D.O.E: 12/03/2019 D.O.S:

Experiment No: 5(a)

Q. 2 strings – 1 string is located in the memory location 6000_H onwards. Move this string byte wise to a new memory location 5000_H. Assume that string contains 10 numbers.

Memory Locations	Instructions	Comments
2000_H	MOV SI, 6000_H	Move the address 6000_H to SI.
2003_H	MOV DI, 5000_H	Move the address 5000_H to DI.
2006_H	MOV CX, $000A_H$	Move 10 datas to counter registes CX.
2009_H	CLD	This is used to clear the direction flag, also this used for auto incrementation.
$200A_H$	REP	This is not a instruction. This is used prior a instruction to repeat it again and again.
$200B_H$	MOVSB	Move the string byte wise.
$200C_H$	INT 03_H	END OF PROGRAM

Result:

Input

Memory Location	Data
6000_H	$D1_H$
6001_H	AE_H
6002_H	$C2_H$
6003_H	22_H
6004_H	$F1_H$
6005_H	$A2_H$
6006_H	63_H
6007_H	$2A_H$
6008_H	30_H
6009_H	$A0_H$

Output

Memory Location	Data
5000_H	$D1_H$
5001_H	AE_H
5002_H	$C2_H$
5003_H	22_H
5004_H	$F1_H$
5005_H	$A2_H$
5006_H	63_H
5007_H	$2A_H$
5008_H	30_H
5009_H	$A0_H$

D.O.E: 12/05/2019

Experiment No: 5(a)

Q. 2 strings – 1 string is located in memory location 6000_H onwards. Move this string word wise to a new memory location 5000_H. Assume that string contains 10 numbers.

Memory location	Instruction	Comments
2000_H	MOV SI, 6000_H	Move the address 6000_H to SI.
2003_H	MOV DI, 5000_H	Move the address 5000_H to DI.
2006_H	MOV CX, $000A_H$	Move 10 datas to counter register CX.
2009_H	CLD	This is used to clear direction flag. It is also used for auto incrementing.
$200A_H$	REP	This is used prior an instruction to repeate it again and again.
$200B_H$	MOVSW	Move string word wise.
$200C_H$	INT 03_H	END OF PROGRAM

Results:

Input:

Memory location	Data
6000_H	$AED1_H$
6002_H	$22C2_H$
6004_H	$A2F1_H$
6006_H	$2A63_H$
6008_H	$A030_H$
$600A_H$	AA19
$600C_H$	0006_H
$600E_H$	$AA51_H$
6010_H	$026C_H$
6012_H	$A884_H$

Output:

Memory location	Data
5000_H	$AED1_H$
5002_H	$22C2_H$
5004_H	$A2F1_H$
5006_H	$2A63_H$
5008_H	$A030_H$
$500A_H$	$AA19_H$
$500C_H$	0006_H
$500E_H$	$AA51_H$
5010_H	$026C_H$
5012_H	$A884_H$

D.O.E: 12/03/2019 D.O.S:

Experiment No: 5(c)

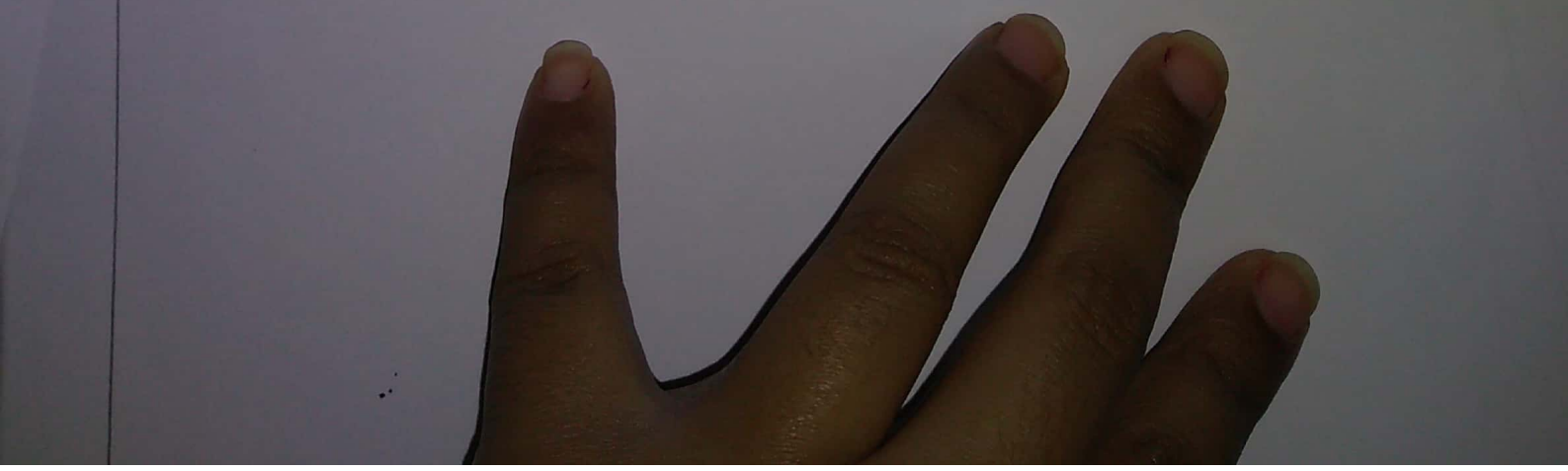
One string is stored from 5000_H memory location [byte wise and wordwise]. Check whether a number is present in the string or not.

Wordwise:

Memory Location	Instruction	Comments
2000_H	MOV DI, 5000_H	Move 5000_H to DI.
2003_H	MOV CX, $000A_H$	Move 10 datas to CX.
2006_H	MOV AX, 0015_H	
2009_H	CLD	This is used to clear the direction flag.
$200A_H$	REPNE	
$200B_H$	SCASW	Scan the string wordwise
$200C_H$	INT 03_H	END OF PROGRAM.

Byteweise:

Memory Location	Instruction	Comments
2000_H	MOV DI, 5000_H	Move the address 5000_H to DI.
2003_H	MOV CX, $000A_H$	Move 10 datas to CX
2006_H	MOV AL, 5	
2009_H	CLD	This is used to clear the direction flag and for auto incrementation.
$200A_H$	REPNE	
$200B_H$	SCASB	Scan the string byteweise
$200C_H$	INT 03_H	END OF PROGRAM



D.O.E: 12/03/2019 D.O.S

Experiment No: 5(b)

WAP to compare 2 strings of data both wordwise and bytewise wheter they are equal or not. Justify your answer.

Wordwise:

Memory Location	Instruction	Comments
2000_H	MOV SI, 6000_H	Move the address 6000_H to SI.
2003_H	MOV DI, 5000_H	Move the address 5000_H to DI.
2006_H	MOV CX, $000A_H$	Move 10 datas to CX.
2009_H	CLD	This is used to clear the direction flag and also for auto incrementation.
$200A_H$	REPE	Replat till the 2 strings are equal.
$200B_H$	CMPSW	Compare string word wise.
$200C_H$	INT 03_H	END OF PROGRAM

Bytewise:

Memory Location	Instruction	Comments
2000_H	MOV SI, 6000_H	Move the address 6000_H to SI.
2003_H	MOV DI, 5000_H	Move the address 5000_H to DI.
2006_H	MOV CX, $000A_H$	Move 10 datas to CX
2009_H	CLD	This is used to clear direction flag and also for auto incrementation.
$200A_H$	REPE	Repeat till the 2 strings are equal.
$200B_H$	CMPSB	Compare 2 string bytewise.
$200C_H$	INT 03_H	END OF PROGRAM