

SPOT EXERCISE:

LAB05

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2019103562

1.

```
[s2019103562@centos8-linux Mon Mar 15 12:06 PM ~]$ vim testq1.c
[s2019103562@centos8-linux Mon Mar 15 12:06 PM ~]$ gcc testq1.c -o testq1
[s2019103562@centos8-linux Mon Mar 15 12:06 PM ~]$ ./testq1
exam.txt
exex.txt
EXP.txt
[s2019103562@centos8-linux Mon Mar 15 12:06 PM ~]$ cat testq1.c
#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>
#include<dirent.h>
int main(){
    struct dirent* direntp;
    DIR* dp;
    dp=opendir("lab01");
    if(dp==NULL)
        printf("Can't open the directory\n");
    char* ptr;
    for(;;){
        direntp=readdir(dp);
        if(direntp==NULL)
            break;
        else{
            ptr=direntp->d_name;
            if((ptr[0]=='E' && ptr[1]=='X') || (ptr[0]=='e' && ptr[1]=='x'))
                printf("%s\n",ptr);
        }
    }
    closedir(dp);
    return 0;
}
[s2019103562@centos8-linux Mon Mar 15 12:07 PM ~]$
```

2.

```
[s2019103562@centos8-linux Mon Mar 15 12:01 PM ~]$ vim fstat.c
[s2019103562@centos8-linux Mon Mar 15 12:02 PM ~]$ gcc fstat.c -o fstat
[s2019103562@centos8-linux Mon Mar 15 12:02 PM ~]$ ./fstat testq1.c
Information of the file:
File size:0
Number of links:1
File inode:89
rw--w----
Not a symbolic link
```

```
[s2019103562@centos8-linux Mon Mar 15 12:02 PM ~]$ cat fstat.c
#include<stdio.h>
#include<stdlib.h>
#include<sys/types.h>
#include<sys/stat.h>
#include<unistd.h>
#include<fcntl.h>
int main(int argc,char* argv[]){
    int fd=0;
    if(fd=open(argv[1],O_RDONLY)==-1){
        printf("Error in opening the file\n");
        return 0;
    }
    struct stat buf;
    if(fstat(fd,&buf)<0){
        printf("Error\n");
        return 0;
    }
    printf("Information of the file:\n");
    printf("File size:%ld\n",buf.st_size);
    printf("Number of links:%ld\n",buf.st_nlink);
    printf("File inode:%ld\n",buf.st_ino);
    printf((buf.st_mode & S_IRUSR) ? "r" : "-");
    printf((buf.st_mode & S_IWUSR) ? "w" : "-");
    printf((buf.st_mode & S_IXUSR) ? "x" : "-");
    printf((buf.st_mode & S_IRGRP) ? "r" : "-");
    printf((buf.st_mode & S_IWGRP) ? "w" : "-");
    printf((buf.st_mode & S_IXGRP) ? "x" : "-");
    printf((buf.st_mode & S_IROTH) ? "r" : "-");
    printf((buf.st_mode & S_IWOTH) ? "w" : "-");
    printf((buf.st_mode & S_IXOTH) ? "x" : "-");
    printf("\n");
    if(S_ISLNK(buf.st_mode))
        printf("The file is a symbolic link\n");
    else
        printf("Not a symbolic link\n");
    return 0;
}
```

```
[s2019103562@centos8-linux Mon Mar 15 12:02 PM ~]$
```

Lstat();

```
[s2019103562@centos8-linux Mon Mar 15 12:17 PM ~]$ gcc lstat.c -o lstat
[s2019103562@centos8-linux Mon Mar 15 12:17 PM ~]$ ./lstat rewinddir.c
rewinddir.c is not a symbolic link
The size of the file:629
rw-r--r--
Number of links:1
File inode:537326781
[s2019103562@centos8-linux Mon Mar 15 12:17 PM ~]$ cat lstat.c
```

```
[s2019103562@centos8-linux Mon Mar 15 12:17 PM ~]$ cat lstat.c
#include<stdio.h>
#include<stdlib.h>
#include<sys/stat.h>
#include<sys/types.h>
#include<unistd.h>
int main(int argc,char* argv[]){
    int n;
    struct stat buf;
    for(n=1;n<argc;n++){
        if(lstat(argv[n],&buf)==-1){
            printf("Error in accessing the file\n");
            return 0;
        }
        if(S_ISLNK(buf.st_mode))
            printf("%s is a symbolic link\n",argv[n]);
        else
            printf("%s is not a symbolic link\n",argv[n]);
        printf("The size of the file:%d\n",buf.st_size);
        printf((S_IRUSR & buf.st_mode) ? "r" : "-");
        printf((S_IWUSR & buf.st_mode) ? "w" : "-");
        printf((S_IXUSR & buf.st_mode) ? "x" : "-");
        printf((S_IRGRP & buf.st_mode) ? "r" : "-");
        printf((S_IWGRP & buf.st_mode) ? "w" : "-");
        printf((S_IXGRP & buf.st_mode) ? "x" : "-");
        printf((S_IROTH & buf.st_mode) ? "r" : "-");
        printf((S_IWOTH & buf.st_mode) ? "w" : "-");
        printf((S_IXOTH & buf.st_mode) ? "x" : "-");
        printf("\n");
        printf("Number of links:%d\n",buf.st_nlink);
        printf("File inode:%d\n",buf.st_ino);
    }
    return 0;
}
```

```
[s2019103562@centos8-linux Mon Mar 15 12:17 PM ~]$
```
