

Sardar Vallabhbhai Patel Institute of Technology- Vasad.

Lab Plan 2023-24(Even sem)

Subject: Micro processor and Interfacing(3160712)

Practical No.	Practical Name
1	Write a program to execute all data transfer, arithmetic and logical, shift and all rotate instructions.
2	a) Write a program to add the content of location 4000h and 4001h and store answer at 4002 h. b) Write an 8085 assembly language program for exchanging two 8-bit numbers stored in memory locations 2050h and 2051h.
3	a) Write the program to add, subtract two 8 bit and 16 bit nos. without using 16 bit instructions. b) Write an 8085 assembly language program to add two 16-bit numbers stored in memory . c) Write a program to find 2's compliment of given no.
4	a) Write an 8085 assembly language program to add two decimal numbers using DAA instruction b) Write an 8085 assembly language program to add two 16bit numbers using DAD instruction c) Write a program to multiply two nos. (Hint: 2X3= 2+2+2) d) Write a program to mask (or clear) the lower 4-bit of the contents of the memory location 2050h. e) Write a program to set the higher 4 bits of the contents of memory location 2050h to 1.
5	a) Write an 8085 assembly language program to find the minimum from two 8-bit numbers and store minimum no at 2000h location. b) Write a program to transfer the block of data stored at 2000h location to 4000h location. Transfer any 5 nos. c) Write a program to transfer the block of data stored at 2000h location to 4000h location in the reverse order. Transfer any 5 nos d) Write a program to add all the nos given in array and store the answer at 5000h location.
6	a) Write an 8085 assembly language program to get the minimum from block of N 8-bit numbers b) Write a program to find highest readings from array and display the reading at an output port. c) A string of readings is stored at memory location starting from 3000h and the end of strings is indicated by 0Dh . Write a program to check each byte in the string and save the bytes between the range of 30h to 39h both inclusive in memory location starting from 5000h. d) Write a program to count no of zero values in the given block of data.
7	a) A string of 6 data bytes is stored starting from location 2050h . The string includes blanks(bytes 00h) . Write a program to eliminate blanks from the string. (Hint: To check the blanks set the zero flag by using ORA instruction). Data: F2, 00, 00, 4A, 98, 00. b) A set of 8 data bytes is stored in memory location starting at location 3000h. Check each data byte for bits D7 and D0. If D7 or D0 is 1, then reject the data byte else store the data byte at location starting from 4000h. Data: 80, 52, E8, 78, F2, 67, 35, 62.

8	<p>a) Write a program to add the positive no of array. Ignore the negative no from the array. The nos are stored at address 3000h. The result is expected to be less than FFH. And if it is overflow then display FFH at port 1. Data: 20, 87, F2, 37, 79, 17.</p> <p>b) A set of 8 readings is stored in the memory location 2050h. Write a program to check whether a byte 40 h exist in the set ? if it does, stop checking and display its memory location otherwise output FFh. Data: 48, 32, F2, 38, 37, 40, 82, 8A.</p>
9	<p>a) Write an 8085 assembly language program to find the number of 1's binary representation of given 8-bit number</p> <p>b) Write an 8085 assembly language program to count the length of string ended with 0dh starting from location 2050h</p>
10	Write an 8085 assembly language program to convert given hex digit to its equivalent ASCII number.
11	<p>a) Write an 8085 assembly language program to compute even parity and insert it as MSB in 8-bit number</p> <p>b) Write a subroutine to exchange two 8-bit numbers. Use it to reverse an array of 8-bit numbers</p>
12	<p>a) Write a program to sort the array in ascending order. Take any 5 nos.</p> <p>b) Write a program to sort the array in descending order. Take any 5 nos.</p>
13	<p>a) Write 8085 Assembly language program for interfacing between 8085 and 8255 to ON/OFF desired output LEDs connected at the output port B.</p> <p>b) Write 8085 Assembly language program for interfacing between 8085 and 8255. Here Port A and Port B are holding two values, take the numbers from port A and B, add them, and send the result at port C.</p>
	<p>BEYOND SYLLABUS Study of simulators for processor like 8086, 80286, Pentium, i3, i5, i7 and i9.</p>

OPEN ENDED PROBLEM:

Compare the Microprocessor and Microcontroller from hardware and software point of view.

Subject coordinator:

HOD-CE

Parul V. Bakaraniya

Asst.prof (Comp)