

Day:7/01/2022

usp lab

1. Perform reverse reading of a file by using lseek API

```
#include <fcntl.h>
#include <stdlib.h>
#include <sys/stat.h>
#include <unistd.h>

int main(int argc, char *argv[]) {
    char buf;
    int fd, size;
    fd = open(argv[1], O_RDONLY);
    size = lseek(fd, -1, SEEK_END);
    while (size-- >= 0) {
        read(fd, &buf, 1);
        write(STDOUT_FILENO, &buf, 1);
        lseek(fd, -2, SEEK_CUR);
    }
    return 0;
}
```

2. Program to emulate ls-l command using appropriate API

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

int main(int argc, char *argv[]) {
    struct stat statbuf;
    // statbuf is from sys/stat.h
    if (lstat(argv[1], &statbuf) == -1) {
        printf("Couldn't stat file!\n");
        exit(0);
    }
    printf("File: %s\n", argv[1]);
    printf("UID : %d\n", statbuf.st_uid);
    printf((S_ISDIR(statbuf.st_mode)) ? "File is a directory\n" : "");
    printf("GID : %d\n", statbuf.st_gid);

    printf("Type and permission : %o\n", statbuf.st_mode);
    printf("No of links : %d\n", statbuf.st_nlink);
    printf("Inode no : %d\n", statbuf.st_ino);

    exit(0);
}
```

```
today is friday
^C
srishti@DESKTOP-8U2GMHR:~$ cat random.txt
hi how are you
today is friday
srishti@DESKTOP-8U2GMHR:~$ ./lseek random.txt
-bash: ./lseek: No such file or directory
srishti@DESKTOP-8U2GMHR:~$ sh lseek random.txt
sh: 0: Can't open lseek
srishti@DESKTOP-8U2GMHR:~$ sh lseek.cpp random.txt
lseek.cpp: 5: Syntax error: "(" unexpected
srishti@DESKTOP-8U2GMHR:~$ vi lseek.cpp
srishti@DESKTOP-8U2GMHR:~$ vi lseek.cpp
srishti@DESKTOP-8U2GMHR:~$ sh lseek.cpp random.txt
lseek.cpp: 5: Syntax error: "(" unexpected
srishti@DESKTOP-8U2GMHR:~$ vi lseek.cpp
srishti@DESKTOP-8U2GMHR:~$ sh lseek.cpp random.txt
lseek.cpp: 5: Syntax error: "(" unexpected
srishti@DESKTOP-8U2GMHR:~$ vi lseek.cpp
srishti@DESKTOP-8U2GMHR:~$ g++ lseek.cpp -o lseekoutput
srishti@DESKTOP-8U2GMHR:~$ ./lseekoutput random.txt

yadirf si yadot
uoy era woh ihsrishti@DESKTOP-8U2GMHR:~$ cat random.txt
hi how are you
today is friday
srishti@DESKTOP-8U2GMHR:~$ ./lseekoutput random.txt

yadirf si yadot
```