

LOGICAL OPERATIONS

EXP NO: 20

AIM:

To compute various logical operations using 8085 processor.

ALGORITHM:

- 1) Load data to accumulator.
- 2) Load another data in register
- 3) Perform logical operations like AND, OR and XOR (Use ANA, ORA, XRA) with the accumulator content.
- 4) Store the result in specified memory location.

PROGRAM:

**AND
OPERATION:**

MVI
A,06

MVI
B,04

ANA
B

STA
2500

HLT

**OR
OPERATION:**

MVI
A,07

MVI
B,06

ORA
B

STA
2000

HLT

**XOR
OPERATION:**

MVI
A,03

MVI
B,08

XRA
B

STA
2000

HLT

INPUT:

OUTPUT:

FileResetAssemblerDebugHelp

Registers

A30

BC0000

DE0000

HL0000

PSW0000

PC420E

SPFFFF

Int-Reg00

Flag

S0

Z0

AC0

P0

C0

Decimal - Hex Conversion

Decimal

0

Hex

0

To Hex

To Dec

I/O Ports

0

-

+

00

Update Port Value

Memory

0

-

+

00

Update Memory

Load me at

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

<Program title>

jmp start

<data>

<code>

start: nop

MVI A, 03

RRC

RRC

RRC

RRC

RRC

STA 2000

HLT

hlt

DataStackKeyPadMemoryI/O Ports

Start2000

OK

Address (Hex)AddressData

07D0200048

07D120010

07D220020

07D320030

07D420040

07D520050

07D620060

07D720070

07D820080

07D920090

07DA20100

07DB20110

07DC20120

07DD20130

Line NoAssembler Message

0Program assembled successfully

Simulator: Idle

27°C

Partly sunny

WindowsTaskbarIcons

ENGIN

09:40

18-10-2023

RESULT: Thus the program was executed successfully using 8085 processor simulator.