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Batch: C

Exp.No: 6

Aim: UPDATE ON FILE FOR SIMULTANEOUS READ AND WRITE

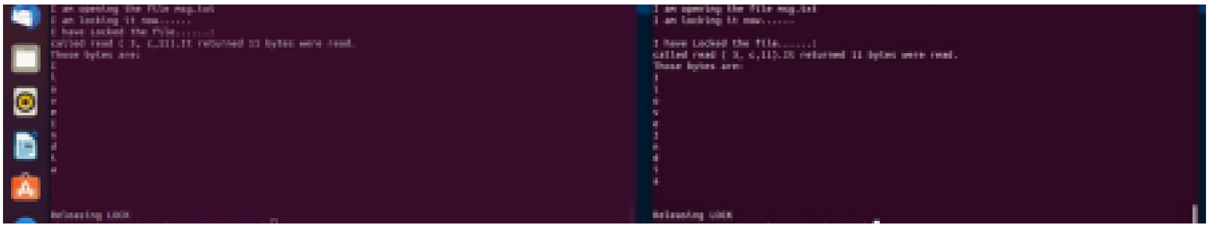
Program :

```
#include<fcntl.h>

#include <stdio.h>

#include<stdlib.h>

#include <string.h>

#include <unistd.h>

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

        char* file=argv[1];

        int fd,sz;


        char *c=(char *)calloc(100,sizeof(char));

        struct flock lock;


        printf ("I am opening the file %s\n", file);fd = open (file, O_RDWR);

        printf ("I am locking it now......\n");


        memset (&lock, 0, sizeof(lock));

        lock.l_type = F_RDLCK;
        fcntl(fd,F_SETLKW, &lock); // I have set the lock.


        printf ("I have Locked the file......:\n");

        sz=read(fd,c,11);
```

```
    printf("called read (% d, c,11).It returned %d bytes were
    read.\n",fd,sz); c[sz]='\0';

    printf("Those bytes are:\n");
    for(int i=0;i<11;i++) {
            printf("%c \n",c[i]);
            sleep(2);
    }

    getchar();
    //I need to release the lock.

    printf("Releasing LOCK\n");
    lock.l_type = F_UNLCK;
    fcntl(fd, F_SETLKW, &lock);
    close (fd);
    return 0;
}
```

Output:

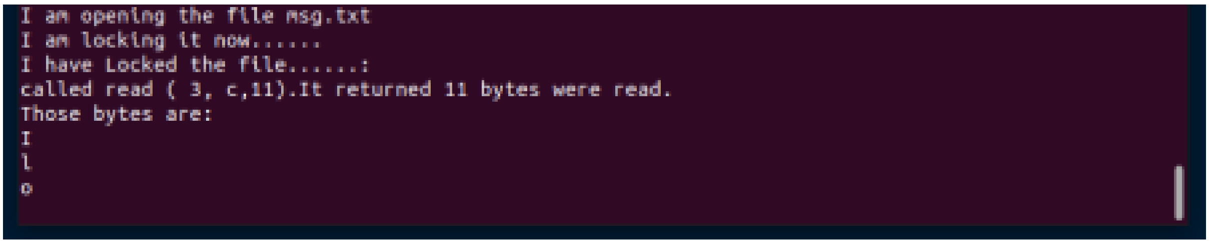
CASE 1) WHEN LOCK IS SET TO WRITE LOCK:



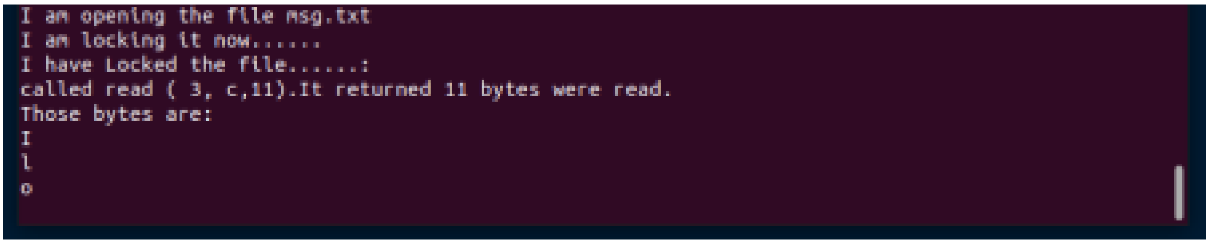
```
I am opening the file msg.txt
I am locking it now......
I have Locked the file......:
called read ( 3, c,11).It returned 11 bytes were read.
Those bytes are:
[illegible]
Releasing LOCK
```

```
I am opening the file msg.txt
I am locking it now......

I have Locked the file......:
called read ( 3, c,11).It returned 11 bytes were read.
Those bytes are:
[illegible]

Releasing LOCK
```

CASE 2) WHEN LOCK IS SET TO READ LOCK:



```
I am opening the file msg.txt
I am locking it now......
I have Locked the file......:
called read ( 3, c,11).It returned 11 bytes were read.
Those bytes are:
I
l
o
```



```
I am opening the file msg.txt
I am locking it now......
I have Locked the file......:
called read ( 3, c,11).It returned 11 bytes were read.
Those bytes are:
I
l
o
```

CONCLUSION:

Hence, we successfully written a program that will prevent destructive update of files by locking.