**Practical - 10**

**Aim:**

Write an assembly program to add the two 16-bit numbers form memory location and to store the sum and flag status at memory locations.

**Description of instructions used:**

**PUSHF:** Store flags register in the stack. Algorithm:

* SP = SP - 2
* SS: [SP] (top of the stack) = flags

**POP:** Get 16 bit value from the stack. Algorithm:

* operand = SS:[SP] (top of the stack)
* SP = SP + 2

**Code:**

MOV AX,4000H

MOV DS,AX

MOV [0001H], 6543H

MOV [0003H], 3456H

MOV AX,[0001H]

MOV AX,[0003H]

MOV [0001H], AX

PUSHF

POP DX

MOV [0007],DX

**Output:**

