

Computer Programming: Skills and Concepts

Week 9 – November 15-18, 2010

Sorting

- (i) Put the following words in lexicographical order using the bubble sort algorithm. How many swaps did you have to do?

hat, operate, but, not, the, other, bulb

- (ii) Same question, this time using (the general version of) MergeSort (for arrays of any length). In this case, you would count the number of times (any call of) **merge** places a value currently stored in **b** (the second array) before some of the **a** (first array) values, in creating the output array **c**.
- (iii) Our implementations of the BubbleSort and MergeSort algorithms were given for arrays of type **int**. Describe how to alter the implementations to deal with arrays of strings (ie, arrays of **char***).

Programming

Take a look at the functions provided by the string library `<string.h>`

Write a function with prototype

```
MakePlural(char *singular, char *plural);
```

This function is intended to take a singular noun `singular` and construct its plural form `plural`. It won't be possible to handle all cases, but have you covered `cat/cats`, `cherry/cherries`, `journey/journeys`, `box/boxes` and `moss/mosses`? What about `index/indices`?

