Jason Millette
2/19/2018
ECE331
Homework 3

1. sudo apt-get update
   cd /usr/src
   sudo git clone https://github.com/raspberrypi/linux.git
   mv linux linux`uname -r`
   make mrproper
   sudo modprobe configs
   cp /proc/config.gz /usr/src/linux4.9.59-v7+
   gunzip config.gz
   mv config.gz .config
   cd /boot
   sudo wget https://github.com/Hexxeh/rpi-firmware/blob/master/Module7.symver
   cd /usr/src/linux4.9.59-v7+
   sudo ln -s /boot/Module7.symvers Module.symvers
   sudo apt-get install bc
   sudo make modules_prepare
   cd /lib/modules/4.9.59-v7+
   sudo ln -s /lib/modules/4.9.59-v7+ build
   sudo ln -s build source
2. a. 0 pass, a fail, -0 pass, +0 pass
   b. r"^((\\s*[+-]?))([0-9]+\\.?[0-9]*$|[0-9]*\\.[0-9]+$)"

3.
```
#include <stdio.h>
#include <regex.h>
/*
 * Jason Millette
 * 2/18/2018
 * float match
 * ECE331
 */

int main(int argc, char *argv[])
/*
 * increments through
 * all arguments and
 * tests for matches
 * then prints results
 */
{
    int match;
    char *regularExpression = "^((\\s*[+-]?))([0-9]+\\.?[0-9]*$|[0-9]*\\.[0-9]+$)";
    regex_t re;
    if (argc < 2) {     //checks for arguments
        printf("You must enter a test\n");
```

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```
        return 1;
    }

    for (int i = 1; i < argc; i++) {      //checks for errors
        if (regcomp(&re, regularExpression, REG_EXTENDED) != 0) {
            printf("error occured\n");
            return 2;
        }

        match = regexec(&re, argv[i],  0, NULL, 0);
        regfree(&re);  //frees memory
        if (!match)
            printf("%s -> pass\n",argv[i]);
        else
            printf("%s fail\n",argv[i]);
    }

    return 0;
}
```

4. source code for script

```
import subprocess
import sys

from subprocess import call
for r in sys.stdin.readlines():
    call(["./float",r)
```

command passed

```
./testScript < test
```

5. dpkg-query -f='\n' -W *[+,-,.]*[0-9] | wc -l

6. ^[0-9]{2-3}$

7. man -P 'less -p "-Wtemplates \(" gcc