Department of Computer science and Technology,
Indian Institute of Engineering, Science and Technology, Shibpur,
Introduction To Computing Lab

Assignment - 6

1. Write a C function "int stringLength(char src[])" that finds and returns the length of the null terminated string src[], that is, the number of characters (excluding the null character) in the parameter src[].

2. Write a C recursive function to compute GCD of two given numbers. The function prototype is as follows: int Compute_GCD(int a,int b), here compute the GCD of a and b and return it to calling function.

3. Write a function that will print the largest word in a line.

4. Write a function that takes a decimal number and base as argument and returns the equivalent number of the given base.

5. Write a C recursive function to reverse a string. Write the complete C program and display the reversed string at the calling function.

6. Write a C function to reverse every word of a given string. As, for example, if the input string is *"C Programming Class"* output string will be *"C gnimmargorP ssalC"*.

7. Declare a structure for storing complex numbers. Write a C program that perform the following operations: a) Read two complex numbers (a+ib). b) add of two complex numbers. c) subtract two complex numbers. d) multiply two complex numbers.

8. Declare a structure to store the following information of an employee

   (a) Employee Code

   (b) Employee Name

   (c) Salary

   (d) Department number

   (e) Date of joining (it is itself a structure consisting of day, month and year)

   Write a program that can take above informations about 10 employee and Display informations for those employees whose Salary $\geq$ 10000.

9. Write a C program to copy one existing file (source file, say *file1.txt*) into another named file (destination file, say *file2.txt*). In this case take file name as input through command line argument. As for example: ***$./a.out file1.txt file2.txt***

   Here the contents of *file1.txt* have to be copied to *file2.txt*.

10. Write a C program that can compare two files specified by the user, return a nonzero value if identical otherwise zero. (such as $cmp file1.txt file2.txt; compare the content of file1.txt and file2.txt if identical display 1 otherwise 0.)