

LAPORAN PRAKTIKUM SISTEM OPERASI

MODUL 10: SIMULASI COMMAND



Disusun oleh:

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PROGRAM STUDI TEKNIK INFORMATIKA

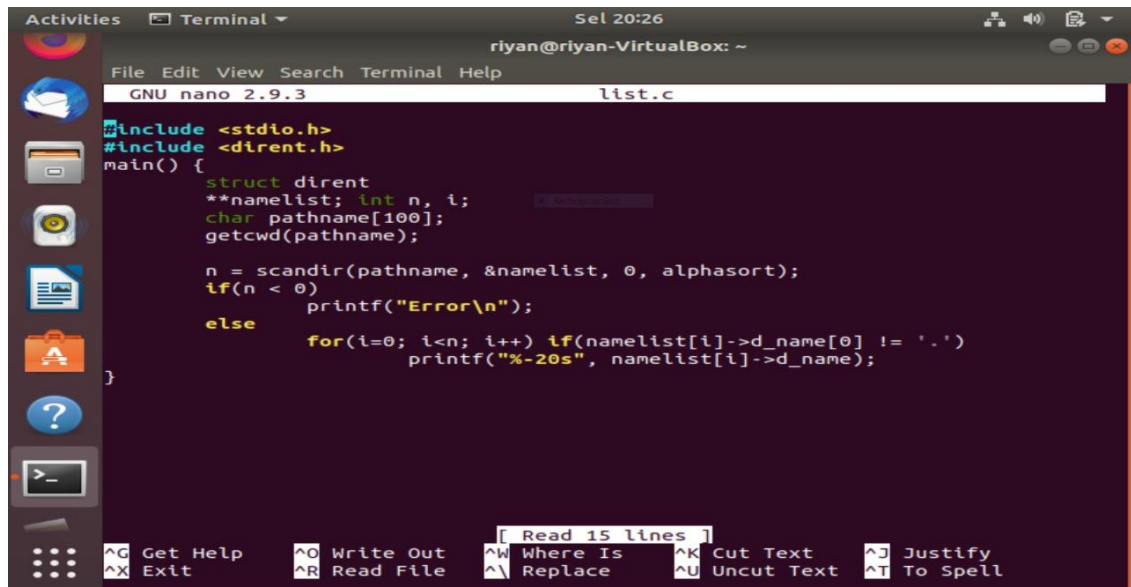
FAKULTAS KOMUNIKASI DAN INFORMATIKA

UNIVERSITAS MUHAMMADIYAH SURAKARTA TAHUN 2022/2023

LANGKAH KERJA

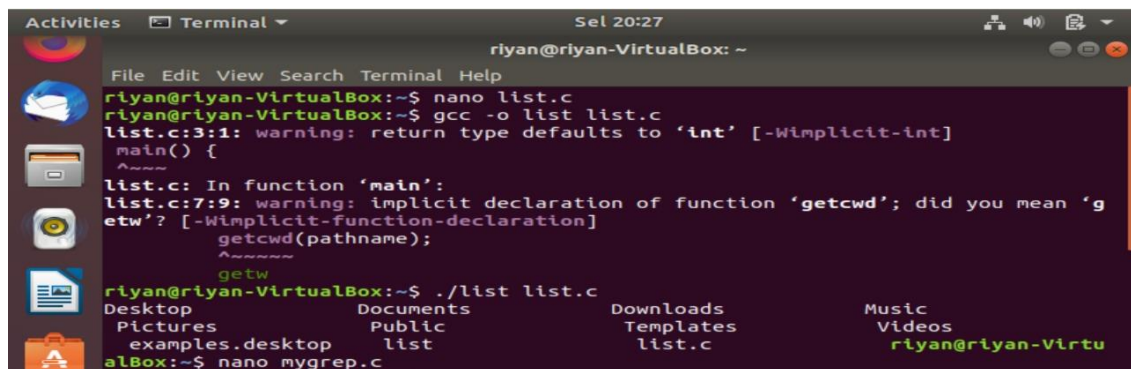
1. Program untuk mensimulasi perintah 'ls'.

Membuat kode program dengan algorithm sebagai berikut:



```
GNU nano 2.9.3 list.c
#include <stdio.h>
#include <dirent.h>
main() {
    struct dirent
    **namelist; int n, i;
    char pathname[100];
    getcwd(pathname);

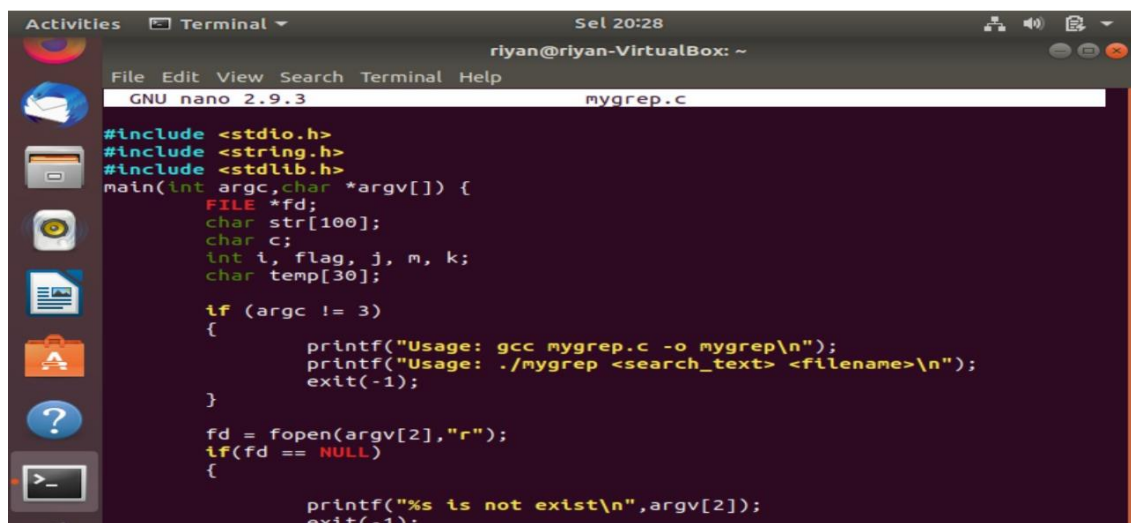
    n = scandir(pathname, &namelist, 0, alphasort);
    if(n < 0)
        printf("Error\n");
    else
        for(i=0; i<n; i++) if(namelist[i]->d_name[0] != '.')
            printf("%-20s", namelist[i]->d_name);
}
```



```
riyan@riyan-VirtualBox:~$ nano list.c
riyan@riyan-VirtualBox:~$ gcc -o list list.c
list.c:3:1: warning: return type defaults to 'int' [-Wimplicit-int]
main() {
^~~~~~
list.c: In function 'main':
list.c:7:9: warning: implicit declaration of function 'getcwd'; did you mean 'getw' [-Wimplicit-function-declaration]
    getcwd(pathname);
    ^~~~~~
riyan@riyan-VirtualBox:~$ ./list list.c
Desktop          Documents        Downloads        Music
Pictures         Public          Templates       Videos
examples.desktop list             list.c          riyan@riyan-Virtu
alBox:~$ nano mygrep.c
```

2. Program untuk mensimulasi perintah 'grep'.

Membuat kode program dengan algorithm sebagai berikut:



```
GNU nano 2.9.3 mygrep.c
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
main(int argc, char *argv[]) {
    FILE *fd;
    char str[100];
    char c;
    int i, flag, j, m, k;
    char temp[30];

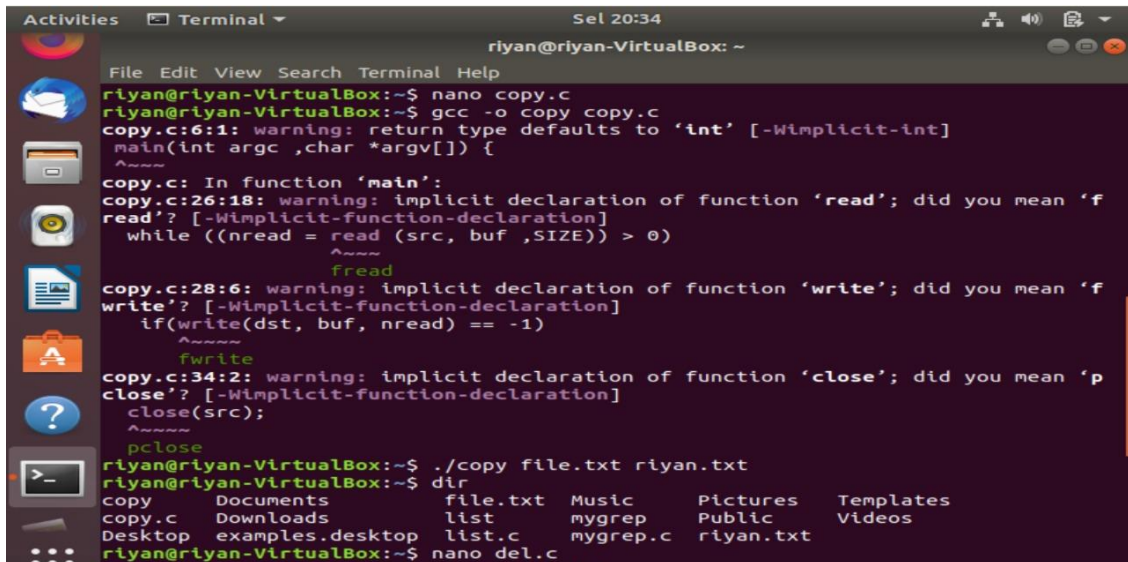
    if (argc != 3)
    {
        printf("Usage: gcc mygrep.c -o mygrep\n");
        printf("Usage: ./mygrep <search_text> <filename>\n");
        exit(-1);
    }

    fd = fopen(argv[2], "r");
    if(fd == NULL)
    {
        printf("%s is not exist\n", argv[2]);
        exit(-1);
    }
}
```



```
        exit(-1);
    }
    while ((nread = read (src, buf ,SIZE)) > 0)
    {
        if(write(dst, buf, nread) == -1)
        {
            printf("can't write\n");
            exit(-1);
        }
    }
}
```

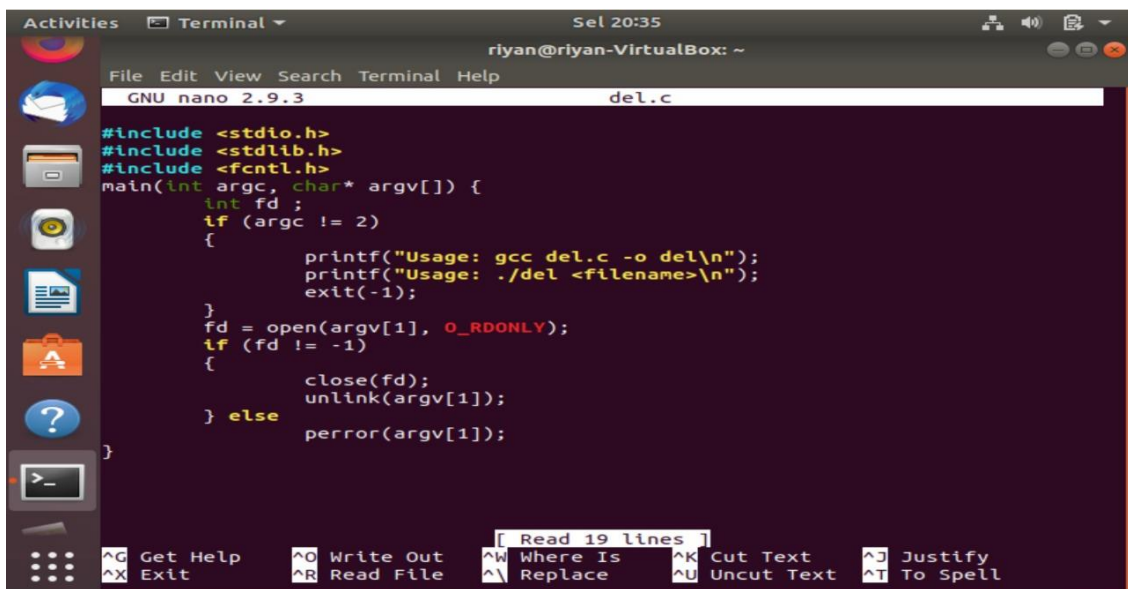
```
    }
    close(src);
    close(dst);
}
```



```
Activities Terminal Sel 20:34
riyan@riyan-VirtualBox: ~
File Edit View Search Terminal Help
riyan@riyan-VirtualBox:~$ nano copy.c
riyan@riyan-VirtualBox:~$ gcc -o copy copy.c
copy.c:6:1: warning: return type defaults to 'int' [-Wimplicit-int]
main(int argc ,char *argv[]) {
^~~~~
copy.c: In function 'main':
copy.c:26:18: warning: implicit declaration of function 'read'; did you mean 'f
read'? [-Wimplicit-function-declaration]
    while ((nread = read (src, buf ,SIZE)) > 0)
                   ^~~~~
copy.c:28:6: warning: implicit declaration of function 'write'; did you mean 'f
write'? [-Wimplicit-function-declaration]
    if(write(dst, buf, nread) == -1)
       ^~~~~
copy.c:34:2: warning: implicit declaration of function 'close'; did you mean 'p
close'? [-Wimplicit-function-declaration]
    close(src);
    ^~~~~
copy.c:34:2: warning: implicit declaration of function 'pclose'
riyan@riyan-VirtualBox:~$ ./copy file.txt riyan.txt
riyan@riyan-VirtualBox:~$ dir
copy  Documents  file.txt  Music  Pictures  Templates
copy.c  Downloads  list     mygrep  Public    Videos
Desktop  examples.desktop  list.c  mygrep.c  riyan.txt
riyan@riyan-VirtualBox:~$ nano del.c
```

4. Program untuk mensimulasi perintah 'rm'.

Membuat kode program dengan algorithm sebagai berikut:



```
Activities Terminal Sel 20:35
riyan@riyan-VirtualBox: ~
File Edit View Search Terminal Help
GNU nano 2.9.3 del.c
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>
main(int argc, char* argv[]) {
    int fd ;
    if (argc != 2)
    {
        printf("Usage: gcc del.c -o del\n");
        printf("Usage: ./del <filename>\n");
        exit(-1);
    }
    fd = open(argv[1], O_RDONLY);
    if (fd != -1)
    {
        close(fd);
        unlink(argv[1]);
    } else
        perror(argv[1]);
}

[ Read 19 lines ]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^_ Replace ^U Uncut Text ^T To Spell
```

```
Desktop  examples.desktop  list.c  mygrep.c  riyan.txt
riyan@riyan-VirtualBox:~$ nano del.c
riyan@riyan-VirtualBox:~$ gcc -o del del.c
del.c:4:1: warning: return type defaults to 'int' [-Wimplicit-int]
main(int argc, char* argv[]) {
~~~~~
del.c: In function 'main':
del.c:15:3: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
close(fd);
~~~~~
pclose
del.c:16:3: warning: implicit declaration of function 'unlink'; did you mean 'unix'? [-Wimplicit-function-declaration]
unlink(argv[1]);
~~~~~
unix
riyan@riyan-VirtualBox:~$ ./del riyan.txt
riyan@riyan-VirtualBox:~$ dir
copy    del.c    Downloads    list    mygrep    Public
copy.c  Desktop    examples.desktop  list.c  mygrep.c  Templates
del     Documents  file.txt    Music   Pictures  Videos
riyan@riyan-VirtualBox:~$ nano copy.c
```