

# 汇编实践

# 实验报告格式

- 实验序号
- 实验内容
- 算法流程图
- 汇编程序
- 运行结果

# 1. 认识OllyDbg/immunityDebugger

00401004 CC INT3

00401005 \$ E9 06000000 JMP 425.00401010

0040100A CC INT3

0040100B CC INT3

0040100C CC INT3

0040100D CC INT3

0040100E CC INT3

0040100F CC INT3

00401010 > 33C0 XOR EAX,EAX

00401012 . 33D2 XOR EDX,EDX

00401014 . 33DB XOR EBX,EBX

00401016 . 66:B8 6400 MOV AX,64

0040101A . B3 07 MOV BL,7

0040101C . F6F3 DIV BL

0040101E . 6A 00 PUSH 0

00401020 . E8 05000000 CALL <JMP.&KERNEL32.ExitProcess>

00401025 CC INT3

00401010=425.00401010

Address	Hex dump
00404000	28 40 00 00 00 00 00 00 00 00 00 00 96 40 00 00
00404010	58 40 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00404020	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00404030	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00404040	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00404050	00 00 00 00 00 00 00 00 00 00 CA 3A 23 77 00 00 00 00

代码区

Registers (FPU)

EAX 0000020E

ECX 00000000

EDX 00000000

EBX 00000007

ESP 0018FF88

EBP 0018FF90

ESI 00000000

EDI 00000000

EIP 0040101E 425.0040101E

C 0 ES 002B 32bit 0 (FFFFFFFF)

P 1 CS 0023 32bit 0 (FFFFFFFF)

A 0 SS 002B 32bit 0 (FFFFFFFF)

Z 1 DS 002B 32bit 0 (FFFFFFFF)

S 0 FS 0053 32bit 7FFDD000 (FFFFF)

T 0 GS 002B 32bit 0 (FFFFFFFF)

D 0

CPU  
寄存器

0018FF88 772386E3 銑#w RETURN t

0018FF8C 7FFDE000 . 幟

0018FF90 0018FFD4 ?□.

0018FF94 7767BD99 銑cw RETURN t

0018FF98 7FFD

0018FF9C 32BB

0018FFA0 00000000 ....

堆栈段

数据段

# 代码区

线性地址

指令机器码

指令汇编代码

00401004	CC	INT3
00401005	\$ E9 06000000	JMP 425.00401010
0040100A	CC	INT3
0040100B	CC	INT3
0040100C	CC	INT3
0040100D	CC	INT3
0040100E	CC	INT3
0040100F	CC	INT3
00401010	> 33C0	XOR EAX,EAX
00401012	. 33D2	XOR EDX,EDX
00401014	. 33DB	XOR EBX,EBX
00401016	. 66:B8 6400	MOV AX,64
0040101A	. B3 07	MOV BL,7
0040101C	. F6F3	DIV BL
0040101E	. 6A 00	PUSH 0
00401020	. E8 05000000	CALL <JMP.&KERNEL32.ExitProcess>
00401025	CC	INT3

# 数据段

线性地址

数据段中数据

Address	Hex dump
00404000	28 40 00 00 00 00 00 00 00 00 00 00 00 96 40 00 00
00404010	58 40 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00404020	00 00 00 00 00 00 00 00 88 40 00 00 00 00 00 00 00
00404030	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00404040	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00404050	00 00 00 00 00 00 00 00 CA 3A 23 77 00 00 00 00 00

# CPU寄存器

通用寄存器

Registers (FPU)

EAX 0000020E  
ECX 00000000  
EDX 00000000  
EBX 00000007  
ESP 0018FF88  
EBP 0018FF90  
ESI 00000000  
EDI 00000000

指令指针寄存器

EIP 0040101E 425.0040101E

标志寄存器

C 0 ES 002B 32bit 0 (FFFFFFFF)  
P 1 CS 0023 32bit 0 (FFFFFFFF)  
A 0 SS 002B 32bit 0 (FFFFFFFF)  
Z 1 DS 002B 32bit 0 (FFFFFFFF)  
S 0 FS 0053 32bit 7FFDD000 (FFF)  
T 0 GS 002B 32bit 0 (FFFFFFFF)  
D 0  
O 0 LastErr ERROR\_SUCCESS (00000000)  
EFL 00000246 (NO,NB,E,BE,NS,PE,GE,LE)

ST0 empty g  
ST1 empty g  
ST2 empty g



# 堆栈段

堆栈寄存器

栈顶

堆栈段

Registers (FPU)

EAX 0000020E

ECX 00000000

EDX 00000000

EBX 00000007

ESP 0018FF88

EBP 0018FF90

0018FF88 772386E3

0018FF8C 7FFDE000

0018FF90 0018FFD4

0018FF94 7767BD99

0018FF98 7FFDE000

0018FF9C 32BBCE4C

0018FFA0 00000000

0018FFA4 00000000

0018FFA8 7FFDE000

0018FFAC C9D49CFF

0018FFB0 FFFFFFF800

0018FFB4 00000000

0018FFB8 00000000

0018FFBC 0018FF9C

0018FFC0 FFFFFFFA80

0018FFC4 0018FFE4

0018FFC8 77625191

0018FFCC 45C5D410

# 实验三

## 作业

- 试编程实现快速排序。
- 试编程实现二分查找。
- 试编程实现 输出 $\{1, 2, \dots, n\}$ 个数全排列。