

CSE341 Assignment-02

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ID: 19101098

Section: 06

Answer to the Q. No 1

My id is 19101098.

MOV AX, 1910h

MOV BX, 1098h

ADD AX, BX

0001100100010000

0001000010011000

0010100110101000

Value of status flag :

ZF=0, SF=0, CF=0, PF=0, AF=0, OF=0

Answer to the Q. No 2

The flag register helps in programming the 8086 microprocessor. The flag register is used in the conditional statement, where the code body gets executed when certain conditions get true. The conditional statements check the value of the various flag such as: zero flag, sign flag, parity flag, auxiliary flag, overflow flag, carry flag. Consider the compare instruction that performs the subtraction operation and checks the zero flag for finding the equality of two numbers.

Answer to the Q. No 3

The main difference between Register direct and Register indirect addressing mode is in direct addressing mode the memory location is directly specified. Example: MOV AX, BX

On the other side, in Register indirect addressing mode, the address of the main memory location is specified. Example:

MOV AX, [BX]

Answer to the Q. No 04

MOV 101A [BP+DI], DL

Byte 1

1	0	0	0	1	0	0	0
Opcode						D	W

Byte 2

1	0	0	1	0	0	1	1
MOD		REG		R/M			

Byte 3

0	0	0	1	1	0	1	0
1Ah							

Byte 4

0	0	0	1	0	0	0	0
10h							

The equivalent machine code is:

$(10001000100100110001101000010000)_2$

$= (88931A10)h$

Answer to the Q. No 5

MOV DX, [BX+SI]

Byte 1

1	0	0	0	1	0	1	1
Opcode						D	W

Byte 2

0	0	0	1	0	0	0	0
MOD		REG		R/M			

The equivalent machine code is:

$(1000101100010000)_2 = (8B10)h$

Answer to the Q.No 6

- a) `MOV 101A [BP+DI], DL` → Base-relative-plus-index addressing
- b) `MOV DX, [BX+SI]` → Base-plus-index addressing