**CSC3320 System Level Programming**

**Chapter 2**

**Lecture Note 1**

Instructor: Yuan Long

**1. Operations on groups**

**Note: some operations must be done as a super user.**

(1) List the groups for the current process

|  |
| --- |
| *$****groups***  *cs yuanlong adm dialout cdrom plugdev lpadmin admin sambashare* |

(2)List the group user ***yuanlong*** belongs to

|  |
| --- |
| *$****groups yuanlong*** |

(3) Create a new group ***cs***

|  |
| --- |
| ***$sudo groupadd cs*** |

(4) Create a new group ***music***

|  |
| --- |
| ***$sudo groupadd music*** |

(5) Crete subshell with effective group id = group

\* Assign user ***yuanlong***  to group ***music*** and ***cs***

|  |
| --- |
| ***$sudo usermod -G cs,music yuanlong*** |

\* Create subshell with effective group ***cs***

|  |
| --- |
| ***$ newgrp cs***  ***$ date>test1***  ***^D*** |

\* Create subshell with effective group ***music***

|  |
| --- |
| ***$ newgrp music***  ***$ date>test2***  ***^D***  ***$ ls -lg test1 test2***  -rw-rw-r-- 1 cs 29 Aug 23 13:57 test1  -rw-rw-r-- 1 music 29 Aug 23 13:57 test2 |

(6) Change the group a file belongs to

\* Assign test2 to group cs

|  |
| --- |
| ***$ sudo chgrp cs test2***  ***$ ls –lg test2***  -rw-rw-r-- 1 cs 29 Aug 23 13:58 test2 |

**2. File permission**

(1) List the long list information in current folder(If directory exists, just show the directory instead of contents)

*$ls  -ld \**

*drwxrwxr-x 3 ylong ylong 4096 2014-09-04 07:03 ch2*

*drwxrwxr-x 2 ylong ylong 4096 2014-09-02 10:57 ch4*

*-rw-rw-r-- 1 ylong ylong   32 2014-09-01 18:03 new\_test*

*-rw-rw-r-- 1 ylong ylong   22 2014-09-01 20:57 new\_test2*

*-rw-rw-r-- 1 ylong ylong   14 2014-09-02 10:51 test5*

(2) Change file permission with command chmod

*$cat>chmod1*

*this is chmod1*

*$chmod -R g+w chmod1*

*$chmod -R u-rw chmod1*

*$chmod -R 777 chmod1*

*$chmod -R 765 chmod1*

(3) Change file owner

*$sudo chown cs\_ylong chmod1*

**3. VI practice**

(1) Open Try.c by vi

(2) Move cursor to the beginning of “Error!”

(3) Insert “xxx”.

(4) Append a blank line after the current line.

(5) Delete “xxx”.

(6) Copy the first 2 lines, move cursor to the beginning of file, and then paste it after cursor

(7) Delete the first 2 lines

(8) Save it

(9) Replace all fptr with FPTR

(10) Save and exit.

(1) vi Try.c

(2) use UP DOWN LEFT RIGHT arrow to control cursor

(3) i

type “xxx”

(4) Esc to command mode

o

(5) Esc. move cursor to the beginning xxx, press x three times or press 3s to delete XXX

(6) :1,2y

:0

p

(7) :1,2d

(8) :w

(9) :1,$s/fptr/FPTR/g

(10) :wq

**//Try.c**

#include <stdio.h>

#include <stdlib.h>  /\* For exit() function \*/

int main(int argc, char \*argv[])

{

   FILE \*fptr;

   fptr=fopen("program.txt","a+");

   if(fptr==NULL){

      printf("Error!");

      exit(1);

   }

   fprintf(fptr,"program is written");

   printf("program is written in program.txt");

   fclose(fptr);

   return 0;

}