



INTRODUCTION TO COMPUTER SYSTEMS (IT1020)

Year 1, Semester 1

Practical Answer Submission 01

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Activity 1.1

CX	BX	DX	ZF
00 06	00 3C	00 30	1
00 03	00 E0	00 31	0
00 02	00 C0	00 31	0

Activity 1.2

INSTRUCTION	CX	IP	CS	ACTUAL ADDRESS
mov bl, 10	00 23	0102	0700	07102
add bl, al	00 23	0104	0700	07104
jz zero	00 07	0110	0700	07110
zero: int 21h	00 07	0114	0700	07114

Activity 3

The screenshot shows an emulator window titled "emulator screen (271x55 chars)". The main window is a command prompt with a black background. Below the command prompt is a toolbar with buttons: "clear screen", "change font", and "D/16". At the bottom of the window is a menu bar with "file", "edit", "bookmarks", "assembler", and "help". Below the menu bar is a toolbar with buttons: "NEW", "OPEN", "SAVE", "ASSEMBLE", and "RUN". Below the toolbar is a text area containing assembly code. The code is as follows:

```
mov bx, 0
int 10h

; set segment registers
mov ax, 0x0000 ; 00000h is the address of VGA card for text mode
mov ds, ax ; move DS into DS, so DS hold the address of VGA card
; print "seg"
; first byte is ascii code, second byte is color code.

mov [00h], "s"
mov [00h], 11110000h

mov [02h], "e"
mov [02h], 11110000h

mov [04h], "g"
mov [04h], 11110000h

mov [06h], " "
mov [06h], 11110000h

mov [08h], " "
mov [08h], 11110000h

mov [0Ah], "a"
mov [0Ah], 11110000h

mov [0Ch], "a"
mov [0Ch], 11110000h

mov [0Eh], " "
mov [0Eh], 11110000h

mov [10h], " "
mov [10h], 11110000h

mov [12h], "t"
mov [12h], 11110000h

mov [14h], "t"
mov [14h], 11110000h

mov [16h], " "
mov [16h], 11110000h

mov [18h], " "
mov [18h], 11110000h

; wait for any key press
mov al, 0
int 16h

ret
```