## Task 1:

### Code:

```
INCLUDE Irvine32.inc
.data
var1 DWORD 5
var2 DWORD 10
var4 DWORD ?
.code
main PROC
mov eax, var1
mov ebx, 5
mul ebx
sub var2, 3
div var2
mov var4, eax
call DumpRegs
exit
main ENDP
END main
```

### **Screenshot:**

C:\WINDOWS\system32\cmd.exe

```
EAX=00000003 EBX=00000005 ECX=00491005 EDX=00000004
ESI=00491005 EDI=00491005 EBP=001BFDA0 ESP=001BFD94
EIP=00491033 EFL=00000202 CF=0 SF=0 ZF=0 OF=0 AF=0 PF=0

Press any key to continue . . .
```

## Task 2:

## Code:

```
INCLUDE Irvine32.inc
.data
val1 DWORD 5
val2 DWORD 10
val3 DWORD 4
one DWORD ?
.code
main PROC
mov edx, 0
mov eax, val2
div val3
mov one, eax
mov edx, 0
mov eax , val1
div val2
```

```
mov eax, one
mul edx
mov val1, eax
call DumpRegs
exit
main ENDP
END main
```

## **Screenshot:**

C:\WINDOWS\system32\cmd.exe

```
EAX=0000000A EBX=01181000 ECX=00EA1005 EDX=00000000
ESI=00EA1005 EDI=00EA1005 EBP=012FFDE0 ESP=012FFDD4
EIP=00EA1046 EFL=00000206 CF=0 SF=0 ZF=0 OF=0 AF=0 PF=1
Press any key to continue . . .
```

## Task 3:

### Code:

```
TITLE My First Program (Test.asm)
INCLUDE Irvine32.inc
.data
var DWORD 5
x DWORD ?
.code
main PROC
cmp ecx, var
jc one
jz one
cmp ecx, edx
jc one
mov x, \theta
jmp two
one:
mov x, 1
two:
mov eax, x
```

```
call DumpRegs
exit
main ENDP
end main
```

#### **Screenshot:**

C:\WINDOWS\system32\cmd.exe

```
EAX=00000000 EBX=009F8000 ECX=00DC1005 EDX=00DC1005 ESI=00DC1005 EDI=00DC1005 EBP=00B8F834 ESP=00B8F828 EIP=00DC103E EFL=00000246 CF=0 SF=0 ZF=1 OF=0 AF=0 PF=1 Press any key to continue . . .
```

# Task 4:

### Code:

```
INCLUDE Irvine32.inc
.data
var DWORD 0
one byte " Hello",0
two byte "World",0
.code
main PROC
12:
mov ecx, 2
mov edx, 0
mov eax, var
call writedec
div ecx
mov ecx, 0
cmp edx, ecx
jz 11
jc 11
mov edx, offset two
call writestring
call crlf
add var, 1
cmp var, 11
jc 12
jz 13
mov edx, offset one
call writestring
```

```
call crlf
add var, 1
cmp var, 11
jc 12
13:
exit
main ENDP
END main
```

# **Screenshot:**

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

### Hello

| Hello
| World
| Hello
| World
| Hello
| World
| Hello
| World
| Hello
| Hell
```