

Midterm #1 Paper Test (5%)

CS5432 Advanced UNIX Programming, Instructor: Cheng-Hsin Hsu

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3:30 p.m. – 4:20 p.m., Oct. 17th, 2016

1) (1%)

Answer:

The system call is an entry point of kernel-space which allow process in the user-space can interact with the system functions in the kernel spaces.

2) (1%)

Answer:

Fully buffering mode: Actual I/O takes place when the standard I/O buffer is filled.

Line buffering mode: The standard I/O library performs I/O when a newline character is encountered on input or output.

Unbuffered mode: The standard I/O library does not buffer the characters. IO is performed as quick as possible.

3) (1%)

Answer:

/dev/null is a file which represents a null device. It ignores all the data written to it and processes usually redirect the unwanted output to /dev/null.

4) (2%) **Answer:**

The variable `c` is declared as `char`, however, which may lead to a problem when EOF is returned by `getchar`. EOF is typically -1 and it cannot be accommodated by `char` correctly. If the operating system implements `char` as signed, and we will not have this problem.