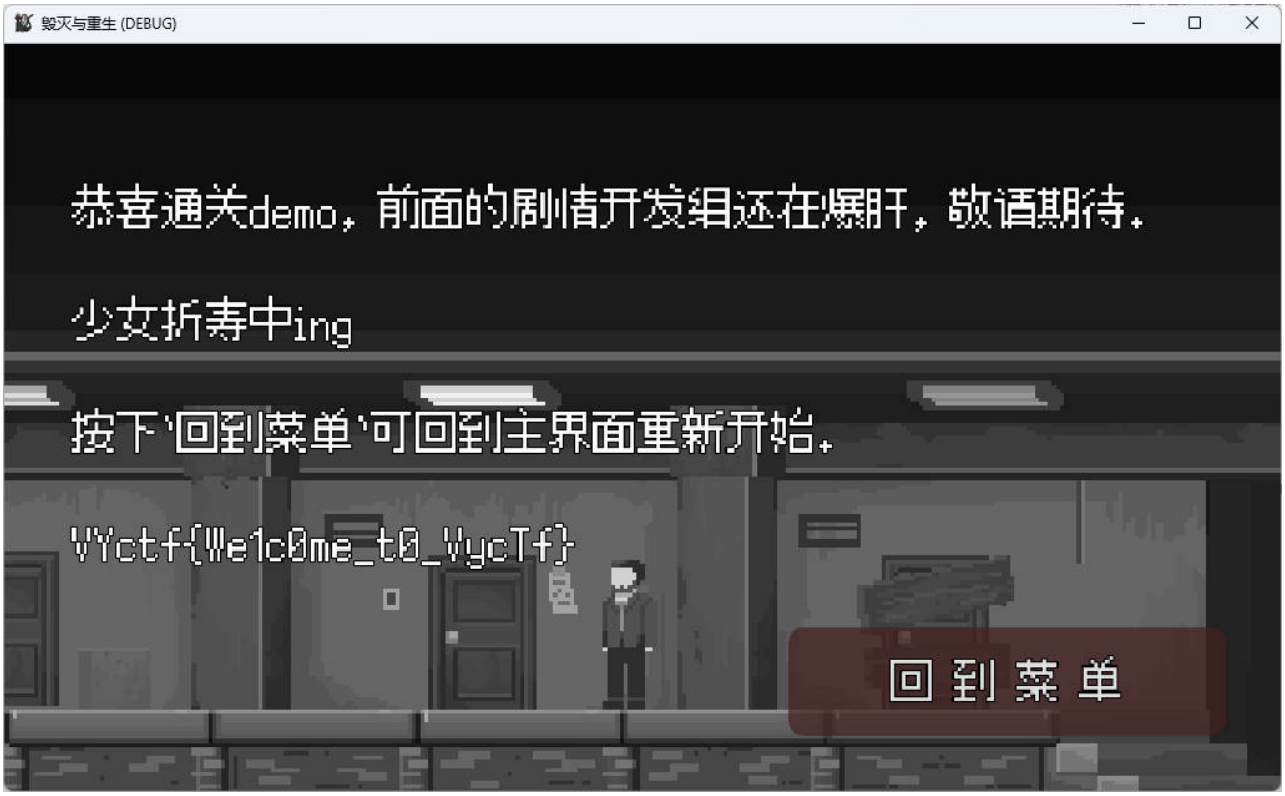
玩蛇2.0

同上

Reverse

大家一起和平地玩耍吧(签到)

就只是玩游戏，通关后给flag



base64逆向

题目：

```
int __cdecl main(int argc, const char **argv, const char **envp)
{
```

```
  FILE *v3; // eax
  size_t v4; // eax
  int v5; // ecx
  char *v6; // eax
  char v8[1024]; // [esp+0h] [ebp-804h] BYREF
  char Buffer[1024]; // [esp+400h] [ebp-404h] BYREF

  sub_401010("please input flag:", v8[0]);
  v3 = _acrt_iob_func(0);
  fgets(Buffer, 1024, v3);
  v4 = strcspn(Buffer, "\n");
  if ( v4 >= 0x400 )
  {
    __report_rangecheckfailure();
    __debugbreak();
  }
  Buffer[v4] = 0;
  strlen(Buffer);
  sub_401040(v8);
  v5 = strcmp(v8, "dnljdGZ7VzMxYzBtM183MF92eWM3Zn0=");
  if ( v5 )
    v5 = v5 < 0 ? -1 : 1;
  v6 = "error\n";
  if ( !v5 )
    v6 = "success\n";
  sub_401010(v6, v8[0]);
  return 0;
}
```

根据题目提示，通过 base64 解码，得 flag

二进制

题目：

```
int __cdecl main(int argc, const char **argv, const char **envp)
{
  int v3; // ebx
  int i; // [rsp+Ch] [rbp-104h]
```

```
5   int v6[44]; // [rsp+10h] [rbp-100h]
6   char v7[56]; // [rsp+C0h] [rbp-50h] BYREF
7   unsigned __int64 v8; // [rsp+F8h] [rbp-18h]
8
9   v8 = __readfsqword(0x28u);
10  v6[0] = 236;
11  v6[1] = 242;
12  v6[2] = 198;
13  v6[3] = 232;
14  v6[4] = 204;
15  v6[5] = 246;
16  v6[6] = 166;
17  v6[7] = 208;
18  v6[8] = 216;
19  v6[9] = 190;
20  v6[10] = 98;
21  v6[11] = 230;
22  v6[12] = 190;
23  v6[13] = 154;
24  v6[14] = 96;
25  v6[15] = 236;
26  v6[16] = 202;
27  v6[17] = 190;
28  v6[18] = 232;
29  v6[19] = 208;
30  v6[20] = 202;
31  v6[21] = 190;
32  v6[22] = 196;
33  v6[23] = 98;
34  v6[24] = 220;
35  v6[25] = 104;
36  v6[26] = 228;
37  v6[27] = 242;
38  v6[28] = 190;
39  v6[29] = 232;
40  v6[30] = 96;
41  v6[31] = 190;
42  v6[32] = 232;
43  v6[33] = 208;
44  v6[34] = 202;
```

```
  v6[35] = 190;
  v6[36] = 216;
  v6[37] = 202;
  v6[38] = 204;
  v6[39] = 232;
  v6[40] = 250;
  printf(&format, argv, envp);
  __isoc99_scanf(&unk_2013, v7);
  for ( i = 0; i <= 40; ++i )
  {
    v3 = v7[i];
    if ( v3 != (unsigned int)shl_flag((unsigned int)v6[i]) )
    {
      puts(s);
      return 0;
    }
  }
  puts(aFlag);
  return 0;
}
```

shl_flag：

```
__int64 __fastcall shl_flag(int a1)
{
  return (unsigned int)(a1 >> 1);
}
```

exp:

```
v6 = [236,242,198,232,204,246,166,208,216,190,98,230,190,154,96,236,202,190,232,208,202,190,196,98,220,104,228,242,190,232,96,190,232,208,202,190,216,202,204,232,250]
flag = ''
for i in range(len(v6)):
    flag += chr(int(v6[i] / 2))

print(flag)
```

crypto

古老的语言(签到)

该题目涉及到 Vlang，GitHub - vlang/v：简单、快速、安全的编译语言，用于开发可维护的软件。以 < 1 秒编译自身，不依赖库。支持自动 C => V 转换。https://vlang.io

安装：

```
git clone https://github.com/vlang/v
cd v
# Linux
make
# Windows
./make.bat
# 添加到 PATH
./v symlink
```

编译并运行：

```
# 编译，会生成 exe 文件
v bflang.v
# 运行
bflang.exe flag.bf
```

素数分解

题目：

```
# 简单的rsa加密技术
E = 7
```

```
N = P * Q
# N = 2771
phin = (P-1) * (Q-1)
D = pow(E, -1, phin)
# print(D)
# D = 1111
PT = open("./flag.ct","w")
with open("./flag.pt","r") as file:
    for f in file.read():
        PT.write(chr((ord(f) ** E) % N))
PT.close()

```

exp:

```
D = 1111
N = 2771
flag = ""
with open("./flag.ct","r", encoding="utf-8") as file:
    for f in file.read():
        flag += chr((ord(f) ** D) % N)
print(flag)
```

简单sqrt

Misc

缺少的专辑(签到)

用 PNGCalculator 一把梭

雪(snow)

附件用 vscode 打开，全选代码，发现有空白格内容，根据题目提示，是 snow 隐写

IOT

简单ino(签到)

附件下载后，发现是 ino 后缀的，是 Arduino 项目，题目用 vscode 打开

```
// lcd1602:SCL is uno:A5, lcd1602:SDA is uno:A4, lcd1602:VCC is num:V5, lcd1602:GND is uno:GND.

#include <LiquidCrystal_I2C.h>

LiquidCrystal_I2C lcd(0x27, 20, 4);

int flag[20] = {118, 121, 995, 116, 102, 123, 104, 101, 492, 108, 482, 95, 65, 114, 100, 117, 493, 110, 482, 125};
int line[20] = {10, 3, 14, 4, 0, 13, 10, 3, 14, 0, 14, 0, 0, 7, 13, 5, 14, 0, 14, 7};
int i = 0;

void setup() {
  lcd.init();
  lcd.backlight();
  lcd.setCursor(0, 0);
  lcd.print("Hello VYctf!");
}

void loop() {
  delay(1000);
```

```
  lcd.clear();
  lcd.print("flag is:");
  lcd.setCursor(line[i], 1);
  lcd.print(flag[i]);
  i++;
}
```

通过 欢迎使用Wokwi! | Wokwi Docs 在线仿真模拟器，用 HelloWokwi.ino - Wokwi ESP32, STM32, Arduino Simulator 来编辑

通过模拟，line[i] 是14 的位置只能显示对应 flag[i] 中前两位，比如：995 只能显示 99

exp:

```
flag = [118,121,99,116,102,123,104,101,49,108,48,95,65,114,100,117,49,110,48,125]
for i in range(len(flag)):
    flag[i] = chr(flag[i])
flag = ''.join(flag)
print(flag)
```

Air001

下载附件，导入嘉立创 EDA 在线模式，嘉立创EDA(专业版) - V2.1.35 (lceda.cn)，转换成 3D 模式，反转到背面