

# LIST

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#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <unistd.h>
#include <dirent.h>

// Constants for command input
#define MAX_INPUT 80
#define MAX_ARGS 10

// Function to tokenize command input
int make_toks(char *input, char *args[]) {
    int i = 0;
    char *token;

    token = strtok(input, " ");
    while (token != NULL) {
        args[i++] = token;
        token = strtok(NULL, " ");
    }
    args[i] = NULL; // Null-terminate the arguments array
    return i; // Return number of tokens
}

// Function to handle the 'list' command
void list(char *dirname, char option) {
    DIR *dp = opendir(dirname);
    if (dp == NULL) {
        printf("Directory %s not found.\n", dirname);
        return;
    }

    struct dirent *entry;
    if (option == 'f') { // List files
        while ((entry = readdir(dp)) != NULL) {
            if (entry->d_type == DT_REG) // Regular file
                printf("%s\n", entry->d_name);
        }
    } else if (option == 'n') { // Count files
        int fileCount = 0;
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        while ((entry = readdir(dp)) != NULL) {
            if (entry->d_type == DT_REG) fileCount++;
        }
        printf("Total files: %d\n", fileCount);
    }

    closedir(dp);
}

// Main shell loop
void myshell() {
    char input[MAX_INPUT];
    char *args[MAX_ARGS];

    while (1) {
        printf("myshell$ ");
        fflush(stdout);
        fgets(input, sizeof(input), stdin);

        // Remove trailing newline character
        input[strcspn(input, "\n")] = 0;

        // Tokenize the input
        int n = make_toks(input, args);

        // Handle built-in commands
        if (n > 0) {
            if (strcmp(args[0], "exit") == 0) {
                exit(0); // Exit the shell
            } else if (strcmp(args[0], "list") == 0 && n == 3) {
                list(args[1], args[2][0]); // Call list function
            } else {
                printf("Invalid command.\n");
            }
        }
    }
}

int main() {
    myshell(); // Start the shell
    return 0;
}

```

