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Problem Sheet #1

1.1) When the function runs, all the local variables are stored in the stack and when the function finishes the variables go out of scope.

Since our function returns a pointer pointing to a variable that is no longer accessible, we get garbage values every time we try to run it.

The right thing to do inorder to correct this would be ~~making~~ changing char d[len+1] to static char d[30].

Changing it to static will change the scope of that variable and will save it in the data section instead of the stack.

1.2) a) • int open (const char *path, int oflag, ...)

- The following values may be set for errno after returning -1.

⊛ [EINVAL] -> the implementation doesn't provide synchronized I/O for this file OR the value of the oflag argument isn't valid

⊛ [EINTR] -> a signal was caught during open()

⊛ [ENFILE] -> the maximum allowable number of files is currently open in the system.

⊛ [ENOTDIR] -> a component of the file prefix is not a directory

⊛ [ENOSPC] -> the directory of the file system can't be expanded or doesn't exist

• int close (int fildes)

- We might expect to see the following out comes for the errno after returning -1.

⊛ [EBADF] -> The fildes argument isn't a valid file descriptor

⊛ [EINTR] -> The close() function was interrupted by a signal

⊛ [EIO] -> an I/O error while reading or writing.

b) • int open (const char * path, int oflag; ...)

⊛ when successfull, it will return the lowest numbered non-negative file descriptor

• int close (int fildes)

⊛ It will return zero when, its successfull.