COMP354 – Operating Systems
Spring 2012

Project #3 – Grading Rubric
Loading & Executing Programs + Shell

/ 50 Required Functionality
compileOS script additions work correctly:
  Y N  Places Disk Map into sector 1 of the disk.
  Y N  Places Disk Directory into sector 2 of the disk.
  Y N  Places message.txt onto the disk using loadFile.
  Y N  Assembles lib.asm.
  Y N  Compiles, links and places uprog1 on disk using loadFile.
  Y N  Compiles, links and places uprog2 on disk using loadFile.
  Y N  Compiles, links and places shell on disk using loadFile.

readFile function works correctly:
  Y N  Reads a 1 sector file correctly (e.g. message).
  Y N  Reads a multiple sector files correctly.
  Y N  Returns the number of sectors read.
  Y N  Returns -1 if file is not found.

executeProgram function works correctly:
  Y N  Loads program at correct memory location.
  Y N  Executes uprog1 successfully.
  Y N  Executes uprog2 successfully.
  Y N  Returns -1 if program is not found.
  Y N  Returns -2 if the segment is not valid.

terminate function works correctly:
  Y N  Resets segment registers.
  Y N  Relaunches shell when uprog2 terminates.

System call interface is correct:
  Y N  AX=0x03 correctly invokes readFile.
  Y N  AX=0x04 correctly invokes executeProgram
  Y N  AX=0x05 correctly invokes terminate.
  Y N  Returns -1 on unrecognized AX value.

Shell functionality is correct:
  Y N  Uses system calls to request OS services.
  Y N  Recognizes type command.
  Y N  type command works on 1 sector file.
  Y N  type command works on multiple sector file.

/ 20 Improvements
User program library implemented:
  Y N  Function provided for print string.
  Y N  Function provided for read string.
  Y N  Function provided for read file.
  Y N  Function provided for execute program.
  Y N  Function provided for exit program.

Shell modified to use user program library:
  Y N  Shell uses user program library.

/ 20 Coding Style
  Y N  Uses structure's appropriately for searching Disk Directory.
  Y N  Uses reasonable functional decomposition.
  e.g. String comparisons
  e.g. Finding directory entries

/ 5 Documentation
  Y N  compileOS is well formatted and adequately documented.
  Y N  kernel.c is well formatted and adequately documented.

/ 0 Bonus
  readFile does not allow buffer overrun.
  Y N  readFile does not read more than a user specified maximum
       number of characters into the buffer.
  Magic number functionality works correctly.
  Y N  Post-processing utility provided.
  Y N  compileOS.bash script ensures executable programs contain
       the magic number.
  Y N  launchProgram will run executable files.
  Y N  launchProgram will not run non-executable files.
  Y N  launchProgram returns -3 if non-executable is run.
  Y N  Shell prints error message if non-executable is run.

/ 95 Total