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CSC220 -- Activity 1
2017-06-03

Part 1: Unix

Question 3

a. Browse to the home directory using `cd /home` and then list all contents with `ls -a`
b. `man find`
c. `$PATH`
d. Browns to the bin directory using `cd /bin` and then list contents beginning with k with `ls k*`

```
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ cd /bin
faysal@DESKTOP-AOGE5FF:/bin$ ls k*
kbd_mode  kill  kmod
```

e. `cat *.lst > alllist.txt`

```
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ cat *.lst > alllist.txt
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ cat alllist.txt
Bob C
Sarah Python
Drew Python
Jason Java
Joe C++
Sue C
Mike Python
Karen Unix
Jason OS/2
Drew Windows
Abby Linux
Sue Mac OS
Mitch Windows
```

f. `head -n10 hello.c`

```
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ head -n10 hello.c
/*
 * "Hello, world" example
 */

#include<stdio.h>

int main() {
        printf("Hello, world!\n");
        return 0;
}
```

temps.c

```
#include<stdio.h>

/* symbolic constants */
#define LOWER 0
#define UPPER 100
#define STEP 10

int main() {
  double fahr;
  int celsius;

  for (celsius = LOWER; celsius <= UPPER; celsius+=STEP) {
    fahr = celsius * 9 / 5 + 32;

    /*
        %4d - print an integer in a 4 character wide column
        \t - tab character
        %6.1 - print a floating point number with 1 decimal point
        \n - newline
    */
    printf("%4d\t%6.1f\n", celsius, fahr);
  }
  return 0;
}
```

```
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ vi temps.c
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ gcc temps.c
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ ./a.out
   0	  32.0
  10	  50.0
  20	  68.0
  30	  86.0
  40	 104.0
  50	 122.0
  60	 140.0
  70	 158.0
  80	 176.0
  90	 194.0
 100	 212.0
```

countlines.c

```
#include <stdio.h>

int main() {
  int c;
  int nl=0;
  int t=0;
  int s=0;
  int digits[10];
  int i;

  /* initializing digits array to zero */

  for (i=0; i<10; i++) {
    digits[i] = 0;
  }

  while ( (c = getchar()) != EOF) {
    switch (c) {
      case '\n':
        nl++;
        break;
      case '\t':
        t++;
        break;
      case ' ':
        s++;
        break;
      case '0': case '1': case '2': case '3': case '4':
      case '5': case '6': case '7': case '8': case '9':
        digits[c-'0']++; /* c is an ascii character code */
    }
  }

  printf ("There were %d newlines!\n", nl);
  printf ("There were %d tabs!\n", t);
  printf ("There were %d spaces!\n", s);

  for (i=0; i<10; i++) {
    printf ("There were %d %ds!\n", digits[i], i);
  }

  return 0;
}
```

```
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ vi countlines.c
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ gcc -ansi -pedantic -Wall countlines.c
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$ ./a.out < countlines.c
There were 42 newlines!
There were 1 tabs!
There were 211 spaces!
There were 12 0s!
There were 4 1s!
There were 1 2s!
There were 1 3s!
There were 1 4s!
There were 1 5s!
There were 1 6s!
There were 1 7s!
There were 1 8s!
There were 1 9s!
faysal@DESKTOP-AOGE5FF:/mnt/c/Users/faysa/Dropbox/School/CSC220/Activity1$
```

codeflow.c

```
#include <stdio.h>

int main() {
  #define LOWER 1
  #define UPPER 50

  int i;
  int c = 0;

  while (c<LOWER || c>UPPER) {
    scanf("%d", &c);
  }

  for (i=0; i<=c; i++) {
    if ( (i%4 == 0) && (i%8 == 0) ) {
      printf ("%d:\tfffffseven\n", i);
    }
    else if (i%7 == 0) {
      printf ("%d:\tseven\n", i);
    }
    else if (i%4 == 0) {
      printf ("%d:\tffff \n", i);
    }
    else if (i%5 == 0) {
      printf ("%d:\t \n", i);
    }
    else {
      printf ("%d:\t%d\n", i, i);
    }
  }

  return 0;
}
```

```
6:      6
7:      seven
8:      ffffseven
9:      9
10:
11:     11
12:     ffff
13:     13
14:     seven
15:
16:     ffffseven
17:     17
18:     18
19:     19
20:     ffff
21:     seven
22:     22
23:     23
24:     ffffseven
25:
26:     26
27:     27
28:     seven
29:     29
30:
31:     31
32:     ffffseven
33:     33
34:     34
35:     seven
36:     ffff
37:     37
38:     38
39:     39
40:     ffffseven
41:     41
42:     seven
43:     43
44:     ffff
45:
46:     46
47:     47
48:     ffffseven
49:     seven
50:
```