Nicholas LaJoie, ECE 331, HW2

```
// Author: Nicholas LaJoie
// ECE 331 - Homework 2
// Date: 2/2/17
```

1. Package commands:
        a. aptitude search weather-util
        b. sudo apt-get install weather-util
        c. dpkg -L weather-util
        d. sudo apt-get remove weather-util

2. avrdude commands:
        a. sudo apt-get source avrdude
        b. wget http://savannah.nongnu.org/bugs/download.php?file_id=32171
       sudo mv download.php\?file_id=32171 /usr/share/avrdude-6.1/endpoint.patch
        c. sudo patch -i endpoint.patch
        d. sudo apt-get build-dep avrdude
        e. sudo dpkg-source --commit
        f. sudo dpkg-buildpackage -us -uc
        g. sudo dpkg -i avrdude
        h. I don't think I ended up doing this process correctly...here's what I added in t
he commit for part e:
        Description: Applying endpoing patch for avrdude
         This is where I'm supposed to provide more info as to what this patch is doing, but
 unfortunately, I'm not entirely sure.

         <More text here from the commit - stuff about the patch source, date, etc.>

3. Link command: ln -s /sys/var/adm/armv7/hf skywalker

4. Total BLOCK program:

```
// Author: Nicholas LaJoie
// File: prob4.c
// Date: 1/25/17
// Description: Print total number of BLOCKS used by list of files passed on command line.
// Sources: https://linux.die.net/man/2/stat

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <unistd.h>

int main(int argc, char * argv[])
{
        int i, blocksum = 0;
    struct stat s;

        if (argc < 2) {
                perror("No arguments passed.\n");
                return 1;
        }
    // Call each command line argument with 'stat' and parse data for # of blocks
        for (i = 1; i < argc; i++) {
        if (stat(argv[i], &s) == -1) {
            perror("Stat error");
        }
        else {
            blocksum += (int) s.st_blocks;
        }
        }
    printf("%d\n", blocksum);

        return 0;
}
```

5. Glob BLOCK program:

     a. ./prob5 '/usr/local/images/*.jpg'
     b. Source code:

```c
// Author: Nicholas LaJoie
// File: prob5.c
// Date: 1/31/17
// Description: Print total number of BLOCKS used by single glob passed on command line.
// Sources: https://linux.die.net/man/2/stat and https://linux.die.net/man/3/glob

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <unistd.h>
#include <glob.h>

int main(int argc, char * argv[])
{
        int i, blocksum = 0;
    struct stat s;
    glob_t g;

    // Only one command line argument is passed - a single glob.
        if (argc != 2) {
                perror("Incorrect number of arguments passed.\n");
                return 1;
        }
    // Call single glob, call each result with 'stat' for # of blocks
    if (glob(argv[1], GLOB_DOOFFS, NULL, &g) != 0) {
        perror("Glob error");
    }
    else {
        for (i = 0; i < g.gl_pathc; i++) {
            if (stat(g.gl_pathv[i], &s) == -1) {
                perror("Stat error");
            }
            else {
                blocksum += (int) s.st_blocks;
            }
            }
    }
    printf("%d\n", blocksum);

        return 0;
}
```

6. debugfs:
     Run debugfs using the command:
     sudo debugfs /dev/<partition>
     (ex. sudo debugs /dev/mmcblk0p7)

     a. show_super_stats
     b. stat /bin/ls
     c. ncheck 11