

PRAKTIKUM SISTEM OPERASI
MODUL 10



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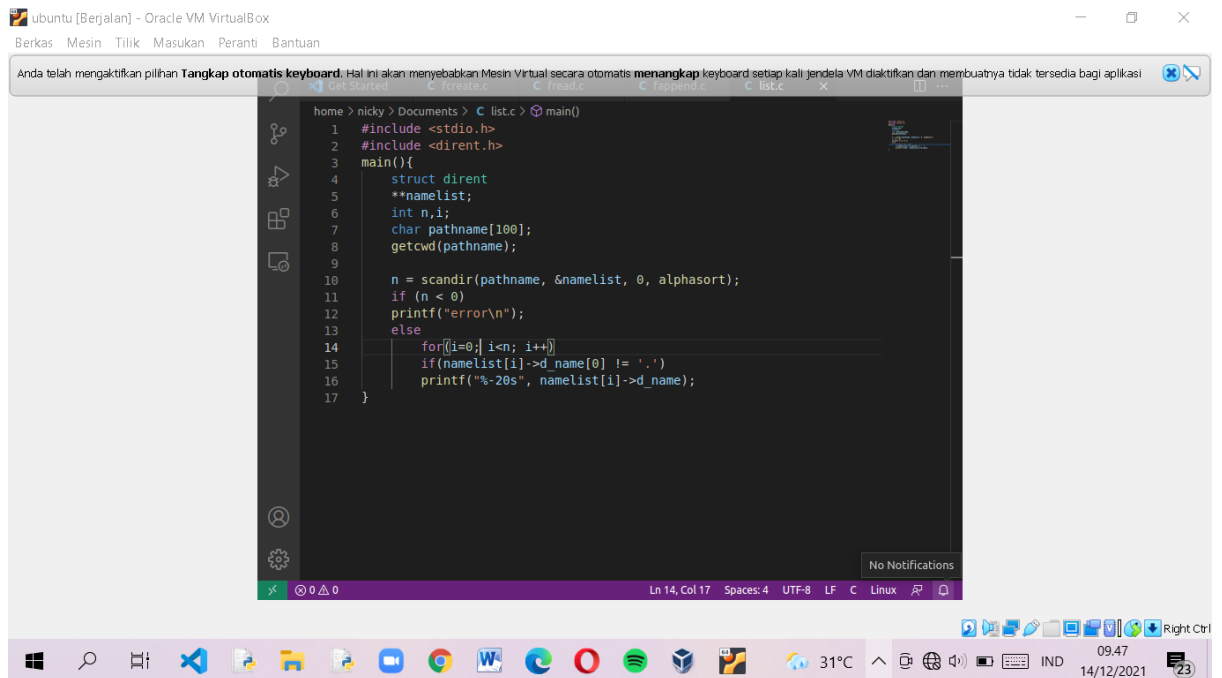
NIM : L200200101

PROGRAM STUDI
INFORMATIKA

FAKULTAS KOMUNIKASI DAN INFORMATIKA
UNIVERSITAS MUHAMMADIYAH SURAKARTA
TAHUN 2021/2022

1. Program untuk mensimulasi perintah 'ls'

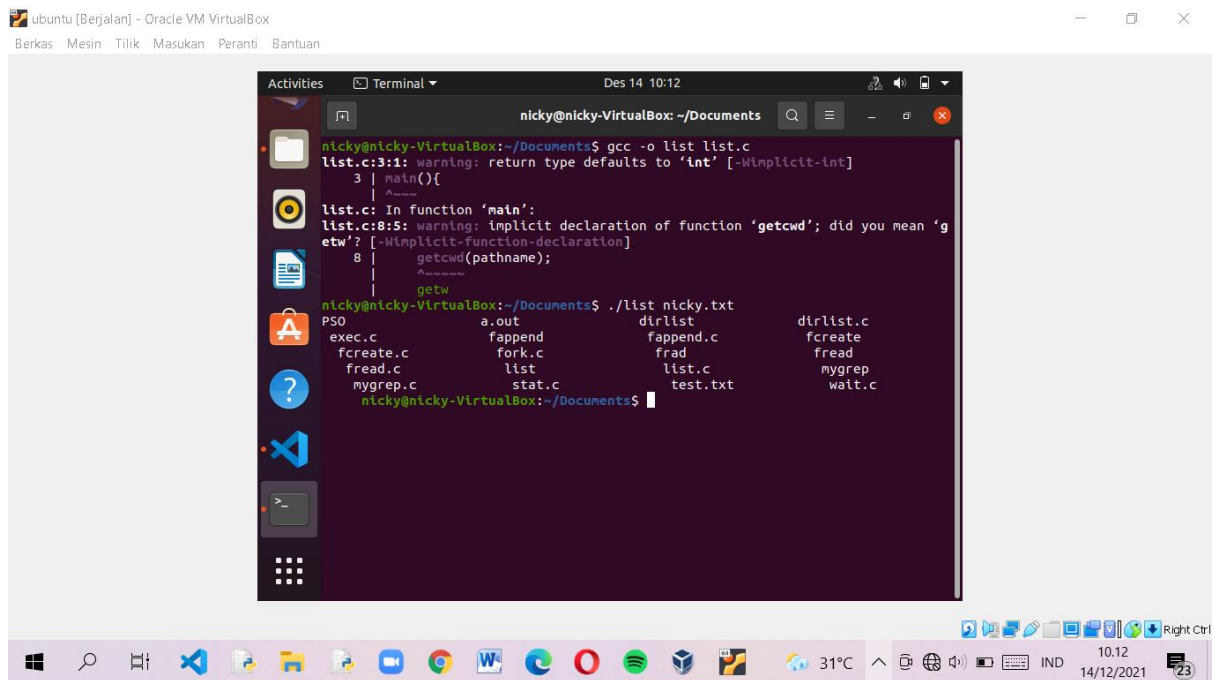
- Kode program *list.c*



The screenshot shows a code editor window titled 'ubuntu [Berjalan] - Oracle VM VirtualBox'. The code is for a program named *list.c* that simulates the 'ls' command. The code is as follows:

```
1 #include <stdio.h>
2 #include <dirent.h>
3 main()
4 {
5     struct dirent
6     **namelist;
7     int n,i;
8     char pathname[100];
9     getcwd(pathname);
10
11     n = scandir(pathname, &namelist, 0, alphasort);
12     if (n < 0)
13         printf("error\n");
14     else
15         for(i=0; i<n; i++)
16             if(namelist[i]->d_name[0] != '.')
17                 printf("%-20s", namelist[i]->d_name);
```

- Running code lewat terminal



The screenshot shows a terminal window titled 'Activities' with the prompt 'nicky@nicky-VirtualBox: ~/Documents'. The user has compiled the program using `gcc -o list list.c`. The output shows warnings about the return type of `main` and the implicit declaration of `getcwd`. The user then runs the program with `./list nicky.txt`, which displays a list of files and directories in the current directory.

```
nicky@nicky-VirtualBox:~/Documents$ gcc -o list list.c
list.c:3:1: warning: return type defaults to 'int' [-Wimplicit-int]
3 | main(){
  | ^~~~~~
list.c: In function 'main':
list.c:8:5: warning: implicit declaration of function 'getcwd'; did you mean 'getw'? [-Wimplicit-function-declaration]
8 |     getcwd(pathname);
  |     ^~~~~~
nicky@nicky-VirtualBox:~/Documents$ ./list nicky.txt
a.out      dirlist      dirlist.c
exec.c     fappend.c   fappend.c
fcreate.c  fork.c      frad        fread
fread.c    list        list.c      mygrep
mygrep.c   stat.c      test.txt   wait.c
nicky@nicky-VirtualBox:~/Documents$
```

2. Program untuk mensimulasi perintah 'grep'

- Kode program *mygrep.c*

et Started C fcreate.c C fread.c C fappend.c C list.c C mygrep.c x ...

```
home > nicky > Documents > C mygrep.c > main(int, char * [])
1 #include <stdio.h>
2 #include <string.h>
3 #include <stdlib.h>
4 main(int argc, char *argv[]){
5     FILE *fd;
6     char str[100];
7     char c;
8     int i, flag, j, m, k;
9     char temp[30];
10
11     if (argc != 3){
12         printf("Usage : gcc mygrep.c -o mygrep\n");
13         printf("Usage : ./mygrep <search_text> <filename>\n");
14         exit(-1);
15     }
16
17     fd = fopen(argv[2], "r");
18     if(fd == NULL){
19         printf("%s is not exist\n", argv[2]);
20         exit(-1);
21     }
22
23     while(!feof(fd)){
24         i = 0;
25         while(1){
26             c = fgetc(fd);
27             if(feof(fd)){
28                 printf("%s\n", str);
29                 break;
30             }
31             str[i++] = c;
32         }
33
34         if(strlen(str) >= strlen(argv[1])){
35             for(k=0; k<=strlen(str)-strlen(argv[1]); k++){
36                 for(m=0; m<strlen(argv[1]); m++){
37                     temp[m] = str[k+m];
38                     temp[m] = '\0';
39                     if(strcmp(temp, argv[1]) == 0){
40                         printf("%s\n", str);
41                         break;
42                     }
43                 }
44             }
45         }
46     }
47 }
```

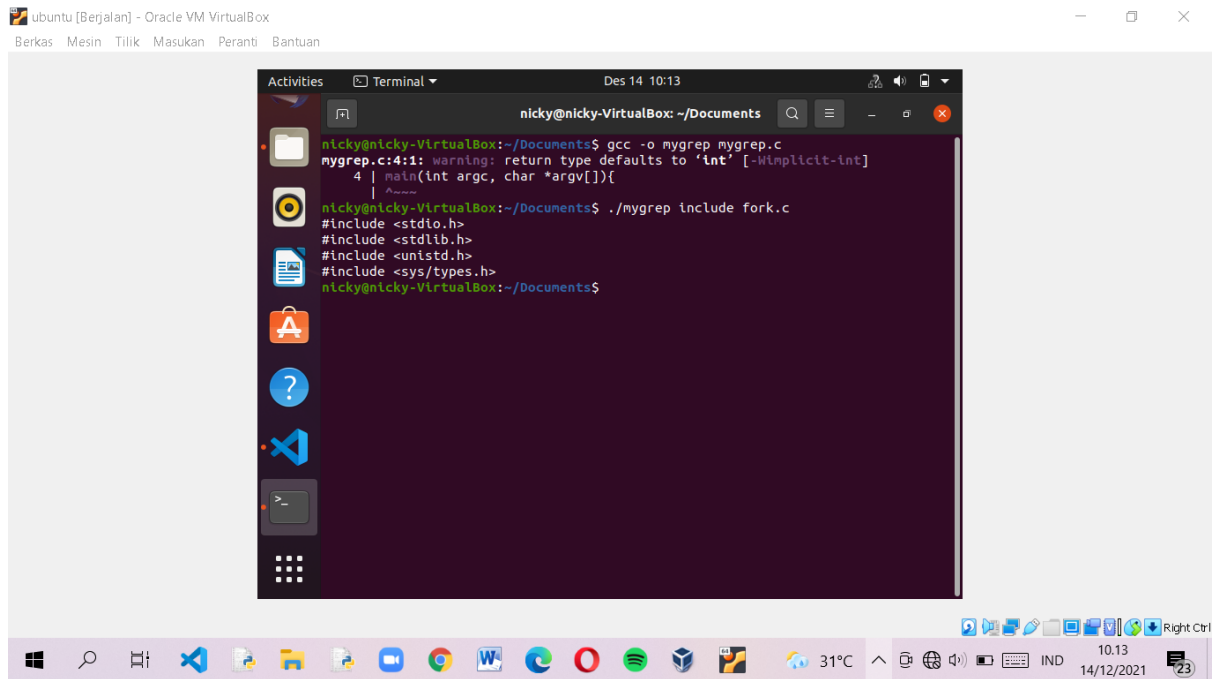
Ln 41, Col 31 Spaces: 4 UTF-8 LF C Linux

et Started C fcreate.c C fread.c C fappend.c C list.c C mygrep.c x ...

```
home > nicky > Documents > C mygrep.c > main(int, char * [])
22 while(!feof(fd)){
23     i = 0;
24     while(1){
25         c = fgetc(fd);
26         if(feof(fd)){
27             str[i++] = '\0'; break;
28         }
29         if(c == '\n'){
30             str[i++] = '\0'; break;
31         }
32         str[i++] = c;
33     }
34
35     if(strlen(str) >= strlen(argv[1])){
36         for(k=0; k<=strlen(str)-strlen(argv[1]); k++){
37             for(m=0; m<strlen(argv[1]); m++){
38                 temp[m] = str[k+m];
39                 temp[m] = '\0';
40                 if(strcmp(temp, argv[1]) == 0){
41                     printf("%s\n", str);
42                     break;
43                 }
44             }
45         }
46     }
47 }
```

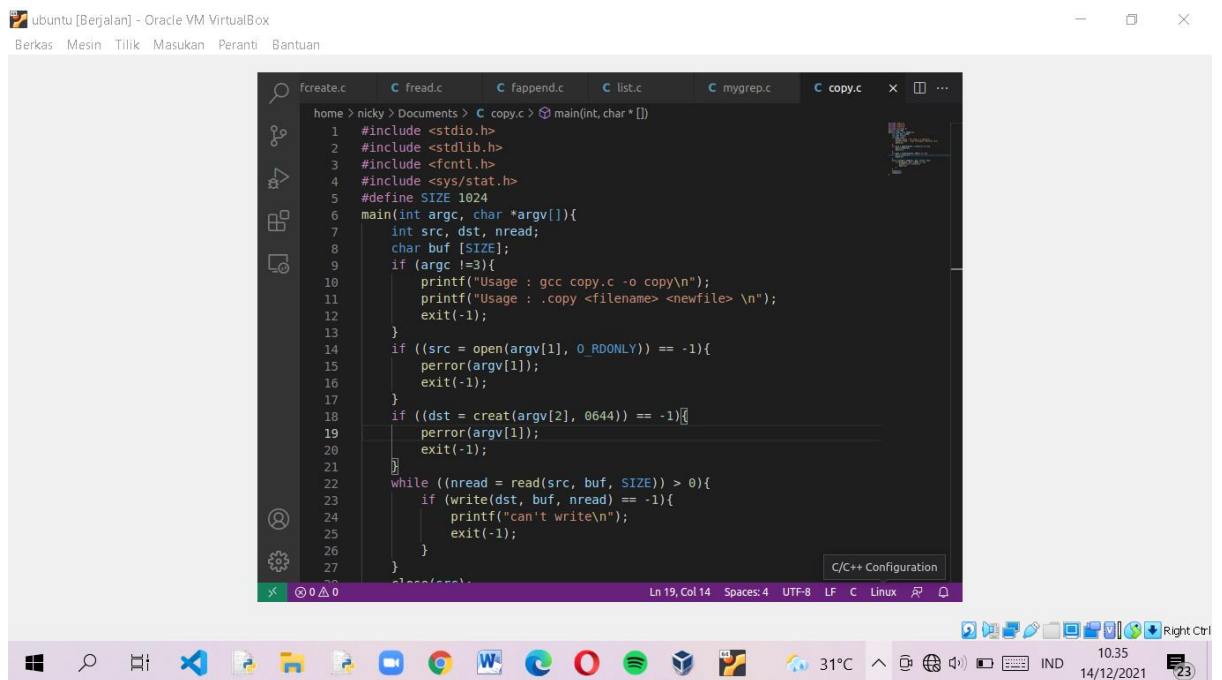
Ln 26, Col 27 Spaces: 4 UTF-8 LF C Linux

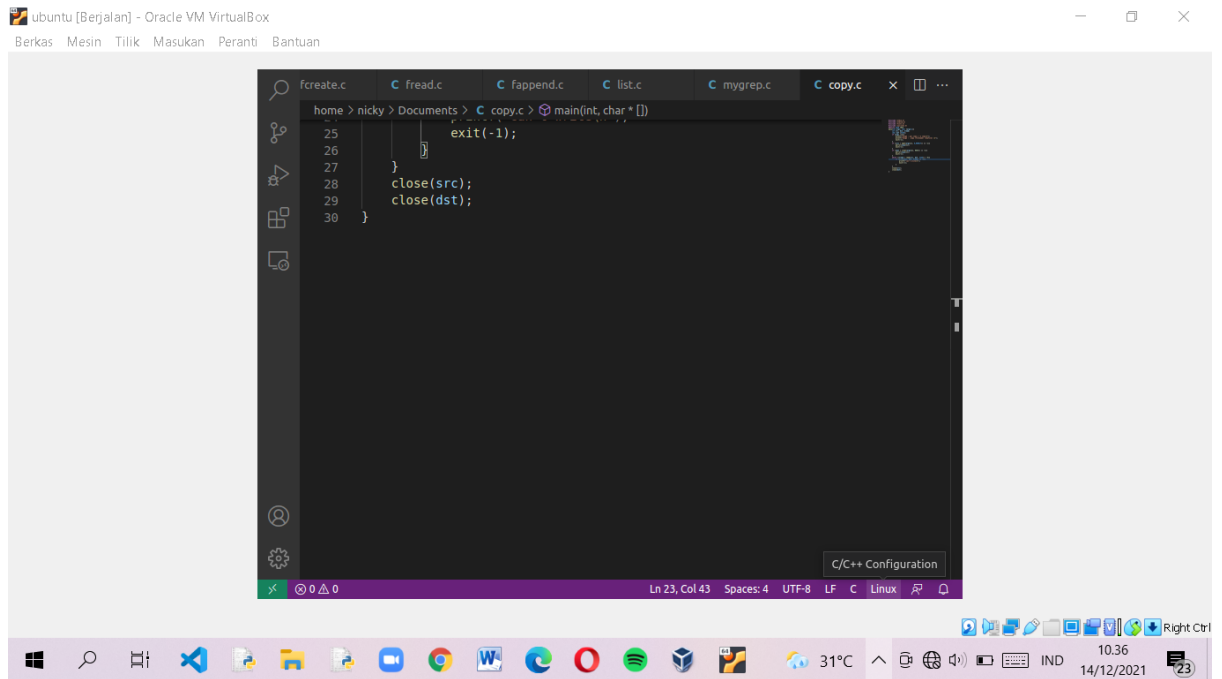
- Running code lewat terminal



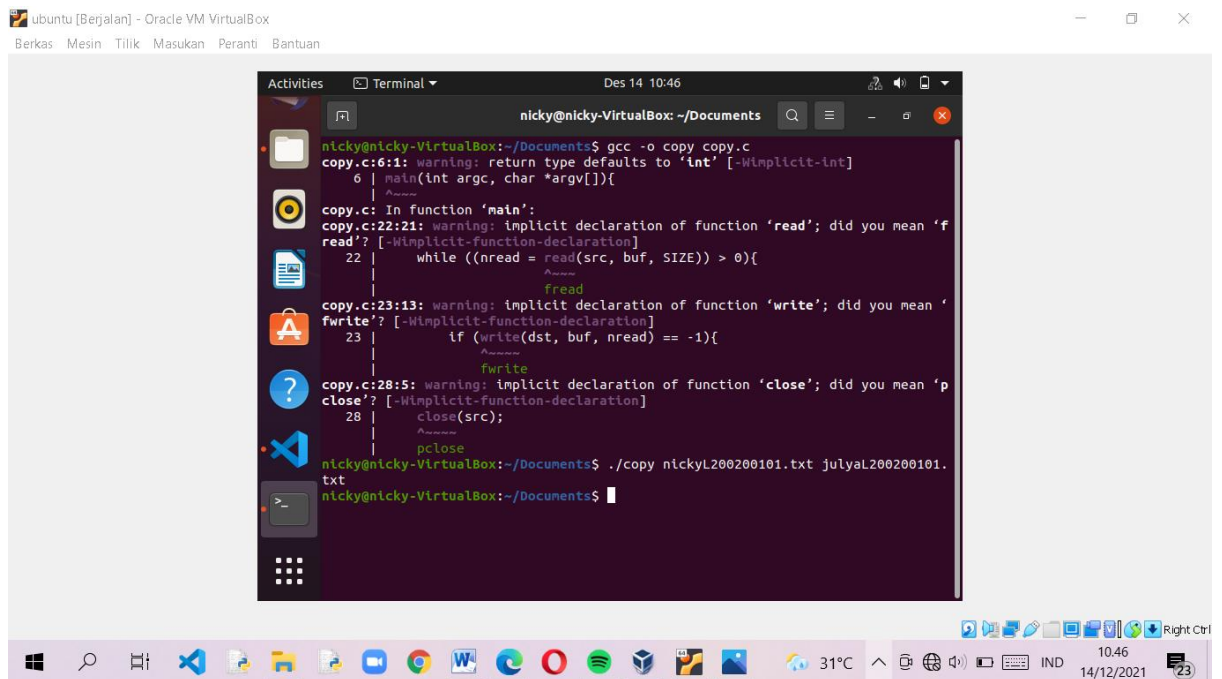
3. Program untuk mensimulasi perintah 'cp'

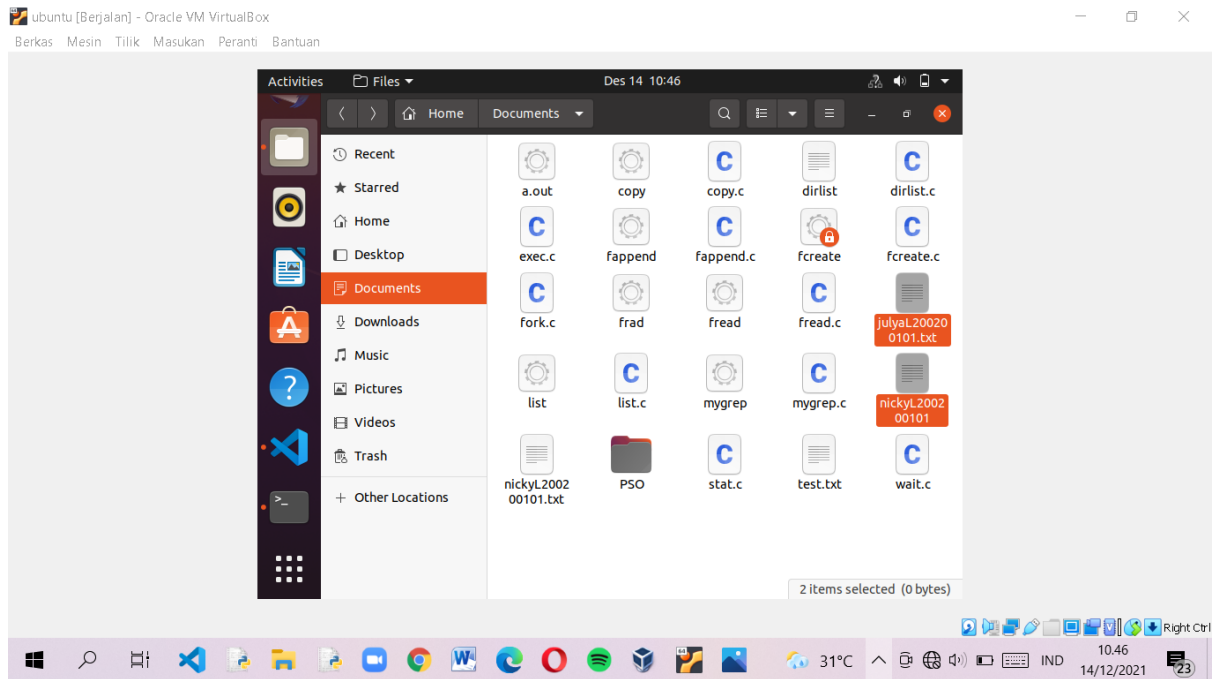
- Kode program *copy.c*



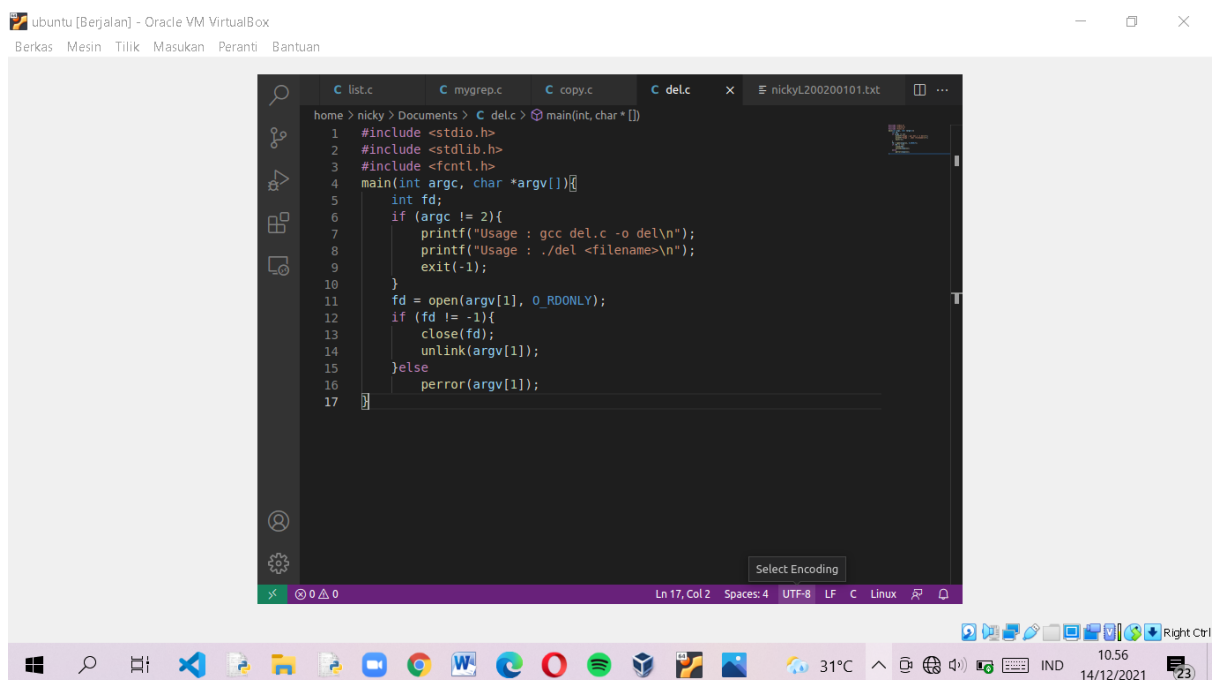


- Running kode lewat terminal





4. Program untuk mensimulasi perintah 'rm' Kode program *del.c*



- Running kode lewat terminal

```
Activities Terminal Des 14 10:56
nicky@nicky-VirtualBox: ~/Documents

nicky@nicky-VirtualBox:~/Documents$ gcc -o del del.c
del.c:4:1: warning: return type defaults to 'int' [-Wimplicit-int]
4 | main(int argc, char *argv[]){
  | ~~~~~
del.c: In function 'main':
del.c:13:9: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
13 |     close(fd);
    |     ~~~~~
del.c:14:9: warning: implicit declaration of function 'unlink' [-Wimplicit-function-declaration]
14 |     unlink(argv[1]);
    |     ~~~~~
nicky@nicky-VirtualBox:~/Documents$ ./del julyaL200200101.txt
nicky@nicky-VirtualBox:~/Documents$
```

