List of Practical
Microprocessor Systems & Applications
B.E. III Electronics Semester VI, Jan – April 2010

Sr No.	Program Index for BATCH B Write 8086 assembly level program	Date	Sign
1.	To perform addition, subtraction, multiplication and division of two 8 bit and 16 bit numbers.		
2.	Write 8086 assembly level program to add 5-bytes stored in array 'A' to 5-bytes stored in another array 'B'. Put the sum in third array 'C'. Store the status of carry flag in 4th array D. (e.g. C1 = A1+B1)		
3.	Write 8086 assembly level program to count occurrence of positive, negative and zero value hex numbers from given array of given size. The size of array is provided in a memory location. Store the result in memory. Modify your program to work with Decimal numbers.		
4.	Compute the following for ten 8-bit numbers. Store the result in memory. Find Sum of numbers. Find average of numbers. Find Maximum of numbers. Arrange numbers in descending order		
5.	Write 8086 assembly level program to multiply two 32 bit numbers to give a 64 bit result. Store the result in memory at location 500H onwards. Modify your program for 64 bit numbers.		
6.	Write 8086 assembly level program to divide a 64 bit number by a 16-bit number. Store quotient and reminder in memory.		
7.	One double word is stored in memory. Write a program to reverse the digits of the number & store it in memory at same location.		
8.	Seven Hex numbers are stored in memory. Write a program to convert this numbers in BCD equivalent and Save the result in memory. Use procedure for number conversion.		
9.	Write 8086 program to generate Fibonacci series elements. No of elements to be generated is stored in a memory location in a data segment. Display the numbers in sequence on the screen also.		
10.	Write a program to generate ten 16-bit Pseudo random numbers using the following rule. Take a 16-bit number, add the individual digits of 16 bit number, and square the sum, if it is 16 bit then that is first Pseudo random number. Consider it for second iteration otherwise do square again till you get 16 bit number. Store the result in memory.		
11.	Write a program which determines whether 8-bit number stored in memory is prime or not Display result on screen.		
12.	Write a program to delete a character from a given string which is occurring more then once. String : Microprocessor Systems & Application		
13.	Write 8086 assembly level program to move a string from source location to destination location 100H in Data segment of memory. Use		

	string instruction MOVSB.		
14.	Write a program to find that string stored in memory is Palindrome or not. Display the message on screen. Use string instruction CMPSB		
15.	One string is stored in memory. Write a program to replace specific word in a given string with given word. String & word are stored in memory. string : "I am student studying in SCET" Replace **student** with your **name**. Program should work for any combination of string & word **(Note : Compare whole word instead of comparing single character)**		
16.	Write a program to accept a string from keyboard & count the number of occurrence of the each vowel. Store the result in memory starting from location 0333H in data segment (DS). Display total number of vowels on screen.		
17.	Write a program to verify your password. Program should ask Password, And then check it with stored one. Display result on screen		
18.	Two different strings are stored in memory. Write a program to find that whether main string is comprise of sub string or not and display the message on screen. **Main String:** Sarvajanik College of Engineering and Technology, Surat. **Sub String:** College		
19.	Following Data is stored in memory. Count number of characters in given data & Find how many words are there in given data. Data : " The Microsoft office family is a collection of full-featured products that work alike and work together as if they are a single program.		
20.	Interrupt and I/O programming		

Homework Problems

1.	Write a program that will accept a string from Keyboard in lower case. Convert string in upper case & then display on the screen.		
2.	Write 8086 assembly level program to compare two strings at two given locations. Display the message "Equal" or "Not Equal" according to the result of comparison.		
3.	Write a program to find the sum of all digits of double word stored in memory. Display result on screen.		
4.	Use procedure and Write 8086 assembly level program to find factorial of a number. Display result on screen.		
5.	One string is stored in memory. Write a program to insert a word in a given string. String & word are stored in memory. String : "Sarvajanik College of Engineering Technology." word is to be inserted : and Insert word after 'Engineering' Program should work for any combination of string & word		

	(Note : Compare whole word instead of comparing single character)		