

Name : Ibadullah Shaikh
Roll No : 19k-0259
Section : BCS-3G
Course : COAL Assignment # 02

Code:

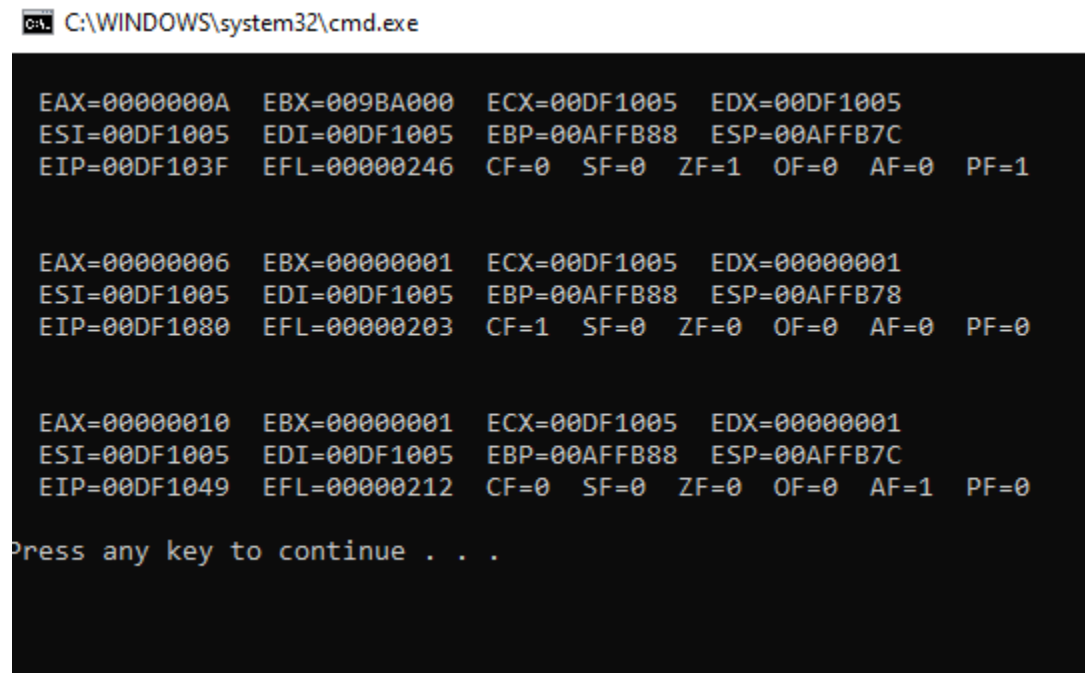
```
INCLUDE Irvine32.inc
.code
main PROC
mov eax, 0
mov eax, 00001010b
call DumpRegs
call Encryption ;calling encryption PROC
call DumpRegs
exit
main ENDP

Encryption PROC
    add eax, 5
    add eax, 2
    sub eax, 4
    rol eax, 3
    test eax, 00000001b
    jnz one
    SHR eax, 1
    mov ebx, 1
    one:
    test eax, 10000000b
    jnz two
    SAR eax, 1
    mov edx, 1
    two:
    RCR eax, 2
    call DumpRegs
    call Dycryption ;calling dycryption PROC
    RET
Encryption ENDP

Dycryption PROC
    RCL eax, 2
    cmp edx, 1
    jz three
    jnz four
    three:
    SAL eax, 1
    four:
    cmp ebx, 1
    jz five
    jnz six
    five:
```

```
    SHL eax, 1
    six:
    ROR eax, 3
    sub eax, 4
    add eax, 2
    add eax, 5
    RET
Dycryption ENDP
END main
```

Screenshot:



The screenshot shows a Windows command prompt window with the title bar "C:\WINDOWS\system32\cmd.exe". The window displays the output of an assembly program. It shows three sets of register values (EAX, EBX, ECX, EDX, ESI, EDI, EBP, ESP, EIP, EFL, CF, SF, ZF, OF, AF, PF) at different points in the execution. The first set shows EAX=0000000A, EBX=009BA000, ECX=00DF1005, EDX=00DF1005, ESI=00DF1005, EDI=00DF1005, EBP=00AFFB88, ESP=00AFFB7C, EIP=00DF103F, EFL=00000246, CF=0, SF=0, ZF=1, OF=0, AF=0, PF=1. The second set shows EAX=00000006, EBX=00000001, ECX=00DF1005, EDX=00000001, ESI=00DF1005, EDI=00DF1005, EBP=00AFFB88, ESP=00AFFB78, EIP=00DF1080, EFL=00000203, CF=1, SF=0, ZF=0, OF=0, AF=0, PF=0. The third set shows EAX=00000010, EBX=00000001, ECX=00DF1005, EDX=00000001, ESI=00DF1005, EDI=00DF1005, EBP=00AFFB88, ESP=00AFFB7C, EIP=00DF1049, EFL=00000212, CF=0, SF=0, ZF=0, OF=0, AF=1, PF=0. At the bottom, it says "Press any key to continue . . .".

```
C:\WINDOWS\system32\cmd.exe

EAX=0000000A  EBX=009BA000  ECX=00DF1005  EDX=00DF1005
ESI=00DF1005  EDI=00DF1005  EBP=00AFFB88  ESP=00AFFB7C
EIP=00DF103F  EFL=00000246  CF=0  SF=0  ZF=1  OF=0  AF=0  PF=1

EAX=00000006  EBX=00000001  ECX=00DF1005  EDX=00000001
ESI=00DF1005  EDI=00DF1005  EBP=00AFFB88  ESP=00AFFB78
EIP=00DF1080  EFL=00000203  CF=1  SF=0  ZF=0  OF=0  AF=0  PF=0

EAX=00000010  EBX=00000001  ECX=00DF1005  EDX=00000001
ESI=00DF1005  EDI=00DF1005  EBP=00AFFB88  ESP=00AFFB7C
EIP=00DF1049  EFL=00000212  CF=0  SF=0  ZF=0  OF=0  AF=1  PF=0

Press any key to continue . . .
```