Name – Harshit

MIS – 112316018

OS lab

Assignment 3

1. Using cp

Code:  
#include <stdio.h>

#include <stdlib.h>

void copyFile(const char \*source, const char \*destination) {

    FILE \*src = fopen(source, "r");

    if (src == NULL) {

        perror("Error opening source file");

        exit(1);

    }

    FILE \*dest = fopen(destination, "w");

    if (dest == NULL) {

        perror("Error opening destination file");

        fclose(src);

        exit(1);

    }

    char ch;

    while ((ch = fgetc(src)) != EOF) {

        fputc(ch, dest);

    }

    printf("File copied successfully.\n");

    fclose(src);

    fclose(dest);

}

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

    if (argc != 3) {

        printf("Usage: %s <source\_file> <destination\_file>\n", argv[0]);

        return 1;

    }

    copyFile(argv[1], argv[2]);

    return 0;

}

Output:



1. Using ls

Code:

#include <stdio.h>

#include <stdlib.h>

#include <dirent.h>

void listFiles(const char \*path) {

    struct dirent \*entry;

    DIR \*dir = opendir(path);

    if (dir == NULL) {

        perror("Error opening directory");

        exit(1);

    }

    printf("Files in directory '%s':\n", path);

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

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

    }

    closedir(dir);

}

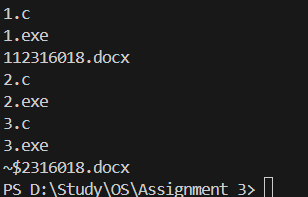
int main(int argc, char \*argv[]) {

    const char \*path = (argc == 2) ? argv[1] : ".";

    listFiles(path);

    return 0;

}

Output:  


1. Using grep

Code:  
#include <stdio.h>

#include <stdlib.h>

#include <string.h>

void grepFile(const char \*filename, const char \*searchTerm) {

    FILE \*file = fopen(filename, "r");

    if (file == NULL) {

        perror("Error opening file");

        exit(1);

    }

    char line[1024];

    int lineNumber = 0;

    while (fgets(line, sizeof(line), file)) {

        lineNumber++;

        if (strstr(line, searchTerm)) {

            printf("Line %d: %s", lineNumber, line);

        }

    }

    fclose(file);

}

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

    if (argc != 3) {

        printf("Usage: %s <filename> <search\_term>\n", argv[0]);

        return 1;

    }

    grepFile(argv[1], argv[2]);

    return 0;

}

Output:

