

COE 205, Term 051

Computer Organization & Assembly Language Programming

Programming Assignment# 3

Due date: Saturday, Nov. 19, 2005

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

- (i) Ask the user to enter a base (2-16) and read the base.
- (ii) Read a number in the entered base. Give an error message if the entered number has an invalid digit and reread the number.
- (iii) Ask the user to enter the base of the output to which the number needs to be converted (2-16).
- (iv) Print the entered 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 a base (2-16): 10
Enter a number in base 10: 20
Enter the base of the output number: 2
The converted number in base 2 is: 10100
```

```
Enter a base (2-16): 2
Enter a number in base 2: 102
Error!! The entered number has an invalid digit.
Enter a number in base 2: 1011
Enter the base of the output number: 16
The converted number in base 16 is: B
```

It is very important that you strictly follow the format given to you in the sample execution of the program.

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).