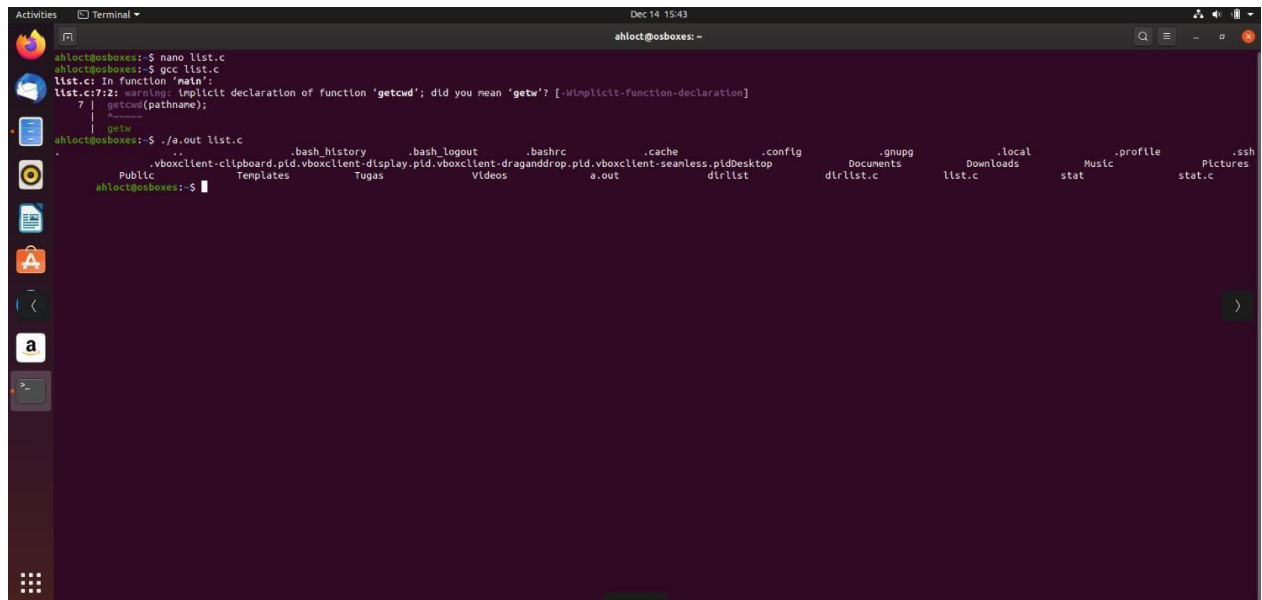


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## Modul 10

### 1. List

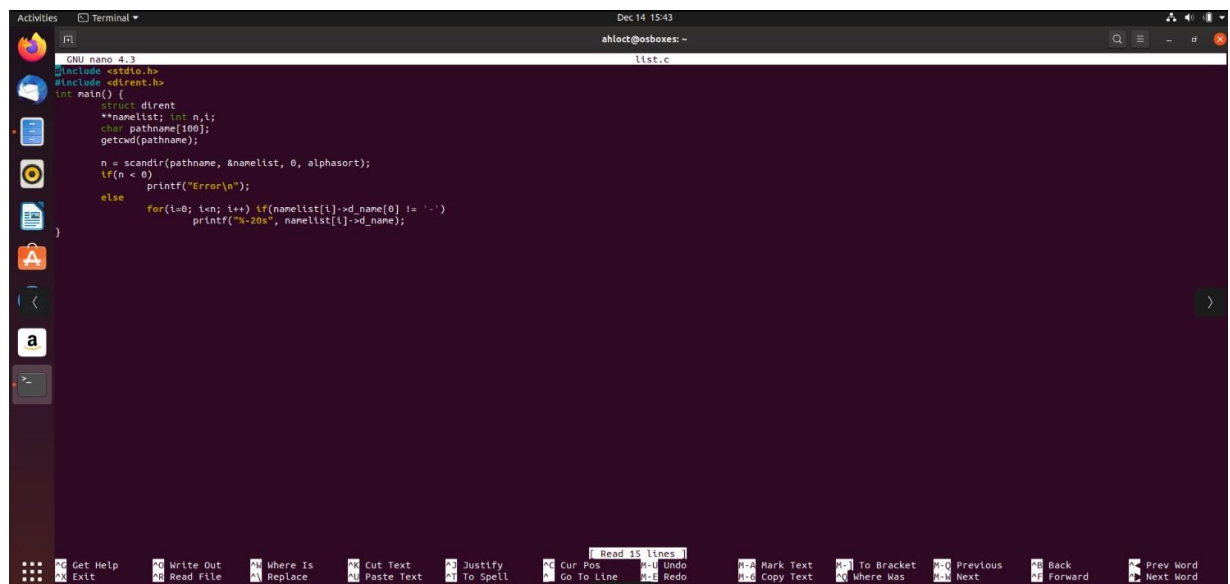


A terminal window titled 'ahloct@osboxes: -' showing the compilation of a C program. The user enters the following commands:

```
ahloct@osboxes:~$ nano list.c
ahloct@osboxes:~$ gcc list.c
list.c: In function 'main':
list.c:7:2: warning: implicit declaration of function 'getcwd'; did you mean 'getw'? [-Wimplicit-function-declaration]
7 |   getcwd(pathname);
  |   ^~~~~~
  |   getw
ahloct@osboxes:~$ ./a.out list.c
```

The output shows a directory listing of the current directory:

```
.          .bash_history  .bash_logout  .bashrc      .cache        .config      .gnupg       .local       .profile     .ssh
Public    Templates      Tugas         Videos      a.out         dirlist      dirlist.c    Downloads   list.c       Music
stat      stat.c
```



A terminal window titled 'ahloct@osboxes: -' showing the source code of the program in a nano editor. The code is as follows:

```
GNU nano 4.3 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);
}
```

## 2. Mygrep

```
ahloct@osboxes:~$ nano mygrep.c
ahloct@osboxes:~$ gcc mygrep.c -o mygrep
ahloct@osboxes:~$ ./mygrep
Usage: gcc mygrep.c -o mygrep
Usage: ./mygrep <search_text> <filename>
ahloct@osboxes:~$ ./mygrep break mygrep.c
ahloct@osboxes:~$
```

```
GNU nano 4.3 mygrep.c
#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, n, 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("File 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;
        }

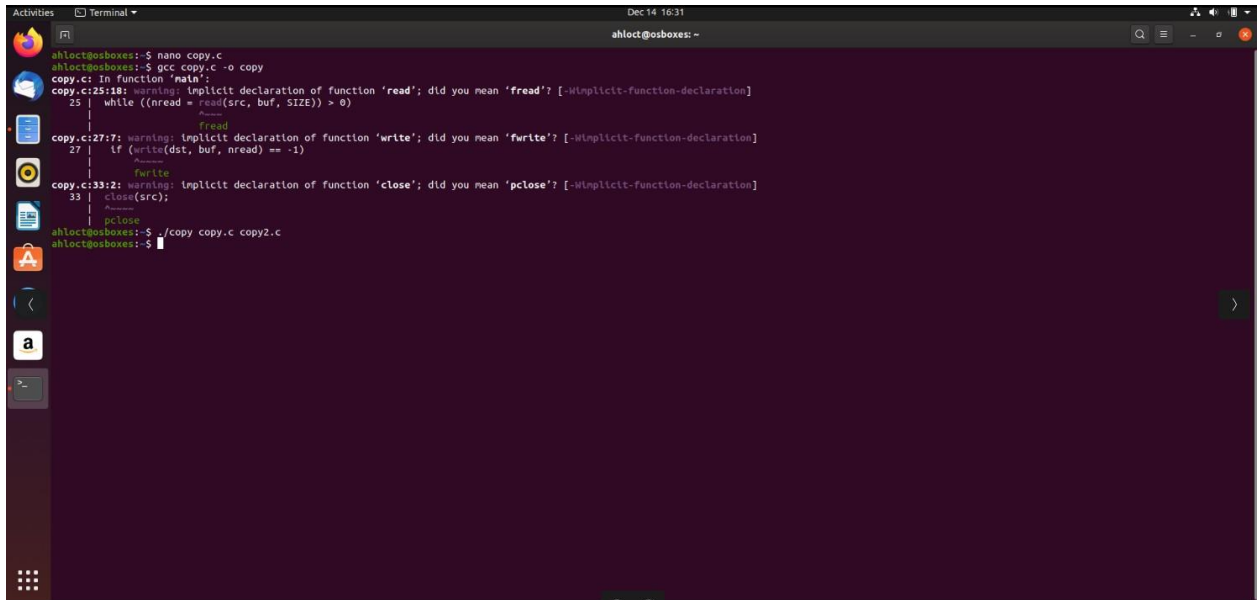
        if (strlen(str) == strlen(argv[1]))
        {
            for (k=0; k<strlen(str)-strlen(argv[1]); k++)
            {
                for (n=0; n<strlen(argv[1]); n++)
                {
                    temp[n] = str[k+n];
                    if (strcmp(temp, argv[1]) == 0)
                    {
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

```
GNU nano 4.3 mygrep.c
printf("Usage: ./mygrep <search_text> <filename>\n");
exit(-1);
fd = fopen(argv[2], "r");
if (fd == NULL)
{
    printf("File is not exist\n", argv[2]);
    exit(-1);
}

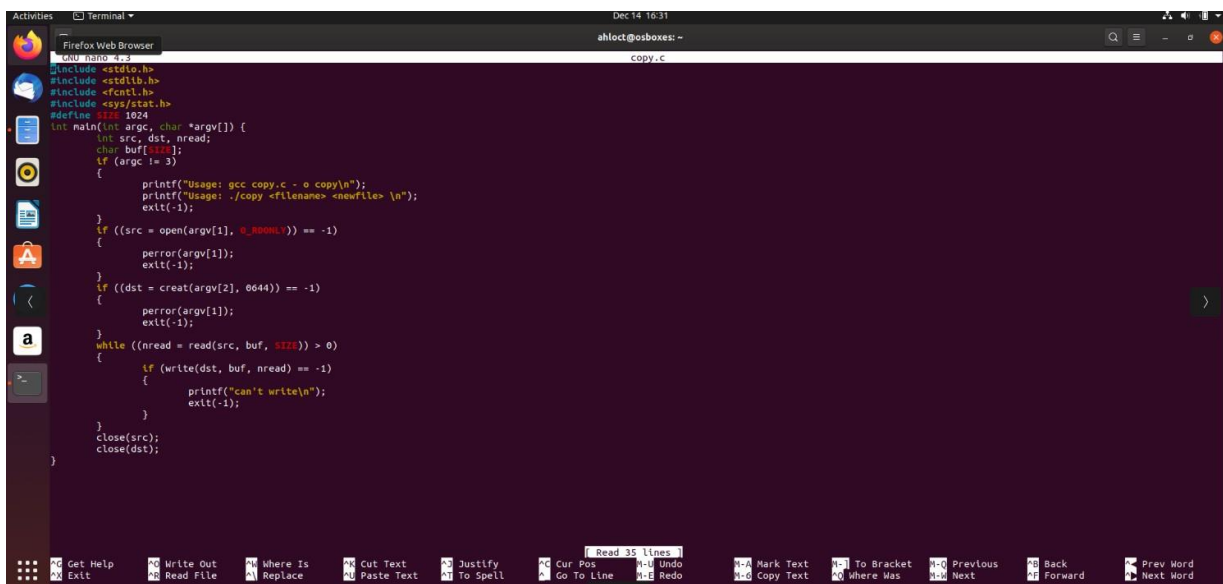
while (!feof(fd))
{
    i = 0;
    while (1)
    {
        c = fgetc(fd);
        if (feof(fd))
        {
            str[i++] = '\0'; break;
        }
        if (c == '\n')
        {
            str[i++] = '\0'; break;
        }
        str[i++] = c;
    }

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

### 3. Copy



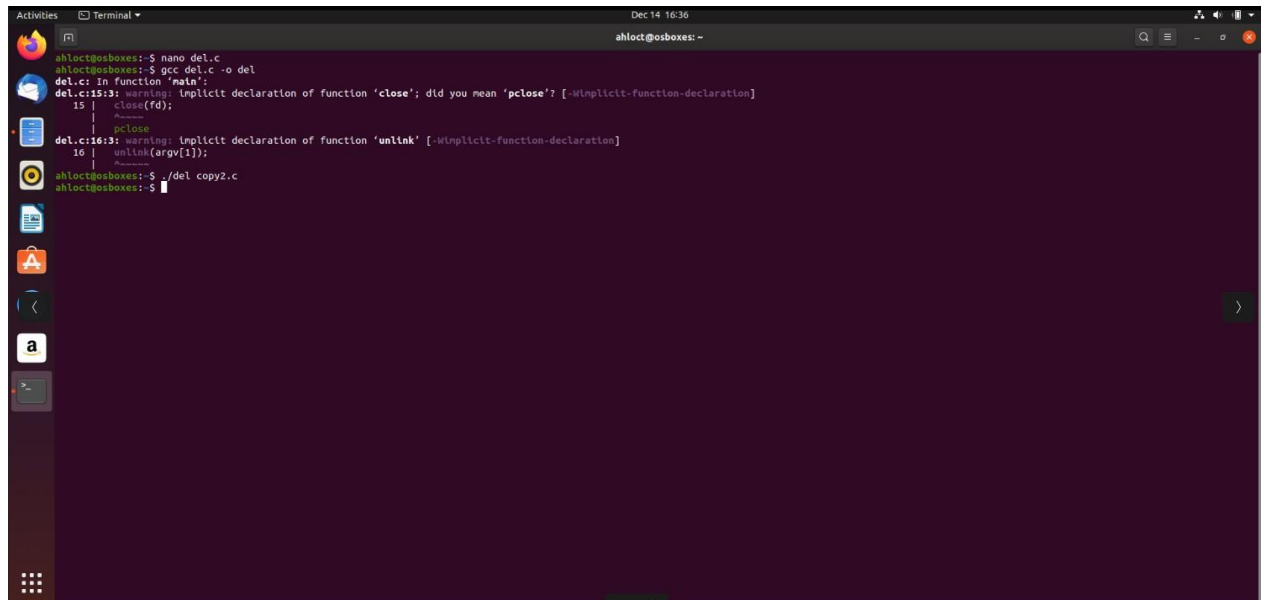
```
ahloct@osboxes:~$ nano copy.c
ahloct@osboxes:~$ gcc copy.c -o copy
copy.c: In function 'main':
copy.c:25:18: warning: implicit declaration of function 'read'; did you mean 'fread'? [-Wimplicit-function-declaration]
   25 |     while ((nread = read(src, buf, SIZE)) > 0)
      |                  ^~~~~
      |                  fread
copy.c:27:7: warning: implicit declaration of function 'write'; did you mean 'fwrite'? [-Wimplicit-function-declaration]
   27 |     if (write(dst, buf, nread) == -1)
      |         ^~~~~
      |         fwrite
copy.c:33:2: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
   33 |     close(src);
      |     ^~~~~
      |     pclose
ahloct@osboxes:~$ ./copy copy.c copy2.c
ahloct@osboxes:~$
```



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

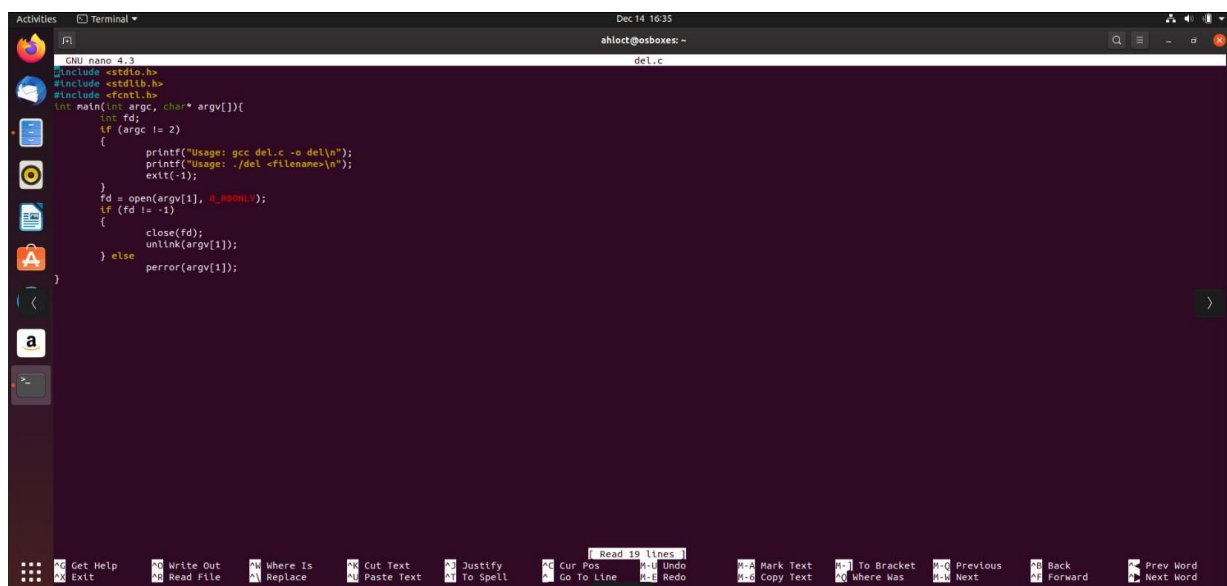
int main(int argc, char *argv[]) {
    int src, dst, nread;
    char buf[SIZE];
    if (argc != 3)
    {
        printf("Usage: gcc copy.c -o copy\n");
        printf("Usage: ./copy <filename> <newfile> \n");
        exit(-1);
    }
    if ((src = open(argv[1], O_RDONLY)) == -1)
    {
        perror(argv[1]);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

## 4. Del



A terminal window titled 'Terminal' with the date 'Dec 14 16:36' and the user 'ahloct@osboxes: ~'. The user enters the following commands:

```
ahloct@osboxes:~$ nano del.c
ahloct@osboxes:~$ gcc del.c -o del
del.c: In function 'main':
del.c:15:3: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
    15 |     close(fd);
        |     ^~~~~~
        |     pclose
del.c:16:3: warning: implicit declaration of function 'unlink' [-Wimplicit-function-declaration]
    16 |     unlink(argv[1]);
        |
ahloct@osboxes:~$ ./del copy2.c
ahloct@osboxes:~$
```



A terminal window titled 'Terminal' with the date 'Dec 14 16:35' and the user 'ahloct@osboxes: ~'. The user enters the command 'cat del.c', and the source code of the 'del.c' file is displayed:

```
GNU nano 4.3 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]);
}
```

At the bottom of the terminal, a menu bar is visible with the following options: Get Help, Exit, Write Out, Read File, Where Is, Replace, Cut Text, Paste Text, Justify, To Spell, Cur Pos, Go To Line, Undo, Redo, Mark Text, Copy Text, To Bracket, Where Was, Previous, Next, Back, Forward, Prev Word, Next Word.