

COE 205, Term 062

Computer Organization & Assembly Language Programming

Programming Assignment# 3

Due date: Saturday, May 12, 2007

Q.1. It is required to write an assembly program that does the following:

- (i) Ask the user to enter the base of an input number. Your program should give an error if a base of 0 or 1 are entered by the user and ask the user to reenter the base.
- (ii) Read the entered number in the specified base. Your program should report an error message if an invalid digit is entered.
- (iii) Ask the user to enter the base he wants the number to be converted to.
- (iv) Print the number in the required base. Only the significant digits have to be printed.

Assume that the number is unsigned. A sample execution of the program is shown below:

```
Enter the base of the input number: 10
Enter the number: 20
Enter the base of the output number: 2
The entered number in base 2 is: 10100
```

```
Enter the base of the input number: 16
Enter the number: 5A
Enter the base of the output number: 2
The entered number in base 2 is: 1011010
```

```
Enter the base of the input number: 2
Enter the number: 11011
Enter the base of the output number: 10
The entered number in base 10 is: 27
```

The solution should be well organized and your program should be well documented. Submit a soft copy of your solution in a zip file. The soft copy should include a Readme file indicating the file names containing the solution and whether it works or not. The Readme file should also contain your name and ID. Submit both source code file (i.e. .asm) and the executable file (i.e. .exe).