**EXPERIMENT – 40**

40. Illustrate the various File Access Permission and different types users in Linux.

#include <stdio.h>

#include <sys/stat.h>

#include <stdlib.h>

void print\_permissions(mode\_t mode) {

printf("User: ");

printf((mode & S\_IRUSR) ? "r" : "-");

printf((mode & S\_IWUSR) ? "w" : "-");

printf((mode & S\_IXUSR) ? "x" : "-");

printf("\nGroup: ");

printf((mode & S\_IRGRP) ? "r" : "-");

printf((mode & S\_IWGRP) ? "w" : "-");

printf((mode & S\_IXGRP) ? "x" : "-");

printf("\nOthers: ");

printf((mode & S\_IROTH) ? "r" : "-");

printf((mode & S\_IWOTH) ? "w" : "-");

printf((mode & S\_IXOTH) ? "x" : "-");

printf("\n");

}

int main() {

char filename[100];

struct stat fileStat;

printf("Enter the filename: ");

scanf("%s", filename);

if (stat(filename, &fileStat) < 0) {

perror("Error accessing file");

return 1;

}

printf("\nFile: %s\n", filename);

printf("File Size: %ld bytes\n", fileStat.st\_size);

printf("Owner UID: %d\n", fileStat.st\_uid);

printf("Group GID: %d\n", fileStat.st\_gid);

printf("\nPermissions:\n");

print\_permissions(fileStat.st\_mode);

return 0;

}

SAMPLE INPUT:

Enter the filename: example.txt

SAMPLE OUTPUT:

File: example.txt

File Size: 47 bytes

Owner UID: 1000

Group GID: 1000

Permissions:

User: rw-

Group: r--

Others: r--