OPERATING SYSTEMS LAB - PRACTICAL 2

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AIM -

Write a C program to simulate Directory management system calls of Linux
a) Create directory (mkdir comand)
b) List the number of files in current directory(ls command)
c) Navigate the directory (cd command)
d) Remove directory (rmdir command)

PROGRAM AND OUTPUT -

1.

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

int main(int argc, char *argv[]){
        int f;
```

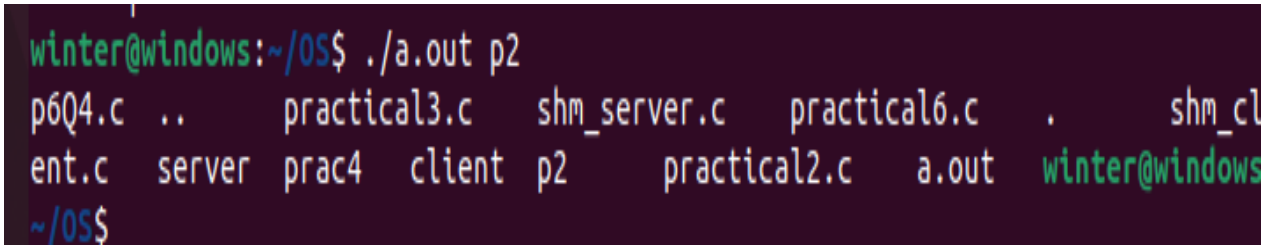
```
        f=mkdir(argv[1],0777);
        if(f==-1){
        printf("\nCannot create directory\n");
        exit(-1);
        }
        else{
        printf("\n Directory with name [%s] created",argv[1]);
        }
 return 0;
 }
```

```
winter@windows:~/OS$ gcc practical2.c
winter@windows:~/OS$ ./a.out p2

 Directory with name [p2] createdwinter@windows:~/OS$
```

2.

```
#include<stdio.h>
#include<sys/stat.h>
#include<sys/types.h>
#include<stdlib.h>
#include<unistd.h>
#include<dirent.h>
int main(int argc, char *argv[]){
        char cwd[1024];
        char dirname[10];
        DIR *p;
```

```
        struct dirent *d;
        if(getcwd(cwd,sizeof(cwd))!=NULL)
        fprintf("\nCurrent working directory is: %s\n",cwd);
        else
        perror("getcwd() error");
        p=opendir(cwd);
        if(p==NULL){
        perror("\n Cannot find directoy\n");
        exit(-1);
        }
        while(d=readdir(p)){
        printf("%s\t",d->d_name);

        }
        return 0;
}
```



3.

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

```
#include<unistd.h>
#include<dirent.h>
#define NAME_MAX 100
int main(int argc, char **argv){
	char buf[NAME_MAX];
	char *path=argv[1];
	if (chdir(path)==-1){
	fprintf(stderr,"\nerror: could not change to dir
[%s]\n",path);
	return 1;
	}
	getcwd(buf,NAME_MAX);
	printf("\n CWD is [%s]\n",buf);
	return 0;
}
```

```
winter@windows:~/OS$ ./a.out p2

 CWD is [/home/winter/OS/p2]
winter@windows:~/OS$
```

4.

```
int main(int argc, char *argv[]){
	int f;
	f=rmdir(argv[1]);
	if(f==-1){
	printf("\nCannot remove directory\n");
```

```
        exit(-1);
        }
        else{
        printf("\nDirectory removed\n");
        }
        return 0;
}
```

```
winter@windows:~/OS$ gcc practical2.c
winter@windows:~/OS$ ./a.out p2

Directory removed
winter@windows:~/OS$
```

RESULT -

Directory management system calls of Linux has been studied and C programs on them has been implemented.