Ex.No:3 C programs to simulate UNIX commands like cp, ls, grep.

Cp

1.Program for simulation of cp unix commands ALGORITHM:

STEP1: Start the program

STEP 2:Declare the variables ch, \*fp, sc=0

STEP3: Open the file in read mode

STEP 4: Get the character

STEP 5: If ch== “ “then increment sc value by one

STEP 6: Print no of spaces STEP 7:Close the file

PROGRAM:

#include<stdio.h>

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

{

FILE \*fp1,fp2;

fp1=fopen(argv[1],”r”);

fp2=fopen(argv[2],”w”);

If(!fp1 || !fp2 || argc!=3)

{

printf(“ error”);

}

char c;

while((c=fgetc(fp1))!=EOF)

{

fputc(c,fp2);

}

fclose(fp1);

fclose(fp2);

}

o/p:create Directory

Ex $mkdir venu

$cd venu

root/venu

$touch f1.txt f2.txt

Cat >>f2.txt

Os or unix lab

123

Abc

Ctrl+z

$gedit cp.c

1.Write the PROGRAM source code

2,compile gcc cp.c

./a.out f1.txt f2.txt

$cat f1.txt enter display copy of file f1.txt file fields

Os or unix lab

123

Abc

Ls program:

#include<stdio.h>

#include<dirent.h>

#include<stdlib.h>

int main()

{

char dirname[10];

DIR\*p;

struct dirent \*d;

printf("Enter directory name\n");

scanf("%s",dirname);

p=opendir(dirname);

if(p=NULL)

{

perror("Cannot find directory");

exit(-1);

}

while(d=readdir(p))

printf("%s\n",d->d\_name);

return 0;

}

o/p: gcc ls.c (mkdir venu,cd venu,mkdir os cd..)

./a.out

Enter Directory name

Venu

Sub folders also displayed

3. PROGRAM FOR SIMULATION OF GREP UNIX COMMANDS

ALGORITHM

STEP1: Start the program

STEP2: Declare the variables fline[max], count=0, occurrences=0 and pointers \*fp, \*newline.

STEP 3: Open the file in read mode.

STEP4: In while loop check fgets(fline,max,fp)!=NULL

STEP 5: Increment count value.

STEP 6: Check newline=strchr(fline, „\n‟)

STEP 7: print the count,fline value and increment the occurrence value.

STEP 8: Stop the program

**Program or source code**

#include<stdio.h>

#include<dirent.h>

int main() {

char fn[10], pat[10], temp[200];

FILE \*fp;

printf("\n Enter file name : ");

scanf("%s", fn);

printf("Enter the pattern: ");

scanf("%s", pat);

fp = fopen(fn, "r");

while (!feof(fp)) {

fgets(temp, sizeof(fp), fp);

if (strcmp(temp, pat))

printf("%s", temp);

}

fclose(fp);

return 1;

}

O/p:

$gcc grep.c –o grep

$./a.out or grep

Enter File name:grep.c

Enter the pattern:while

Display complete program (while loop)