

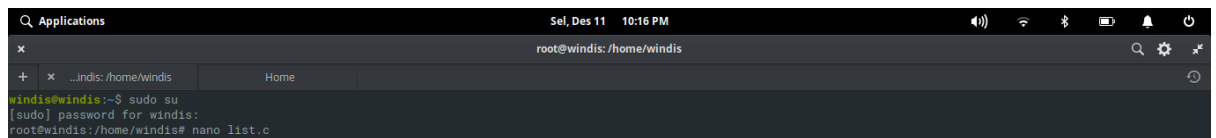
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NIM : L200170115

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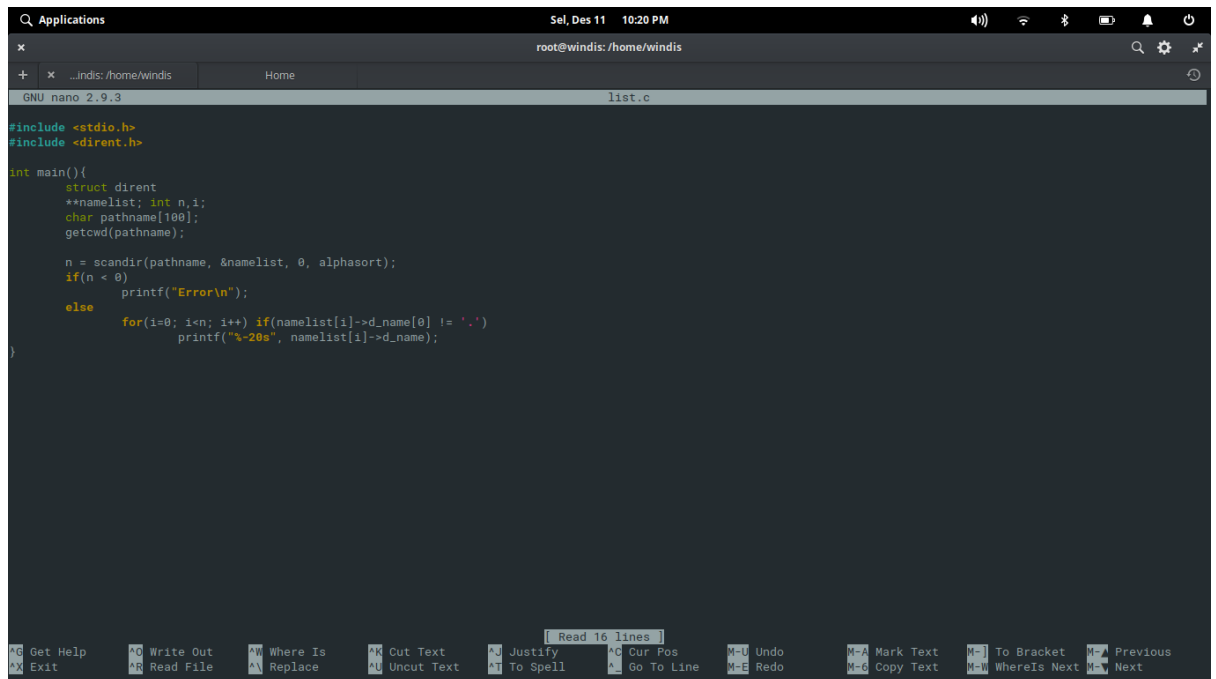
A. Program untuk mensimulasikan perintah "ls"

1. Ketik nano list.c



```
Applications Sel, Des 11 10:16 PM
root@windis: /home/windis
windis@windis:~$ sudo su
[sudo] password for windis:
root@windis: /home/windis# nano list.c
```

Kemudian ketikkan perintah seperti berikut ini,



```
Applications Sel, Des 11 10:20 PM
root@windis: /home/windis
GNU nano 2.9.3 list.c
#include <stdio.h>
#include <dirent.h>

int 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);
}
```

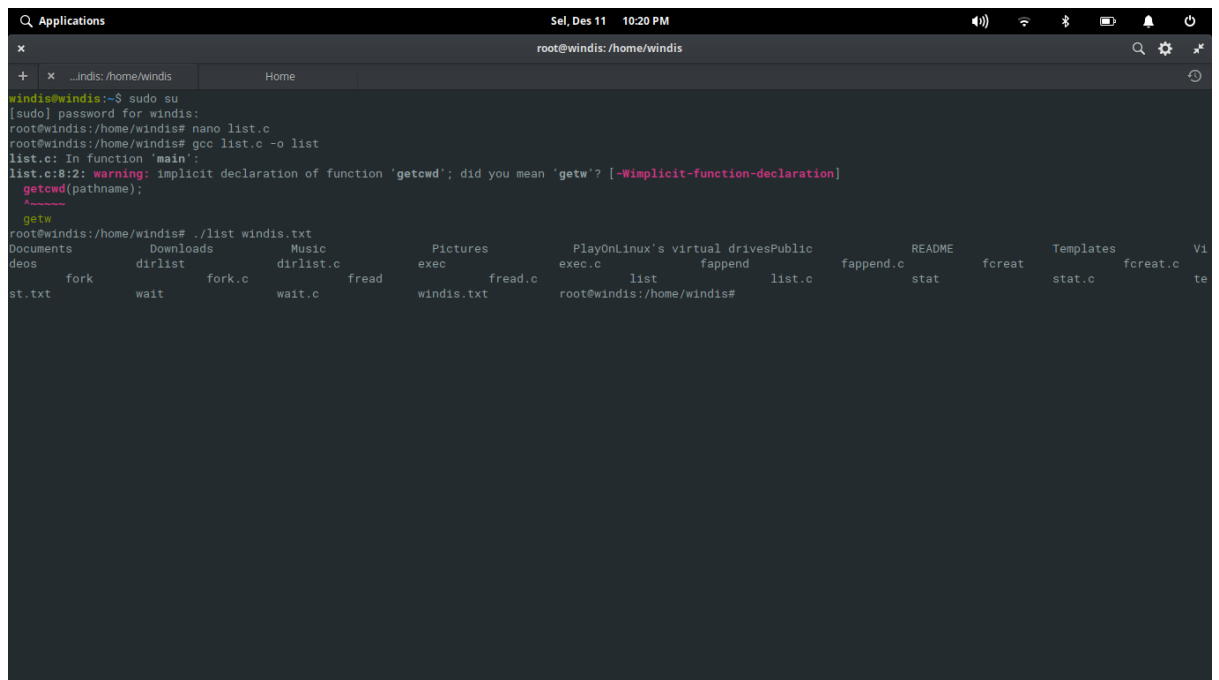
Setelah itu simpan dengan ketik CTRL+X , terus Y dan enter

2. Cek dengan ketik gcc list.c -o list



```
Applications Sel, Des 11 10:16 PM
root@windis: /home/windis
windis@windis:~$ sudo su
[sudo] password for windis:
root@windis: /home/windis# nano list.c
root@windis: /home/windis# gcc list.c -o list
list.c: In function 'main':
list.c:8:2: warning: implicit declaration of function 'getcwd'; did you mean 'getw'? [-Wimplicit-function-declaration]
    getcwd(pathname);
    ^~~~~~
    getw
```

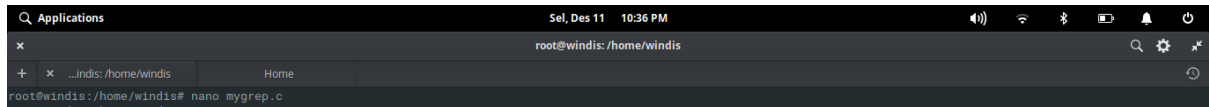
3. Liat hasilnya dengan ketik `./list windis.txt` (filename)



```
windis@windis:~$ sudo su
[sudo] password for windis:
root@windis:/home/windis# nano list.c
root@windis:/home/windis# gcc list.c -o list
list.c: In function 'main':
list.c:8:2: warning: implicit declaration of function 'getcwd'; did you mean 'getw'? [-Wimplicit-function-declaration]
  getcwd(pathname);
  ^~~~~~
  getw
root@windis:/home/windis# ./list windis.txt
Documents      Downloads      Music          Pictures        PlayOnLinux's virtual drivesPublic  README  fcreat  Templates  fcreat.c  V1
deos           dirlist       dirlist.c      exec            exec.c         list      fappend  fappend.c  stat      fcreat     stat.c      fcreat.c  te
st.txt         wait          fork.c         wait.c          fread          fread.c    windis.txt root@windis:/home/windis#
```

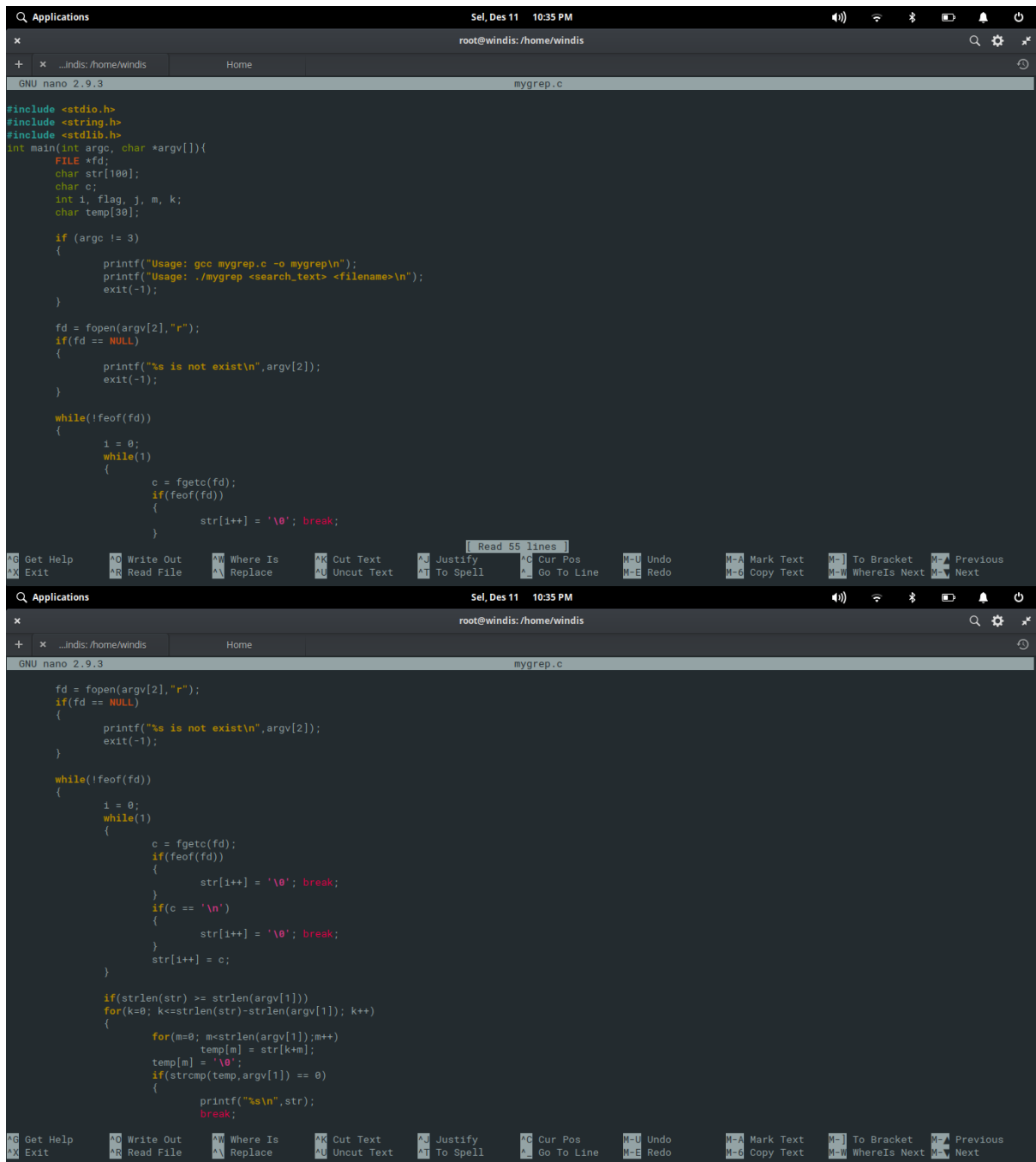
B. Program untuk mensimulasikan perintah “grep”

1. ketik nano mygrep.c



```
root@windis:/home/windis# nano mygrep.c
```

Kemudian ketikkan perintah di mygrep.c seperti dibawah ini



```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
int 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);
    }

    while (!feof(fd))
    {
        i = 0;
        while (1)
        {
            c = fgetc(fd);
            if (feof(fd))
            {
                str[i++] = '\0'; break;
            }
        }

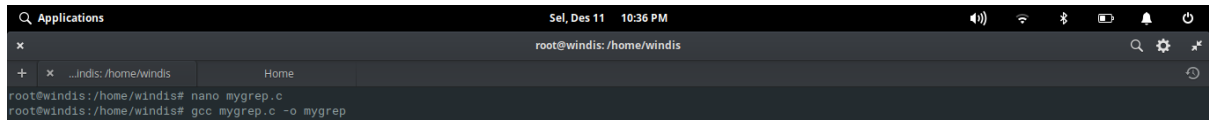
        fd = fopen(argv[2], "r");
        if (fd == NULL)
        {
            printf("%s is not exist\n", argv[2]);
            exit(-1);
        }

        while (!feof(fd))
        {
            i = 0;
            while (1)
            {
                c = fgetc(fd);
                if (feof(fd))
                {
                    str[i++] = '\0'; break;
                }
                if (c == '\n')
                {
                    str[i++] = '\0'; break;
                }
                str[i++] = c;
            }

            if (strlen(str) == strlen(argv[1]))
            {
                for (k=0; k<strlen(str)-strlen(argv[1]); k++)
                {
                    for (m=0; m<strlen(argv[1]); m++)
                    {
                        temp[m] = str[k+m];
                        if (strcmp(temp, argv[1]) == 0)
                        {
                            printf("%s\n", str);
                            break;
                        }
                    }
                }
            }
        }
    }
}
```

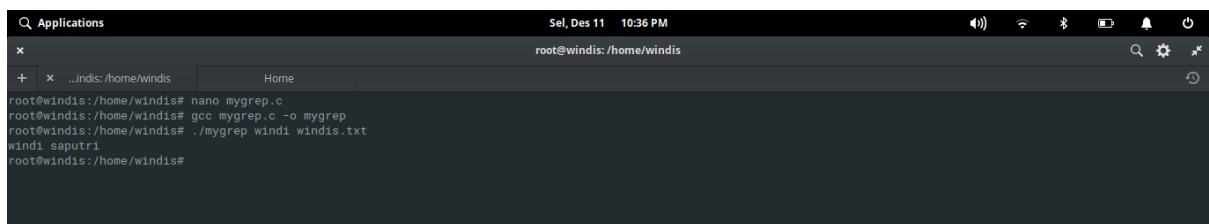
Setelah itu simpan dengan CTRL+X, terus Y enter

2. di cek dengan ketik gcc mygrep.c -o mygrep



```
Applications Sel, Des 11 10:36 PM
root@windis:/home/windis
root@windis:/home/windis# nano mygrep.c
root@windis:/home/windis# gcc mygrep.c -o mygrep
```

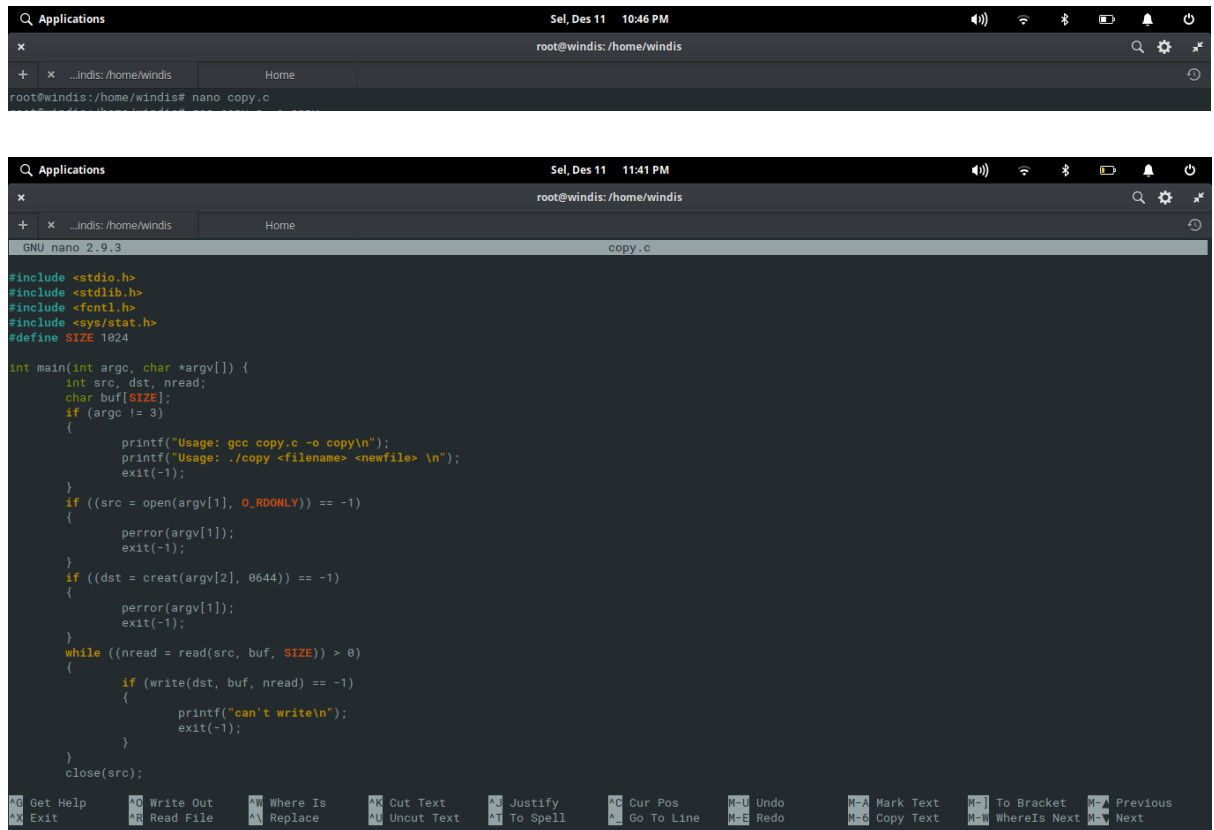
3 . lihat hasilnya dengan ketik ./mygrep windi windis.txt



```
Applications Sel, Des 11 10:36 PM
root@windis:/home/windis
root@windis:/home/windis# nano mygrep.c
root@windis:/home/windis# gcc mygrep.c -o mygrep
root@windis:/home/windis# ./mygrep windi windis.txt
windi saputri
root@windis:/home/windis#
```

C . program untuk mensimulasikan perintah “cp”

1. Ketik nano copy.c

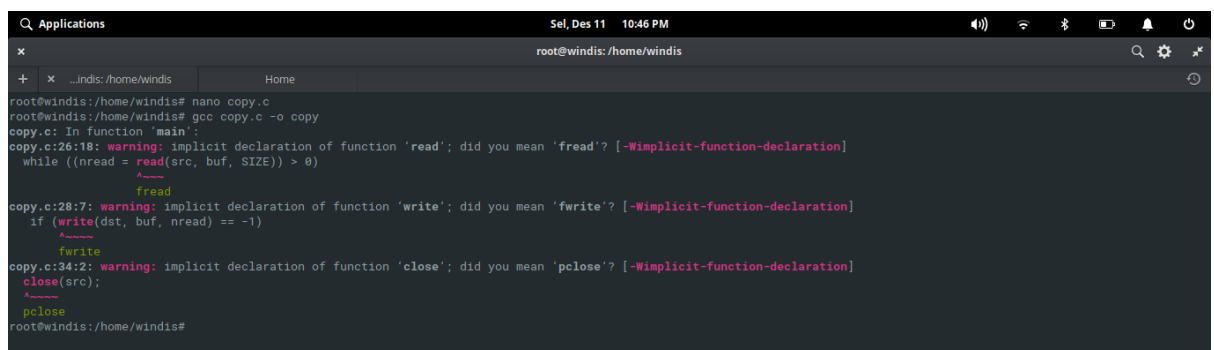


The screenshot shows a terminal window with the nano editor open. The first part shows the command `nano copy.c` being executed. The second part shows the contents of `copy.c` being edited. The code is as follows:

```
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>
#include <sys/stat.h>
#define SIZE 1024

int main(int argc, char *argv[]) {
    int src, dst, nread;
    char buf[SIZE];
    if (argc != 3)
    {
        printf("Usage: gcc copy.c -o copy\n");
        printf("Usage: ./copy <filename> <newfile> \n");
        exit(-1);
    }
    if ((src = open(argv[1], O_RDONLY)) == -1)
    {
        perror(argv[1]);
        exit(-1);
    }
    if ((dst = creat(argv[2], 0644)) == -1)
    {
        perror(argv[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);
}
```

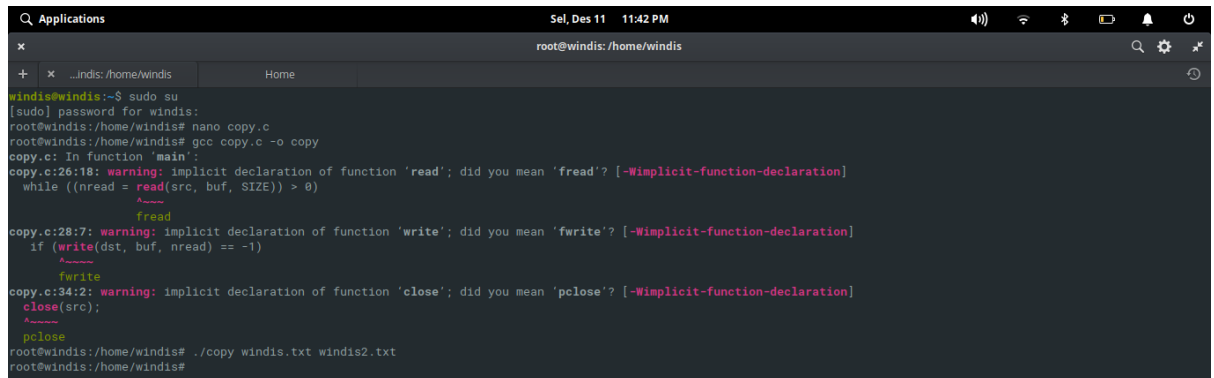
2. Di cek dengan ketik gcc copy.c -o copy



The screenshot shows a terminal window with the command `gcc copy.c -o copy` being executed. The output shows three warnings about implicit function declarations for `read`, `write`, and `close`.

```
root@windis:/home/windis# nano copy.c
root@windis:/home/windis# gcc copy.c -o copy
copy.c: In function 'main':
copy.c:26:18: warning: implicit declaration of function 'read'; did you mean 'fread'? [-Wimplicit-function-declaration]
    while ((nread = read(src, buf, SIZE)) > 0)
                   ^~~~~~
                   fread
copy.c:28:7: warning: implicit declaration of function 'write'; did you mean 'fwrite'? [-Wimplicit-function-declaration]
    if (write(dst, buf, nread) == -1)
        ^~~~~~
        fwrite
copy.c:34:2: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
    close(src);
    ^~~~~~
    pclose
root@windis:/home/windis#
```

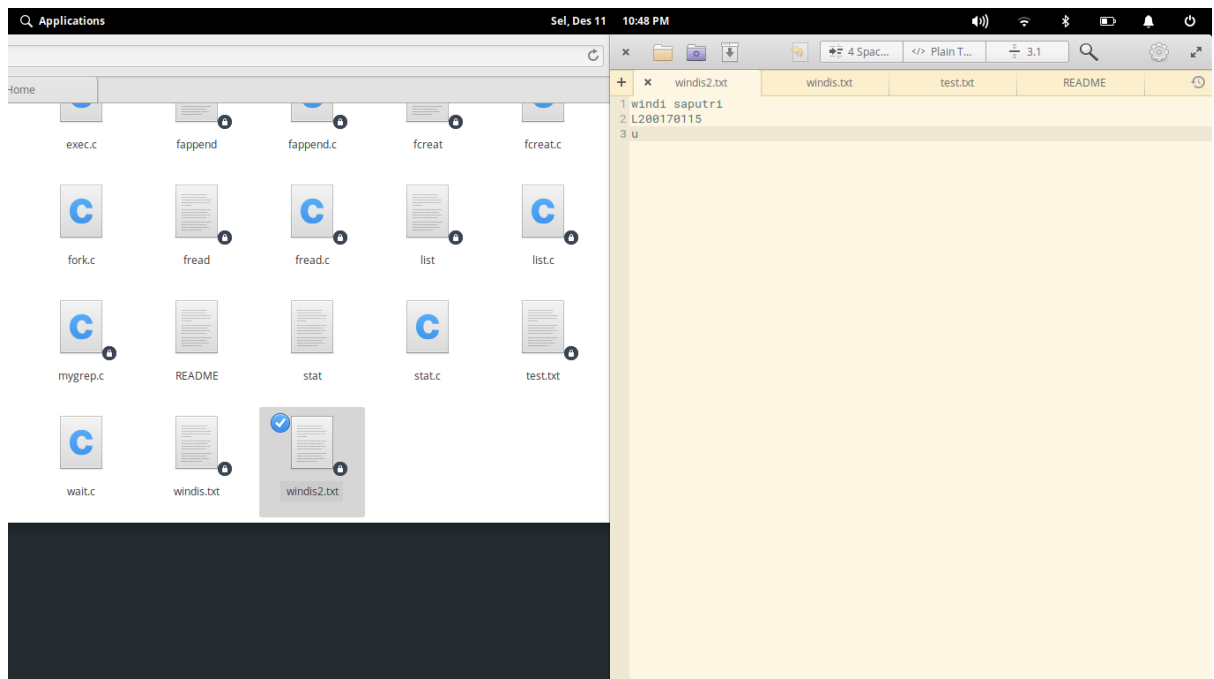
3. Lihat hasilnya dengan ketik `./copy windis.txt widis2.txt`



```
Q Applications Sel, Des 11 11:42 PM
root@windis: /home/windis

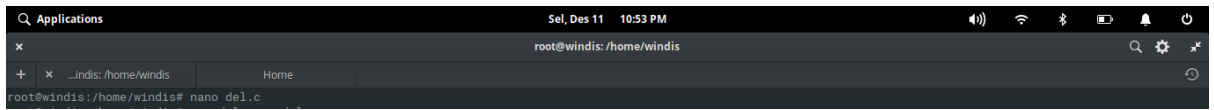
windis@windis:~$ sudo su
[sudo] password for windis:
root@windis:/home/windis# nano copy.c
root@windis:/home/windis# gcc copy.c -o copy
copy.c: In function 'main':
copy.c:26:18: warning: implicit declaration of function 'read'; did you mean 'fread'? [-Wimplicit-function-declaration]
   while ((nread = read(src, buf, SIZE)) > 0)
                   ^~~~~
copy.c:28:7: warning: implicit declaration of function 'write'; did you mean 'fwrite'? [-Wimplicit-function-declaration]
   if (write(dst, buf, nread) == -1)
       ^~~~~
copy.c:34:2: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
   close(src);
   ^~~~~
   pclose
root@windis:/home/windis# ./copy windis.txt widis2.txt
root@windis:/home/windis#
```

Jika berhasil maka data di dalam file `windis.txt` akan tercopy di file baru `windis2.txt`



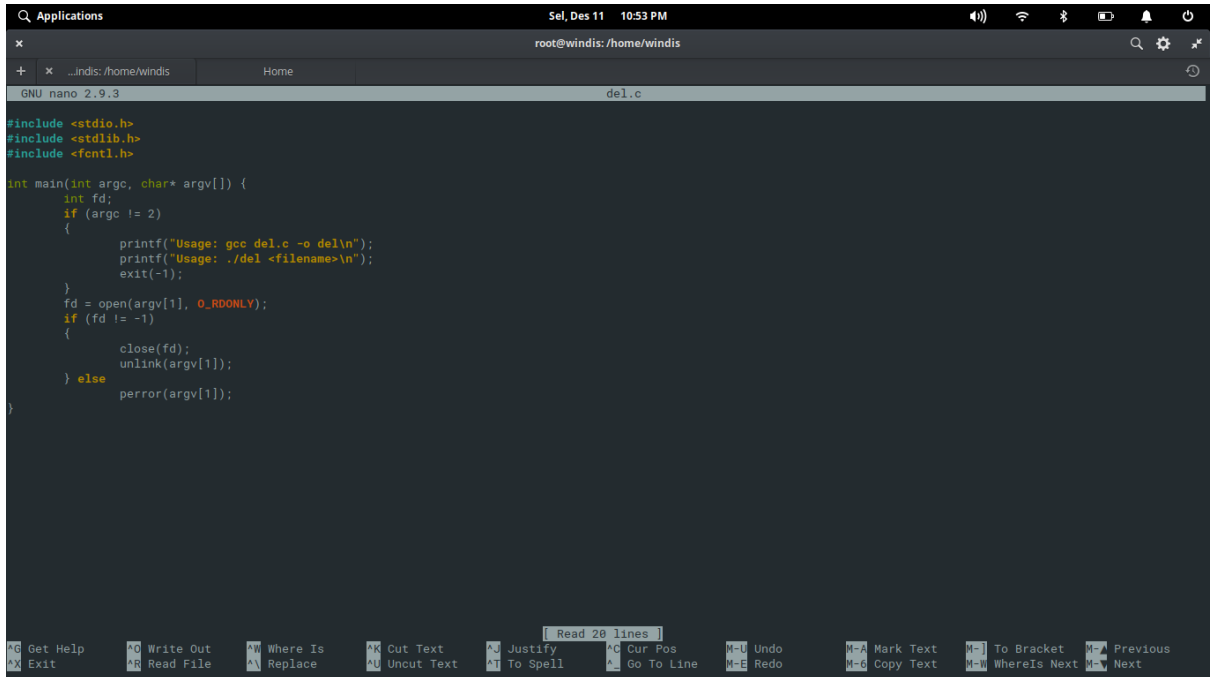
D . program untuk mensimulasikan perintah “rm”

1. Ketik nano del.c



```
root@windis:/home/windis# nano del.c
```

Kemudian ketikkan perintah seperti dibawah ini

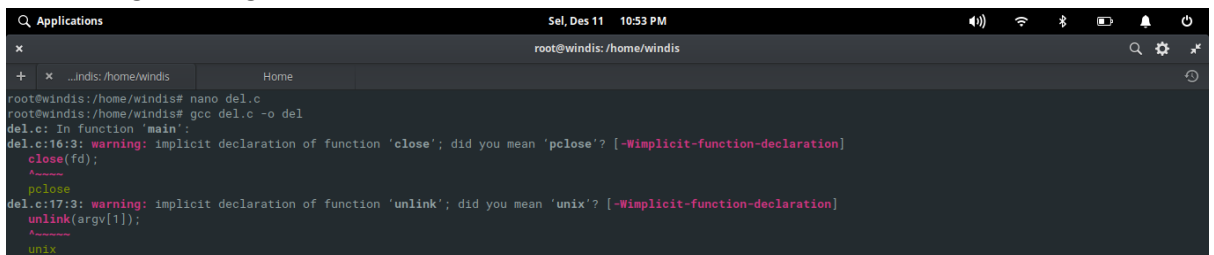


```
GNU nano 2.9.3 del.c
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>

int 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]);
}
```

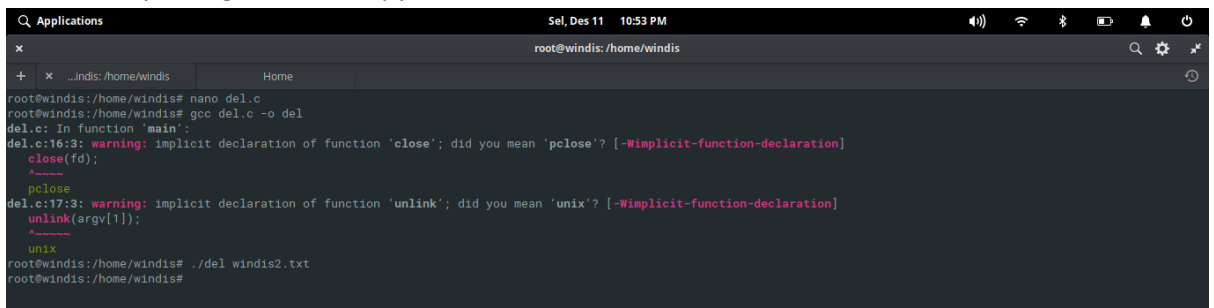
Setelah itu disimpan dengan CTRL+X , terus Y , enter

2. Di cek dengan ketik gcc del.c -o del



```
root@windis:/home/windis# gcc del.c -o del
del.c: In function 'main':
del.c:16:3: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
   close(fd);
   ^~~~~~
del.c:17:3: warning: implicit declaration of function 'unlink'; did you mean 'unix'? [-Wimplicit-function-declaration]
   unlink(argv[1]);
   ^~~~~~
unix
```

3. Lihat hasilnya dengan ketik ./copy windis2.txt



```
root@windis:/home/windis# ./del windis2.txt
root@windis:/home/windis#
```

