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

Aim:

The aim of this C program is to simulate the functionality of the `ls` command in UNIX. The program lists the files and directories in the current directory or specified directory.

Algorithm:

1. Take an optional directory path as input. If no directory is specified, use the current directory.
2. Use the `opendir` function to open the directory.
3. Use the `readdir` function to read each entry in the directory.
4. Print the names of the files and directories.
5. Close the directory using `closedir`.

Procedure:

1. Include necessary headers (`stdio.h`, `dirent.h`, `stdlib.h`).
2. Open the directory using `opendir`.
3. Read the directory entries using `readdir`.
4. Print the filenames of the directory entries.
5. Close the directory after reading.

Code:

```
#include <stdio.h>

#include <stdlib.h>

#include <dirent.h>



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

   DIR *dir;

   struct dirent *entry;

   char *path = (argc > 1) ? argv[1] : ".";
```

```
    dir = opendir(path);
    if (dir == NULL) {
        perror("opendir");
        return 1;
    }

    while ((entry = readdir(dir)) != NULL) {
        printf("%s\n", entry->d_name);
    }

    closedir(dir);
    return 0;
}
```

Result:

Running the program would output a list of filenames and directories in the current directory or specified directory.

Output: