

CS 3733 Operating Systems — Fall 2001

Assignment 1

Name _____

Consecutively number the pages and fill in the index below with page numbers.
Put a check mark in the appropriate place if you think the part is korrekt.

Part	.out	.lint	datolib.c	datatest.c	check if correct
Part 0	_____	_____	_____	_____	_____
Part 1	_____	_____	_____	_____	_____
Part 2	_____	_____	_____	_____	_____

testing.txt _____

part3.out _____

If you think everything you did is correct, check here: _____

Otherwise, give a brief description of what is working and what is not:

Please answer these questions here or put them on a separate sheet and indicate the page number containing your answers here: _____

1. What would happen if after a successful `add_entry` call, the calling program modified the string it passed as a key?
2. What would happen if after a successful `add_entry`, the calling program modified the string it passed as a host name?
3. Suppose `add_entry` used the pointer to the key rather than creating new space and copying the key. How could the calling program corrupt the database?
4. How did you test that your program does not have any memory leaks?
5. `getdata` and `findentry` are passed buffers in which to store the strings to be returned. These strings are copied into buffers supplied to the calling program. An alternative would be to return pointers to these strings inside the database. Give at least two reasons for not doing it this other way.
6. `findentry` handles length errors for `host` and `key` differently. If the `host` does not fit, it is considered a fatal error (-1 is returned) while if the `key` does not fit, part of the `key` is copied and no error is generated. Why is it done this way?
7. The file `data.lib.h` contains prototypes of the functions in `data.lib.c` but the typedefs used in `data.lib.c` are not in this file. Why is that?