

## PRACTICAL: 2(C7)

**AIM:** Add Two 32-bit numbers stored in consecutive memory locations and store the result in memory locations starting from 7000H

**CODE:**

```
org 100h
```

```
MOV [4000H], 1111H
```

```
MOV [4002H], 1111H
```

```
MOV [4004H], 2222H
```

```
MOV [4006H], 2222H
```

```
MOV AX, [4000H]
```

```
MOV BX, [4002H]
```

```
MOV CX, [4004H]
```

```
MOV DX, [4006H]
```

```
ADD AX, CX ;ADC SUPPORTS 16BIT ADDITION ONLY
```

```
ADC BX, DX ;MSB
```

```
MOV [7000H], AX
```

```
MOV [7002H], BX
```

```
ret
```

**OUTPUT:**

emulator: PRAC\_2C7.com\_

file math debug view external virtual devices virtual drive help

Load reload step back single step run step delay ms: 0

registers

	H	L
AX	33	33
BX	33	33
CX	22	22
DX	22	22
CS	F400	
IP	0154	
SS	0700	
SP	FFFA	
BP	0000	
SI	0000	
DI	0000	
DS	0700	
ES	0700	

F400:0154

F4150:	FF	255	RES
F4151:	FF	255	RES
F4152:	CD	205	=
F4153:	20	032	SPA
F4154:	CF	207	±
F4155:	00	000	NULL
F4156:	00	000	NULL
F4157:	00	000	NULL
F4158:	00	000	NULL
F4159:	00	000	NULL
F415A:	00	000	NULL
F415B:	00	000	NULL
F415C:	00	000	NULL
F415D:	00	000	NULL
F415E:	00	000	NULL
F415F:	00	000	NULL
F4160:	FF	255	RES
F4161:	FF	255	RES
F4162:	CD	205	=
F4163:	1A	026	→
F4164:	CF	207	±
F4165:	00	000	NULL

F400:0154

BIOS DI
INT 020h
I RET
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD BH, BH
DEC BP
SBB CL, BH
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD BH, BH
DEC BP
ADD BH, CL
ADD [BX + SI], AL
ADD [BX + SI], AL
...

screen source reset aux vars debug stack flags

Random Access Memory

7000 update table list

0700:7000	33	33	33	33	00	00	00	00	00-00	00	00	00	00	00	00	00	3333.....
0700:7010	00	00	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	.....
0700:7020	00	00	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	.....
0700:7030	00	00	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	.....
0700:7040	00	00	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	.....
0700:7050	00	00	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	.....
0700:7060	00	00	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	.....
0700:7070	00	00	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	.....

**CONCLUSION:**

We learned about ADC command and its implementation for 32-Bit Numbers.