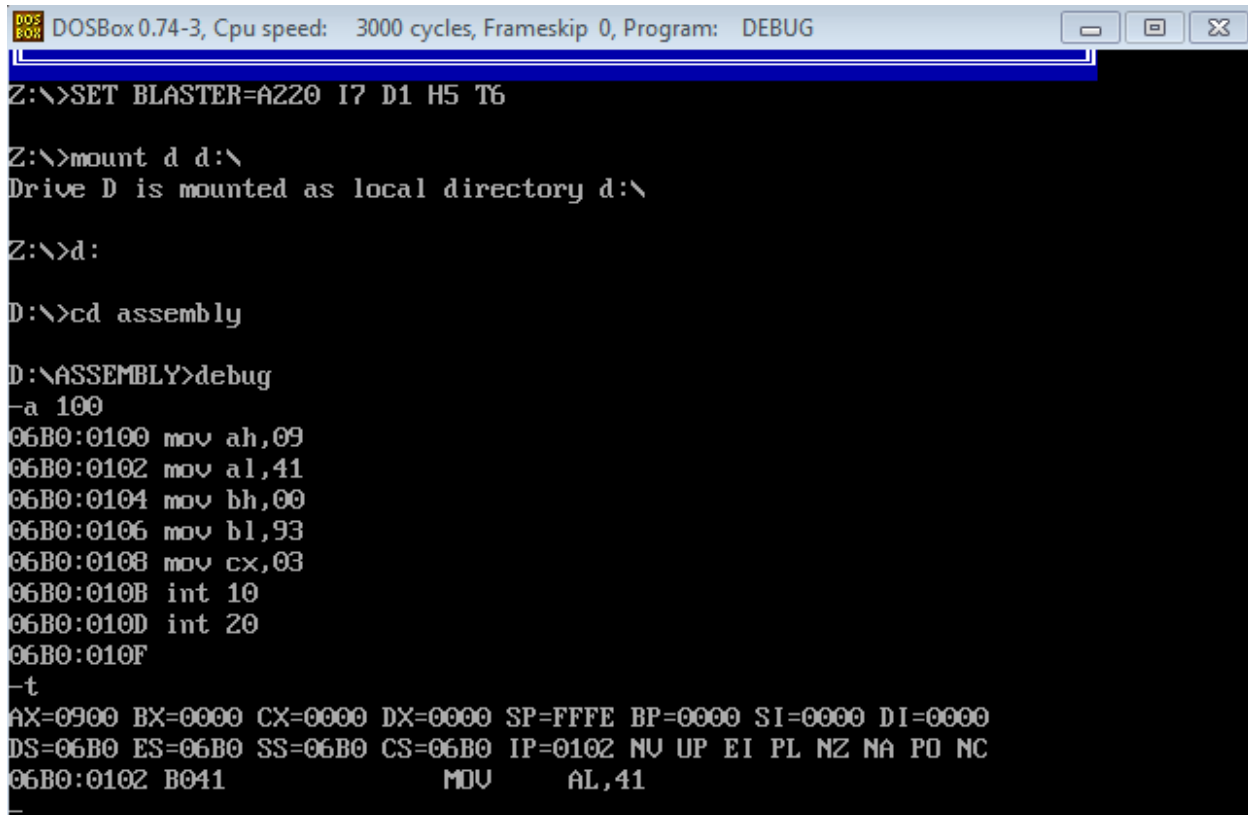


POSTEST II



```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
Z:\>SET BLASTER=A220 I7 D1 H5 T6

Z:\>mount d d:\
Drive D is mounted as local directory d:\

Z:\>d:

D:\>cd assembly

D:\ASSEMBLY>debug
-a 100
06B0:0100 mov ah,09
06B0:0102 mov al,41
06B0:0104 mov bh,00
06B0:0106 mov bl,93
06B0:0108 mov cx,03
06B0:010B int 10
06B0:010D int 20
06B0:010F
-t
AX=0900 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B041          MOV     AL,41
```

Melakukan trace pada praktek 1

Mov ah,09 memasukkan nilai 09 ke register ah(ax 2 digit depan)

Berfungsi untuk mencetak nilai servis

```
DOS
BOX
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
Drive D is mounted as local directory d:\

Z:\>d:

D:\>cd assembly

D:\ASSEMBLY>debug
-a 100
06B0:0100 mov ah,09
06B0:0102 mov al,41
06B0:0104 mov bh,00
06B0:0106 mov bl,93
06B0:0108 mov cx,03
06B0:010B int 10
06B0:010D int 20
06B0:010F
-t
AX=0900 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B041          MOV     AL,41
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B700          MOV     BH,00
-
```

Mov al,41 memasukkan nilai 41 ke register al(ax 2 digit belakang)

Berfungsi mencetak karakter

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
D:\>cd assembly
D:\ASSEMBLY>debug
-a 100
06B0:0100 mov ah,09
06B0:0102 mov al,41
06B0:0104 mov bh,00
06B0:0106 mov bl,93
06B0:0108 mov cx,03
06B0:010B int 10
06B0:010D int 20
06B0:010F
-t
AX=0900 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B041          MOV     AL,41
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B700          MOV     BH,00
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0106 NU UP EI PL NZ NA PO NC
06B0:0106 B393          MOV     BL,93
```

Mov bh,00 memasukkan nilai 0 ke register bh(bx 2 digit depan)

Berfungsi untuk nomor halaman layar

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
06B0:0100 mov ah,09
06B0:0102 mov al,41
06B0:0104 mov bh,00
06B0:0106 mov bl,93
06B0:0108 mov cx,03
06B0:010B int 10
06B0:010D int 20
06B0:010F
-t
AX=0900 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B041      MOV     AL,41
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B700      MOV     BH,00
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0106 NU UP EI PL NZ NA PO NC
06B0:0106 B393      MOV     BL,93
-t
AX=0941 BX=0093 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0108 NU UP EI PL NZ NA PO NC
06B0:0108 B90300    MOV     CX,0003
-
```

Mov bl,93 memasukkan nilai 93 ke register bl(bx 2 digit belakang)

Berfungsi untuk warna

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
06B0:0108 mov cx,03
06B0:010B int 10
06B0:010D int 20
06B0:010F
-t
AX=0900 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B041          MOV     AL,41
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B700          MOV     BH,00
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0106 NU UP EI PL NZ NA PO NC
06B0:0106 B393          MOV     BL,93
-t
AX=0941 BX=0093 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0108 NU UP EI PL NZ NA PO NC
06B0:0108 B90300        MOV     CX,0003
-t
AX=0941 BX=0093 CX=0003 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NU UP EI PL NZ NA PO NC
06B0:010B CD10          INT     10
-
```

mov cx,03 memasukkan nilai 03 ke register cx

Berfungsi untuk mencetak karakter yang ingin dicetak(3)

```
DOS
BOX
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-t
AX=0900 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B041          MOV     AL,41
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B700          MOV     BH,00
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0106 NU UP EI PL NZ NA PO NC
06B0:0106 B393          MOV     BL,93
-t
AX=0941 BX=0093 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0108 NU UP EI PL NZ NA PO NC
06B0:0108 B90300        MOV     CX,0003
-t
AX=0941 BX=0093 CX=0003 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NU UP EI PL NZ NA PO NC
06B0:010B CD10          INT     10
-t
AX=0941 BX=0093 CX=0003 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010D NU UP EI PL NZ NA PO NC
06B0:010D CD20          INT     20
-
```

Int 10(menjalankan & memberi warna pada program)

```
DOS
Box DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
06B0:0102 B041          MOV     AL,41
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B700          MOV     BH,00
-t
AX=0941 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0106 NU UP EI PL NZ NA PO NC
06B0:0106 B393          MOV     BL,93
-t
AX=0941 BX=0093 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0108 NU UP EI PL NZ NA PO NC
06B0:0108 B90300        MOV     CX,0003
-t
AX=0941 BX=0093 CX=0003 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NU UP EI PL NZ NA PO NC
06B0:010B CD10          INT     10
-t
0941 BX=0093 CX=0003 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010D NU UP EI PL NZ NA PO NC
06B0:010D CD20          INT     20
-t
Program terminated (0000)
_
```

Int 20(program selesai,kembali ke dos)

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
AX=0941 BX=0093 CX=0003 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NV UP EI PL NZ NA PO NC
06B0:010B CD10          INT     10
-t
AX=0941 BX=0093 CX=0003 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010D NV UP EI PL NZ NA PO NC
06B0:010D CD20          INT     20
-t

Program terminated (0000)
-a 100
06B0:0100 mov ah,09
06B0:0102 mov al,41
06B0:0104 mov bh,00
06B0:0106 mov bl,93
06B0:0108 mov cx,03
06B0:010B int 10h
                ^ Error
06B0:010B int 10
06B0:010D int 20
06B0:010F
-g
AAA
Program terminated (0000)
-
```

Hasil program

POSTEST II

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
Z:\>MOUNT D D:\
Drive D is mounted as local directory D:\

Z:\>D:

D:\>CD ASSEMBLY

D:\ASSEMBLY>DEBUG
-A 100
06B0:0100 MOV AH,02
06B0:0102 MOV DL,41
06B0:0104 MOV CX,10
06B0:0107 INT 21
06B0:0109 INC DL
06B0:010B LOOP 0107
06B0:010D INT 20
06B0:010F
-G
ABCDEFGHJKLMNPO
Program terminated (0000)
-T
AX=0200 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B241          MOV     DL,41
-
```

Mov ah 02 memasukkan nilai 02 (2 digit depan register ax)

Berfungsi untuk mencetak nilai servis

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
D:\>CD ASSEMBLY
D:\ASSEMBLY>DEBUG
-A 100
06B0:0100 MOV AH,02
06B0:0102 MOV DL,41
06B0:0104 MOV CX,10
06B0:0107 INT 21
06B0:0109 INC DL
06B0:010B LOOP 0107
06B0:010D INT 20
06B0:010F
-G
ABCDEFGHIJKLMN
Program terminated (0000)
-T
AX=0200 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B241          MOV     DL,41
-T
AX=0200 BX=0000 CX=0000 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B91000       MOV     CX,0010
-
```

MOV DL,41 memasukkan nilai 41 ke register dl(2 digit belakang dx)

Berfungsi untuk mencetak karakter

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-A 100
06B0:0100 MOV AH,02
06B0:0102 MOV DL,41
06B0:0104 MOV CX,10
06B0:0107 INT 21
06B0:0109 INC DL
06B0:010B LOOP 0107
06B0:010D INT 20
06B0:010F
-G
ABCDEFGHJKLMNPO
Program terminated (0000)
-T
AX=0200 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B241          MOV     DL,41
-T
AX=0200 BX=0000 CX=0000 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B91000       MOV     CX,0010
-T
AX=0200 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NU UP EI PL NZ NA PO NC
06B0:0107 CD21        INT     21
-
```

Mov cx,10 memasukkan nilai 10 ke register cx

Berfungsi untuk banyaknya pengulangan(10)

```
DOS
BOX DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
06B0:0107 INT 21
06B0:0109 INC DL
06B0:010B LOOP 0107
06B0:010D INT 20
06B0:010F
-G
ABCDEFGHIJKLMNPO
Program terminated (0000)
-T
AX=0200 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B241          MOV     DL,41
-T
AX=0200 BX=0000 CX=0000 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B91000       MOV     CX,0010
-T
AX=0200 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NU UP EI PL NZ NA PO NC
06B0:0107 CD21          INT     21
-T
AAX=0241 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0109 NU UP EI PL NZ NA PO NC
06B0:0109 FEC2          INC     DL
-
```

Int 21 mencetak karakter

Berfungsi untuk mencetak karakter

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
06B0:010F
-G
ABCDEFGH IJKLMN OP
Program terminated (0000)
-T
AX=0200 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NV UP EI PL NZ NA PO NC
06B0:0102 B241          MOV     DL,41
-T
AX=0200 BX=0000 CX=0000 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NV UP EI PL NZ NA PO NC
06B0:0104 B91000        MOV     CX,0010
-T
AX=0200 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NV UP EI PL NZ NA PO NC
06B0:0107 CD21          INT     21
-T
AAX=0241 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0109 NV UP EI PL NZ NA PO NC
06B0:0109 FEC2          INC     DL
-T
AX=0241 BX=0000 CX=0010 DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NV UP EI PL NZ NA PE NC
06B0:010B E2FA          LOOPW  0107
-
```

Inc dl menambahkan register dl dengan 1 menjadi 42

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-T
AX=0200 BX=0000 CX=0000 DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0102 NU UP EI PL NZ NA PO NC
06B0:0102 B241          MOV     DL,41
-T
AX=0200 BX=0000 CX=0000 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B91000       MOV     CX,0010
-T
AX=0200 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NU UP EI PL NZ NA PO NC
06B0:0107 CD21        INT     21
-T
AX=0241 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0109 NU UP EI PL NZ NA PO NC
06B0:0109 FEC2        INC     DL
-T
AX=0241 BX=0000 CX=0010 DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NU UP EI PL NZ NA PE NC
06B0:010B E2FA        LOOPW   0107
-T
AX=0241 BX=0000 CX=000F DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NU UP EI PL NZ NA PE NC
06B0:0107 CD21        INT     21
-
```

Loop 0107 mengulang int 21 h sampai ke inc dl dan terus diulang hingga ke 10

```
DOS
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-T
AX=0200 BX=0000 CX=0000 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0104 NU UP EI PL NZ NA PO NC
06B0:0104 B91000          MOV     CX,0010
-T
AX=0200 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NU UP EI PL NZ NA PO NC
06B0:0107 CD21          INT     21
-T
AX=0241 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0109 NU UP EI PL NZ NA PO NC
06B0:0109 FEC2          INC     DL
-T
AX=0241 BX=0000 CX=0010 DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NU UP EI PL NZ NA PE NC
06B0:010B E2FA          LOOPW  0107
-T
AX=0241 BX=0000 CX=000F DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NU UP EI PL NZ NA PE NC
06B0:0107 CD21          INT     21
-T
AX=0242 BX=0000 CX=000F DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0109 NU UP EI PL NZ NA PE NC
06B0:0109 FEC2          INC     DL
-
```

Pengulangan inc dl

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-T
AX=0200 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NU UP EI PL NZ NA PO NC
06B0:0107 CD21          INT     21
-T
AAX=0241 BX=0000 CX=0010 DX=0041 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0109 NU UP EI PL NZ NA PO NC
06B0:0109 FEC2          INC     DL
-T
AX=0241 BX=0000 CX=0010 DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NU UP EI PL NZ NA PE NC
06B0:010B E2FA          LOOPW   0107
-T
AX=0241 BX=0000 CX=000F DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NU UP EI PL NZ NA PE NC
06B0:0107 CD21          INT     21
-T
BAX=0242 BX=0000 CX=000F DX=0042 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0109 NU UP EI PL NZ NA PE NC
06B0:0109 FEC2          INC     DL
-T
AX=0242 BX=0000 CX=000F DX=0043 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NU UP EI PL NZ NA PO NC
06B0:010B E2FA          LOOPW   0107
-
```

Inc dl menambahkan register dl dengan 1 menjadi 43 dan terus diulang


```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NV UP EI PL NZ AC PE NC
06B0:010B E2FA          LOOPW  0107
-T
AX=024F BX=0000 CX=0001 DX=0050 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0107 NV UP EI PL NZ AC PE NC
06B0:0107 CD21          INT     21
-T
PAX=0250 BX=0000 CX=0001 DX=0050 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=0109 NV UP EI PL NZ AC PE NC
06B0:0109 FEC2          INC     DL
-T
AX=0250 BX=0000 CX=0001 DX=0051 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010B NV UP EI PL NZ NA PO NC
06B0:010B E2FA          LOOPW  0107
-T
AX=0250 BX=0000 CX=0000 DX=0051 SP=FFFE BP=0000 SI=0000 DI=0000
DS=06B0 ES=06B0 SS=06B0 CS=06B0 IP=010D NV UP EI PL NZ NA PO NC
06B0:010D CD20          INT     20
-T
Program terminated (0000)
-G
ABCDEFGHIJKLMNPO
Program terminated (0000)
-
```

Setelah banyak pengulangan register di menjadi 51(Q), namun yang dicetak hanya 50(P) karena hanya 10 kali pengulangan terhitung sebelum pengulangan(a)

1. 41
2. 42
3. 43
4. 44
5. 45
6. 46
- 4A-4E(J-O)
7. 47
8. 48
9. 49
10. 50

```
DOS  
BOX DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG  
The DOSBox Team http://www.dosbox.com  
Z:\>SET BLASTER=A220 I7 D1 H5 T6  
  
Z:\>MOUNT D D:\  
Drive D is mounted as local directory D:\  
  
Z:\>D:  
  
D:\>CD ASSEMBLY  
  
D:\ASSEMBLY>DEBUG  
-A 100  
06B0:0100 MOV AH,02  
06B0:0102 MOV DL,41  
06B0:0104 MOV CX,10  
06B0:0107 INT 21  
06B0:0109 INC DL  
06B0:010B LOOP 0107  
06B0:010D INT 20  
06B0:010F  
-G  
ABCDEFGHIJKLMNPO  
Program terminated (0000)  
-
```

Hasil program

POSTEST III

```
EKO63 - Notepad
File Edit Format View Help

.model SMALL
.code
    ORG 100h
tdata:    jmp proses
          lusername      db 13,10,'Username : $'
          lpassword      db 13,10,'Password : $'
          lditerima      db 13,10,'Diterima $'
          lditolak       db 13,10,'Ditolak $'

          vusername      db 23,?,23 dup(?)
          vpassword      db 23,?,23 dup(?)

proses:
    mov ah,09h
    lea dx,lusername
    int 21h

    mov ah,0ah
    lea dx,vusername
    int 21h

    mov ah,09h
    lea dx,lpassword
    int 21h

    mov ah,0ah
    lea dx,vpassword
    int 21h

    lea si,vusername
    lea di,vpassword

    cld
    mov cx,23
    rep cmpsb
    jne gagal

    mov ah,09h
    lea dx,lditerima
    int 21h
    jmp exit

gagal:
    mov ah,09h
    lea dx,lditolak
    int 21h
    jmp proses

exit:
    int 20h
end tdata
```

Org 100 h =menentukan alamat offset dari program yang digunakan

Tdata:

jmp proses =lompat ke bagian proses(dimulai dari mov ah,09h)

lusername db 13,10,'Username : \$'

lpassword db 13,10,'Password : \$'

lditerima db 13,10,'Diterima \$'

lditolak db 13,10,'Ditolak \$'

=db digunakan untuk mendefinisikan nilai pada variabel

13,10 untuk pindah baris dan menuju ke kolom 0

\$ untuk mengakhiri kalimat yang dicetak

vusername db 23,?,23 dup(?) =menyiapkan variabel untuk input yang belum diketahui

vpasword db 23,?,23 dup(?) =menyiapkan variabel untuk input yang belum diketahui

Proses:

mov ah,09h	=memasukkan 09 ke register ah dan mencetak nilai servis
lea dx,lusername	=karakter diambil dari lusername dicetak ke register dx
int 21h	=mencetak kalimat sebelum tanda\$
mov ah,0ah	=nilai servis untuk mencetak lebih dari 1 karakter
lea dx,vusername	=karakter diambil dari vusername dicetak ke register dx
int 21h	= mencetak kalimat sebelum tanda\$
mov ah,09h	=memasukkan 09 ke register ah dan mencetak nilai servis
lea dx,lpassword	= karakter diambil dari lpassword akan dicetak ke dx
int 21h	=mencetak kalimat sebelum tanda\$
mov ah,0ah	=nilai servis untuk mencetak lebih dari 1 karakter
lea dx,vpassword	= karakter diambil dari vpassword dicetak ke register dx
int 21h	=mencetak kalimat sebelum tanda\$
lea si,vusername	= si awal
lea di,vpassword	= di tujuan
cld	=arah proses menarik
mov cx,23	=banyaknya loop(23)
rep cmpsb	=membandingkan ukuran sama/tidak
jne gagal	=jika tidak sama lompat ke gagal
mov ah,09h	=memasukkan 09 ke register ah dan mencetak nilai servis
lea dx,lditerima	=karakter diambil dri lditerima dicetak ke dx
int 21h	=mencetak kalimat
jmp exit	=lompat ke exit

gagal:

mov ah,09h	= memasukkan 09 ke register ah dan mencetak nilai servis
lea dx,lditolak	=karakter diambil dari lditolak dicetak ke dx
int 21h	=menjalankan program
jmp proses	=lompat ke proses

exit:

int 20h	=kembali ke dos
---------	-----------------

end tdata	=akhir program
------------------	----------------

POSTEST IV

```
633 - Notepad
File Edit Format View Help

.model SMALL
.code
    ORG 100h
tdata: jmp proses
        lusername      db 13,10,'Username : $'
        lpassword      db 13,10,'Password : $'
        lditolak       db 13,10,'Ditolak $'
        lditerima      db 13,10,'Diterima $'

        vusername      db 23,?,23 dup(?)
        vpassword      db 23,?,23 dup(?)

proses:
        mov ah,09h
        lea dx,lusername
        int 21h

        mov ah,0ah
        lea dx,vusername
        int 21h

        mov ah,09h
        lea dx,lpassword
        int 21h

        mov ah,0ah
        lea dx,vpassword
        int 21h

        lea si,vusername
        lea di,vpassword

        cld
        mov cx,23
        rep cmpsb
        jne gagal

        mov ah,09h
        lea dx,lditolak
        int 21h
        jmp proses
gagal:
        mov ah,09h
        lea dx,lditerima
        int 21h
        jmp exit

exit:
        int 20h
end tdata
```

Mengubah data ditolak dan diterima

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
For more information read the README file in the DOSBox directory.
HAVE FUN!
The DOSBox Team http://www.dosbox.com

Z:\>SET BLASTER=A220 I7 D1 H5 T6

Z:\>mount d d:\
Drive D is mounted as local directory d:\

Z:\>d:

D:\>cd prak

D:\PRAK>tasm 633.asm
Turbo Assembler Version 2.51 Copyright (c) 1988, 1991 Borland International

Assembling file: 633.asm
Error messages: None
Warning messages: None
Passes: 1
Remaining memory: 490k

D:\PRAK>_
```

Mengubah file menjadi obj


```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
The DOSBox Team http://www.dosbox.com
Z:\>SET BLASTER=A220 I7 D1 H5 T6

Z:\>mount d d:\
Drive D is mounted as local directory d:\

Z:\>d:

D:\>cd prak

D:\PRAK>tasm 633.asm
Turbo Assembler Version 2.51 Copyright (c) 1988, 1991 Borland International

Assembling file: 633.asm
Error messages: None
Warning messages: None
Passes: 1
Remaining memory: 490k

D:\PRAK>tlink 633.obj/t
Turbo Link Version 4.0 Copyright (c) 1991 Borland International

D:\PRAK>
```

Mengubah file ke.com

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: 633
Drive D is mounted as local directory d:\

Z:\>d:

D:\>cd prak

D:\PRAK>tasm 633.asm
Turbo Assembler Version 2.51 Copyright (c) 1988, 1991 Borland International

Assembling file: 633.asm
Error messages: None
Warning messages: None
Passes: 1
Remaining memory: 490k

D:\PRAK>tlink 633.obj/t
Turbo Link Version 4.0 Copyright (c) 1991 Borland International

D:\PRAK>633

Username : dsk
Password : dsk
Ditolak
Username :
```

Menjadi ditolak saat menginput yang sama

```
DOS  
BOX DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
```

```
D:\>cd prak  
  
D:\PRAK>tasm 633.asm  
Turbo Assembler Version 2.51 Copyright (c) 1988, 1991 Borland International  
  
Assembling file: 633.asm  
Error messages: None  
Warning messages: None  
Passes: 1  
Remaining memory: 490k  
  
D:\PRAK>tlink 633.obj/t  
Turbo Link Version 4.0 Copyright (c) 1991 Borland International  
  
D:\PRAK>633  
  
Username : dsk  
Password : dsk  
Ditolak  
Username : Eko Rachmat S  
Password : 2100018142  
Diterima  
D:\PRAK>
```

Diterima apabila menginputkan berbeda