**COMP354 – Operating Systems**

**Spring 2016**

**Project #2 – Grading Rubric**

**System Calls**

**\_\_39\_\_\_ / 40 Required Functionality**

compileOS script additions work correctly:

**Y** N Places message.txt into sector 30 of the disk.

printString function works correctly:

**Y** N Correctly invokes BIOS interrupt 0x10

**Y** N Returns the number of characters printed.

**Y** N Does not print the null character.

readChar function works correctly:

**Y** N Correctly invokes BIOS interrupt 0x16.

**Y** N Returns character’s ASCII.

**Y** N Returns scan code.

readString function works correctly:

**Y** N Correctly invokes BIOS interrupt 0x16.

**Y** N Reads characters into buffer until ENTER is pressed.

**Y** N Does not place ENTER (0x0D) into buffer.

**Y** N Appends null terminator to the buffer.

**Y** N Returns the number of characters read into the buffer.

**Y** N Excludes the null terminator from the count.

readSector function works correctly:

**Y** N Correctly invokes BIOS interrupt 0x13.

**Y** N Correctly computes T:H:S address.

Y **N** Correctly and efficiently computes MOD function

**Y** N Returns 1.

System call interface is correct:

**Y** N Interrupt vector 0x21 is modified correctly.

**Y** N handleInterrupt21 function works correctly.

**Y** N AX=0x00 correctly invokes printString.

**Y** N AX=0x11 correctly invokes readChar.

**Y** N AX=0x01 correctly invokes readString

**Y** N No system call provided for readSector

**Y** N Returns -1 on unrecognized AX value.

**\_\_\_10\_\_ / 10 Improvements**

Backspace key is handled correctly:

**Y** N Cursor moves back one space.

**Y** N Character is erased from the screen.

**Y** N Handles full erase of entered characters correctly.

**\_\_\_5\_\_ / 5 Documentation**

**Y** N compileOS is well formatted and adequately documented.

**Y** N kernel.c is well formatted and adequately documented.

**\_\_\_\_\_ / 0 Bonus**

readString does not allow buffer overrun.

Y **N** readString does not read more than a user specified maximum

number of characters into the buffer.

Y **N** readString behaves sensibly when additional keys are typed.

Y **N** readString behaves sensibly when BACKSPACE is typed.

printInt function works correctly.

Y **N** Prints positive integer values correctly.

Y **N** Prints negative integer values correctly.

Y **N** Prints zero correctly.

**\_\_\_54\_\_ / 55 Total**