COE 205 Computer Organization & Assembly Language – Fall 2004

Assignment 5: Procedures and Parameters
Professor: Muhamed Mudawar
Due Date: Monday, December 6, 2004

Q1. (10 pts) Write an assembly language program to perform string reversal. The program should have a *reverse* procedure that receives a pointer to a character string and its length, and reverses the string. It should also have a *main* procedure to request the string from the user and to display the reversed string as output of the program. Limit the length of the string to at most 40 characters. A sample run is shown below, where user input is show in **bold**.

```
Enter a string (max 40 chars): slap
Reversed string is pals
```

Q2. (10 pts) Write an assembly language program to locate a character in a given string. The program should have a *locate* procedure that receives a pointer to a character string, its length, and the character to be located. It returns the character position of the first occurrence of the character within the string. The position of the first character in string is counted as 1. If the character is not found then the procedure should return 0. The program should have a *main* procedure to request from the user the input string to be searched and the character to be located, and to display as output the location of the character in the string. If there is no match, a message should be displayed to that effect. A sample run is shown below:

```
Enter a string (max 40 chars) : testing
Enter character to be searched: n
n is found at position 6
```

Document your code and make it as readable as possible. 20% of the mark will go to documentation and readability, 20% will go to procedural breakdown and parameter passing, and 60% will go to correctness. Put the source and executable files of each program in a separate folder. Call these folders A5Q1 and A5Q2, for assignment 5 questions 1 and 2, respectively. Write your name, your id, the date, and the objective at the beginning of the program. Write also the objective, the parameters, and results at the beginning of each procedure. Submit both programs on a floppy disk along with a hard copy in a sealed envelop at the beginning of class time.