Addressing Modes

Lab Activity 4

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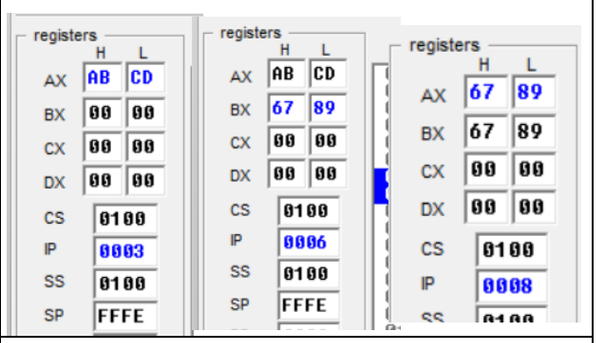
BSCpE III - GF

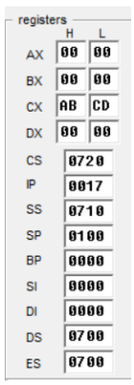
Run the following codes.

Make a screenshot of the following after executing the instructions.

a. registers used
b. memory location being accessed
   i. memory
   ii. variable

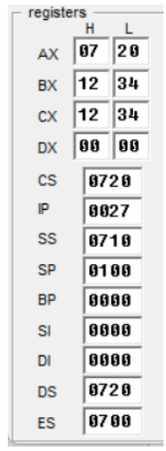
Addressing Mode	Screenshot

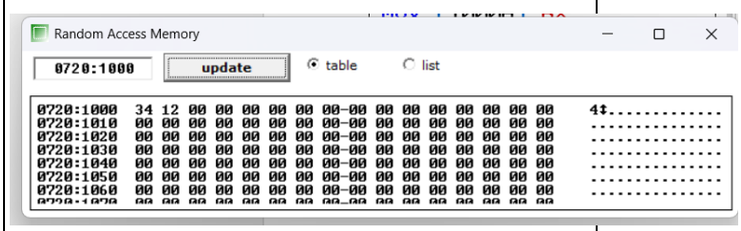
;Register Addressing
mov ax,0ABCDh
mov bx,06789h
mov ax,bx
	Register
	 

.model small .stack .data .code ;Immediate Addressing MOV CX,0ABCDh	Register 

```
;Direct Addressing

MOV AX,@DATA
MOV DS,AX

MOV BX,1234H
MOV CX,0H
MOV [1000H],BX
MOV CX,[1000H]
```

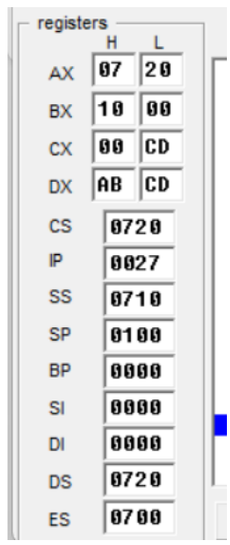
Register and Memory

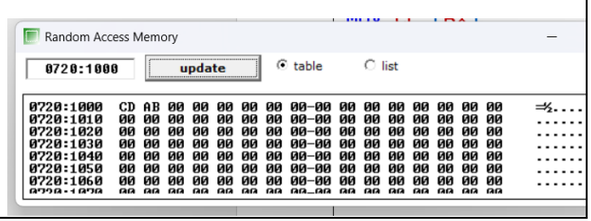





```
.model small
.stack
.data
.code

;Register Indirect

MOV AX,@DATA
MOV DS,AX

MOV CX,0000H

MOV BX,1000h
MOV [BX],0ABCDH
MOV CL,[BX]
MOV DX,[BX]
```

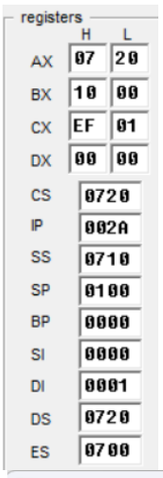
Register and Memory

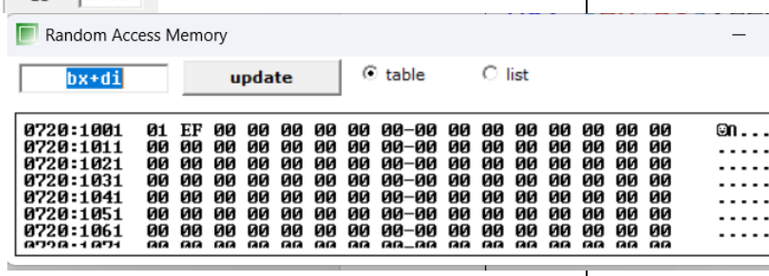




```
.model small
.stack
.data
.code

;Base-plus-index

MOV AX,@DATA
MOV DS,AX

MOV CX,0000H

MOV BX,1000h
MOV DI,01H
MOV [BX+DI],0EF01H
MOV CL,[BX+DI]
MOV CX,[BX+DI]
```

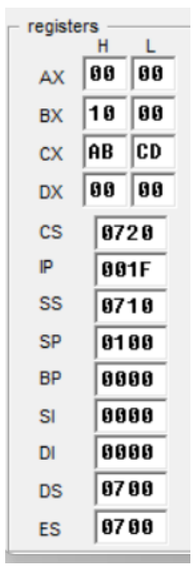
Register and Memory

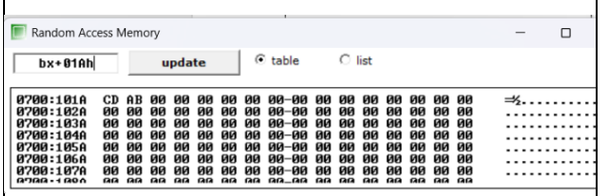





```
; # 6 - Register Relative
mov bx, 1000h
mov [bx+01Ah], 0ABCDh
mov cx, [bx+01Ah]
```

Register and Memory



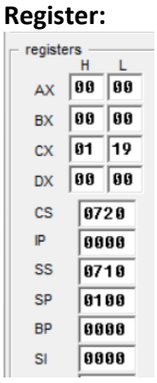


```
;base relative+index
.model small

.data
array db 1,2,3,4

.code
mov ax,@data
mov ds,ax

mov dl,01h
mov bx,offset array

mov cx,04h
mov si,00h
loop1:
     mov array[bx+si],dl
     inc si
     loop loop1
```

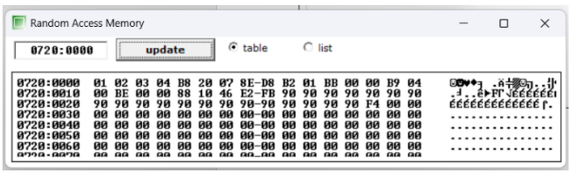
Register, Memory and Array/Variable **(Before and After)**

Before:

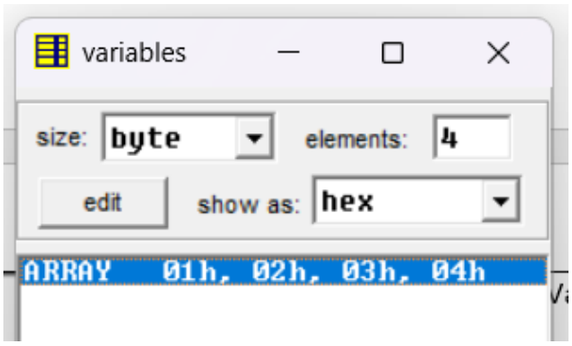
Register:



Memory:

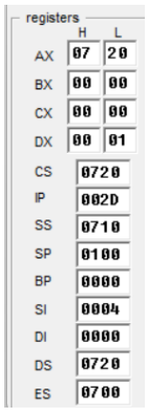


Array:

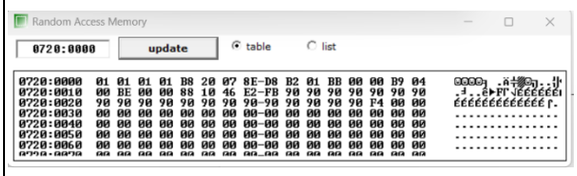


After:

Register:



Memory:



ARRAY