**CMPE-343: Systems Programming**

Experiments on Laboratory Works

**Introductory laboratory work for UNIX**

**Aims:**

Using some UNIX (Linux) commands

Analyzing command line parameters

EXPERIMENTS

1. Connect to UNIX (Linux) system and fix results of the following UNIX commands.

ls, ls-l, ls-la, rm, cp, mkdir, ps

1. Connect to UNIX (Linux) system. Then, using the text editor **pico** (or any other editor), input in your home directory and then create executable file, corresponding to the given C program below.

To compile and link the program, use the command line **gcc -o myprog myprog.c**.

/\* myprog.c \*/

#include  <stdio.h>
#include <stdlib.h>

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

     if  ( argc < 2 )
     {
 printf("Usage: %s parameters\n", argv[0]) ;
         exit (1) ;
     }

     printf("Starting program %s \n", argv[0] ) ;
     printf("Number of parameters \n", argc-1 ) ;

     for (i=1; i<argc; ++i)
         printf("argv[%d]: %s\n",i, argv[i]);

     exit ( 0 ) ;
**}**

Run this program for the given command lines below and fix results of each run.

1. ./myprog
2. ./myprog parameter1
3. ./myprog parameter1 parameter2
4. Using the text editor **pico** (or any other editor), input in your home directory and then create executable file, corresponding to the given C program below.

To compile and link the program, use the command line **gcc -o date date.c**.

/\* date.c\*/

#include  <stdio.h>
#include  <stdlib.h>

int main (int argc, char \*argv[])
{
     int day, year;
     /\* Program usage \*/
     if (argc != 3)
     {
 printf("Usage: %s <day> <year>\n", argv[0]);
         exit(1);
     }
     day = atoi(argv[1]); /\*  <stdlib.h> is necessary\*/
     year = atoi(argv[2]);

     printf("day=%d year=%d\n", day, year);
     exit(0);
**}**

Run this program for the given command lines below and fix results of each run.

1. ./date
2. ./date 26
3. ./date 26 2012
4. Write a C program for UNIX that will be executed with the given command line below. Your program will find summation of three parameters as integer and display all these integer numbers and summation. Do not forget to write usage of the program.

./sum 10 20 30

QUESTIONS

1. What is the meaning of two parameters of the function **main()** ?
2. Suppose that you started the program in Step 2 using two names of files. What will be the value of the parameter **argc** in the **main** function? What are **argv[0]**, **argv[1]** and **argv[2]** ?