Himalaya College of Engineering
Tutorial – 2 (ALP 8086)
Microprocessor (BCT II / II)

Date of Submission: 10th Shrawan 2070

1. Write an assembly language program to perform the addition of a 100 natural even numbers and display the sum in screen. [sum = n (n+1)]
2. Write an assembly language program to convert the lower case vowels to upper case.
3. Write an assembly language program to count the number of vowels in the entered string.
4. Write an assembly language program to input string and display it at middle of the screen. (Use character input character output and string input string output function numbers).
5. Write an assembly language program to display words of the sentence in separate lines and to count the number of words presented in the entered sentence.
6. Write an assembly language program to get n^{th} number from the user and sum the odd numbers from 1 to n^{th} term and display sum. [sum = n^2]
7. Write an assembly language program to perform the addition of numbers from 1 to n, where n being entered number by user having 3 digits.
8. Write an assembly language program to display the string at the middle of the cleared screen one letter at one line with blue foreground and white background.
9. Write an assembly language program for sorting arrays of numbers and display each number in separate line.
10. Write an assembly language program for 8086 to find the sum of the following series. x + 2x + 3x + 4x + … to ten terms. Where x is a two digit number entered by the user. Display the result.

Old Board Questions

11. Write an assembly language program to calculate sum of the series $1^2+2^2+3^2+4^2+$ … up to ten terms and display the result. [2066 Magh]
12. Write an assembly language program for 8086 to read a string and find the number of alphabets, numerals and other characters. Display the different counts. [2066 Kartik]
13. Write an assembly language program to get string input; count no. of vowels and display message ‘even vowels’ on the screen if the count is even otherwise display ‘odd vowels’. [2065 Chaitra]
14. Write down an assembly language program to read a string and display each word on different lines of a clear screen. [2065 Kartik]
15. Write down an assembly language program to read a string and count the no of vowels in the string. Display the no of vowels in the string and the string without the vowels in it in a clear screen with reverse attribute. [2064 Poush]

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16. Write a program to generate multiplication table of five numbers stored in memory as array, store the result and display in following format.
    5 10 15 20 25 30 35 40 45 50
    3 6 9 12 15 18 21 24 27 30
    … … … … [2064 Shrawan]
17. Write an assembly language program for 8086 to read string count the number of vowels in the string and display the string and its vowels count in a clear screen. [2063 Kartik]
18. Write an assembly language program for 8086 to sort an array of ten numbers stored in memory. Display the numbers in the screen after sorting. [2063, Ashadh]
19. Write a program to read a string and separate the words from the string. Display each word at the center of each line of a clear screen with blue background and cyan foreground. [2062 Bhadra]
20. Write assembly language program for 8086 to sort five numbers in ascending and descending order. [2062 Baishakh]
21. Write an assembly language program to read a string from the user, convert it to upper case, count the number of words and display each word in each line and number of words. [2061 Ashwin]
22. Write a program to read a string, convert the small case letters to upper case and display the converted string in the next line. [2060 Bhadra]
23. Write an 8086 assembly language program to sort ten 16-bit data stored in a table and display the numbers as decimal numbers in the screen. [2060 Jestha]
24. Write an assembly language program for 8086 to find the largest number among 10 numbers stored as arr. [2060 Chaitra]
25. Write an 8086 assembly language program to separate words from a string. Display each word in separate line. [2059 Shrawan]