

SANTA CLARA UNIVERSITY
Electrical and Computer Engineering Department

Real-Time Embedded Systems - ECEN 121
Lab 8
DYLAN THORNBURG

USB Flash Drive

Andrew Wolfe

Pre Lab:

1. Review [fatgen103.pdf](#).
 2. Review [STM32CUBE FAT manual.pdf](#).
 3. Look at the main page at [FatFs - Generic FAT Filesystem Module](#).
 4. In your prelab, describe the difference between a long file name and a short file name.
Long file names are limited to 255 characters (260 for full paths) and short file names are limited to 8+3 or 11 characters (80 for full path names).
 5. Is π man53.txt a long file name or a short file name? Explain why.
It's a short file name because it has less than 11 characters.
 6. What parameters are required for fread() and what is the data type of each parameter?
Fread has four parameters (fread(P1,P2,P3,P4). P1 is the buffer or where you'll be putting the read data. P2 is the size of each element in bytes. P3 is the count of elements to read. P4 is the pointer to the file stream you'll read from. P1 and P4 are pointers (void * and FILE *) and P2 and P3 are unsigned integers.
- NOTE: For this prelab we were instructed to look at the FatFs website and in that website it describes a function f_read() that switches the order of the parameters when compared to fread(). IF this question was intended to ask us about f_read, then just switch the parameter order so f_read(P4, P1, P3, P2). Also P2 will be a pointer.**
7. How many total bytes are used to represent the parameters of fread()?
On a 64-bit system, it is $4 \times 64 / 8 = 32$ bytes. On a 32-bit system, it is $4 \times 32 / 8 = 16$ bytes.