

AIM: 8086 program to find average of n numbers

CODE:

```
data segment
    array db 01H, 02H, 03H, 04H, 05H
    count db 05H
    res dw 0000H
data ends
```

```
code segment
assume CS:code, DS:data
start:
```

Operation	Explanation	Addressing Mode	Affected Flags
MOV ax, data	AX ← Address of the data segment	Immediate addressing mode	None
MOV ds, ax	DS ← AX	Register addressing mode	None
LEA si, array	SI ← Effective address of array	Register addressing mode	None
MOV cl, count	CL ← Value of 'count'	Direct addressing mode	None
MOV ax, 0000H	AX ← 0000H	Immediate addressing mode	None
ADD al, [si]	AL ← AL + [SI]	Register indirect addressing mode	CF, OF, SF, ZF, AF, PF
ADD si, 01H	SI ← SI + 1	Immediate addressing mode	None
DEC cl	CL ← CL - 1	Direct addressing mode	SF, ZF, AF, PF
JNZ sum	Jump to 'sum' if ZF = 0	Direct addressing mode, relative	None
MOV cl, count	CL ← Value of 'count'	Direct addressing mode	None
DIV cl	AX ← AX / CL,	Direct addressing	CF, OF, SF,

	Quotient in AL, Remainder in AH	mode	ZF, AF, PF
MOV res, ax	'res' <- Value in AX (Quotient)	Direct addressing mode	None
MOV ah, 4CH	AH <- 4CH	Immediate addressing mode	None
INT 21H	Generate interrupt 21H (DOS function)	Direct addressing mode	None

code ends

end start

OUTPUT

```

File Edit View Run Breakpoints Data Options Window Help
[ ]=CPU 80486 1=[↑][↓]
cs:0003 8ED8      mov     ds,ax
cs:0005 BE0000    mov     si,0000
cs:0008 8A0E0500  mov     cl,[0005]
cs:000C B80000    mov     ax,0000
cs:000F 0204      add     al,[si]
cs:0011 83C601    add     si,0001
cs:0014 FEC9      dec     cl
cs:0016 75F7      jne     000F
cs:0018 8A0E0500  mov     cl,[0005]
cs:001C F6F1      div     cl
cs:001E A30600    mov     [0006],ax
cs:0021 B44C      mov     ah,4C
cs:0023 CD21      int     21
cs:0025 0000      add     [bx+si],al
cs:0027 0000      add     [bx+si],al

ds:0000 01 02 03 04 05 05 03 00  E9 04 04 04
ds:0008 00 00 00 00 00 00 00 00
ds:0010 B8 AD 48 8E D8 BE 00 00  7 1H 1
ds:0018 8A 0E 05 00 B8 00 00 02  e7 1 8
ds:0020 04 83 C6 01 FE C9 75 F7  a 1 1 1 1

ax 0003  c=0
bx 0000  z=1
cx 0005  s=0
dx 0000  o=0
si 0005  p=1
di 0000  a=0
bp 0000  i=1
sp 0000  d=0
ds 48AD
es 489D
ss 48AC
cs 48AE
ip 0021

ss:0002 6474
ss:0000 0000
ss:FFFE 3346
ss:FFFC 48AE
ss:FFFA 0021

F1-Help F2-Bkpt F3-Mod F4-Here F5-Zoom F6-Next F7-Trace F8-Step F9-Run F10-Menu

```