

COMP 2160 Programming Practices

Lab3 (Oct 10 - Oct 12)

Preparation

Read Column 3 of Programming Pearls prior to the lab. Note the importance of thinking a problem through before writing any code and let the data structure the program.

Exercise

Do problem 6 of Column 3. Use the test files `template.txt` and `data.txt`. You are free to hand code constraints, buffer sizes and file names – the point is doing the file processing. Also note that the textbook provides a pseudo-code solution for this problem. The 2nd edition code is shown below:

```
read fields from database
loop from start to end of schema
    c = next character in schema
    if c != '$'
        putchar c
    else
        c = next character in schema
        case c of
            '$':      putchar c
            '0'...'9':  printstring field[c]
            default:    error("bad schema")
```

The easiest way to process the customer data is to tokenize it. You'll have to store the data in an array – assume that there are always 9 fields and that there's a maximum of 30 customers (don't worry about error checking for the lab...).

The template file is best processed character by character looking for variables. Note that this is the exact same processing `printf()` uses when processing the formatted string. You have to process the file for each customer – it's easier to re-read the file than store it in a buffer (the system has it buffered anyway). Don't open/close the file though, use `rewind()`.

After you have shown your work to the TA, please make sure to sign the sign-up sheet (which the TA will bring), and the TA will record your grade for the lab.