Experiment-27: Develop a C program for simulating the function of ls UNIX Command.

**Aim:**  
To simulate the function is UNIX command

**Procedure:**

1. Take the number of disk requests, the initial position of the disk head, and the direction of movement (left or right) as input.
2. Sort the disk requests to handle them in the direction of the disk head movement.
3. Simulate the SCAN algorithm by processing the requests in the current direction until the end of the disk, then reverse the direction.
4. Calculate and display the seek sequence and total seek time.

**C Program:**

#include <stdio.h>

#include <stdlib.h>

#include <dirent.h>

#include <string.h>

void list\_files(const char \*path) {

struct dirent \*entry;

DIR \*dp = opendir(path);

if (dp == NULL) {

perror("opendir");

return;

}

while ((entry = readdir(dp)) != NULL) {

// Skip "." and ".."

if (strcmp(entry->d\_name, ".") != 0 && strcmp(entry->d\_name, "..") != 0) {

printf("%s\n", entry->d\_name);

}

}

closedir(dp);

}

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

char \*path;

if (argc > 2) {

fprintf(stderr, "Usage: %s [directory]\n", argv[0]);

exit(EXIT\_FAILURE);

}

// Default to current directory if no argument is provided

path = (argc == 2) ? argv[1] : ".";

printf("Listing files in directory: %s\n\n", path);

list\_files(path);

return 0;

}

Input:

./simulate\_ls /home/user

Output:

