

Strings and Command Line Arguments

11-17-2003

Opening Discussion

- What did we talk about last class?
- Do you have questions about the assignment?

Questions on Minute Essays

- What is "->"?
- Why use structs? When do you take their size?
- Dynamic memory inside structures.
- When to use ** instead of *.
- When would you not use dynamic memory?

The string.h Library

- If you type in "man string" you can get a listing of all the functions that are part of the string.h library.
- That is the standard C library for dealing with strings, or null terminated arrays of characters.
- This library contains many helpful functions. You could write any of them yourself, but they save you from having to.

Basic Functions

- `strcmp(char *s1, char *s2)` - compares two strings. It returns 0 if they are equal, <0 if the first is less and >0 if the second is less.
- `strlen(char *s)` - returns the length of the string.
- `strcpy(char *dest, char *src)` - copies a string.
- `strcat(char *dest, char *src)` - concatenates.

Other Functions

- `strcasecmp` - case insensitive comparison.
- `strchr` - finds a character in a string.
- `strtok` - finds a token in a string.
- `strfry` - makes a random anagram of the string.
- `strncmp` - compare the first n characters of strings.
- `strncpy` - copy the first n character of a string.

Command Line Arguments

- When you are working in Linux, you almost always type not just a command, but some type of arguments for that command.
- We'd like to be able to do this in our programs so that we can give our program extra information about how to run when we type the command.
- Example "a.out 3+5*8"

Arguments for main

- The way we get command line arguments is by providing special arguments for main. With the following signature, the int is the number of arguments, including the command, and the char** is an array of strings for those arguments.

```
int main(int argc, char **argv);
```

Code using Command Line Arguments

- Now let's write some code that uses command line arguments. Since the arguments always come as strings we can use some parts of the string library as well.

Minute Essay

- How are you coming on the assignment? Command line arguments are something that is rarely used in the windows environment. Do you see their value when working on a computer?
- Next class is sorting.
