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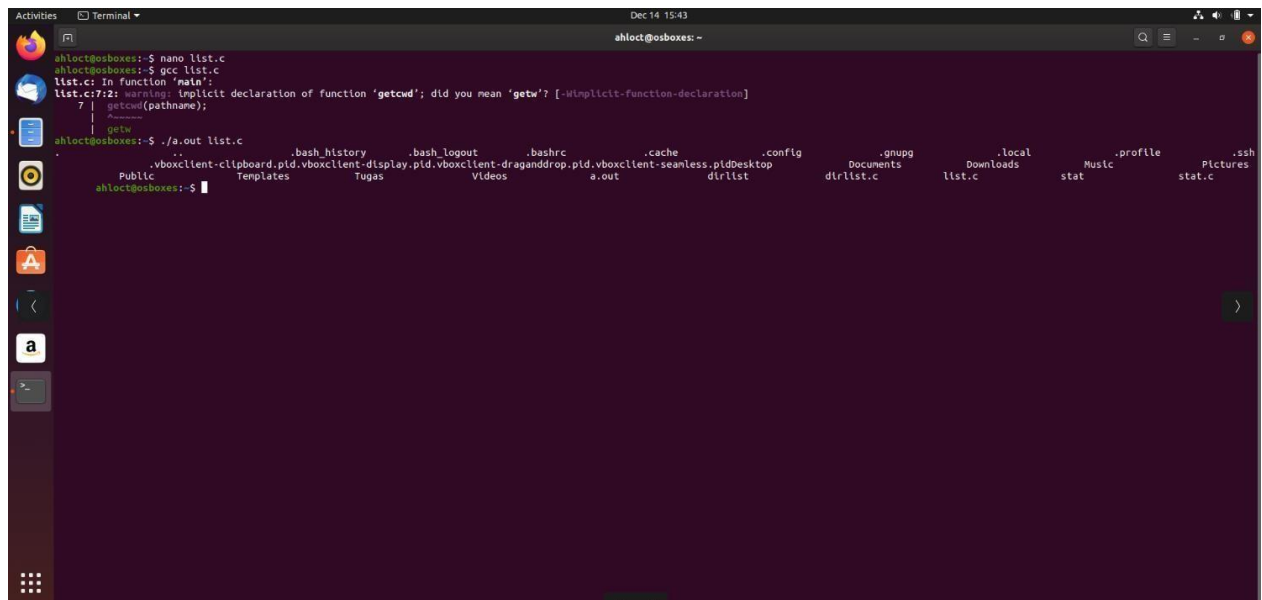
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Praktikum SO

Class X

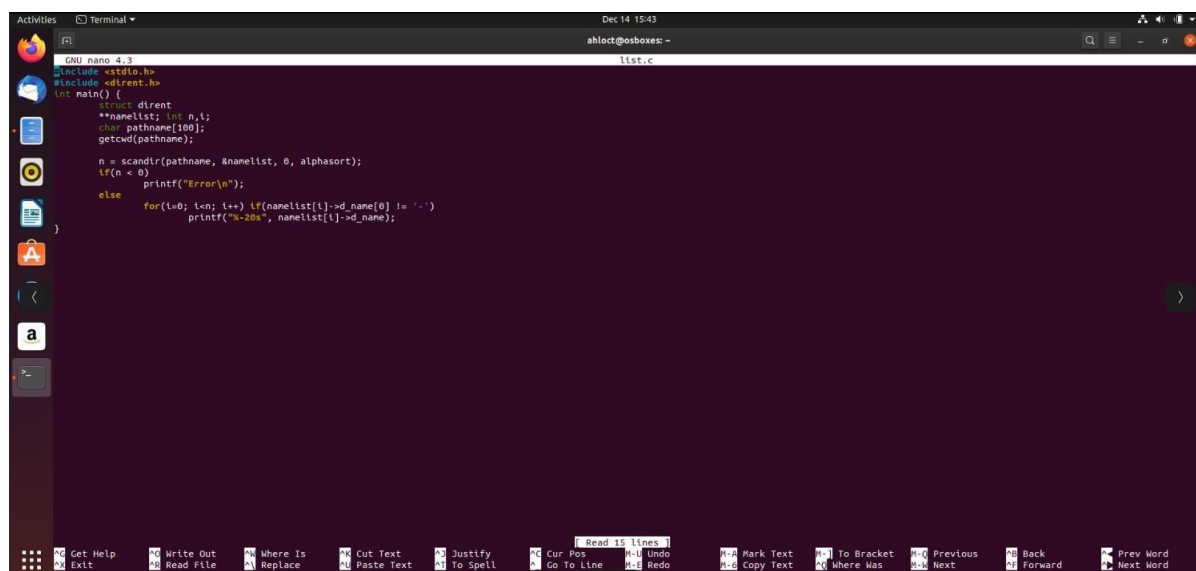
Modul 10 (Simulasi Command)

1. List



A terminal window showing the compilation of a C program. The user runs `nano list.c` to edit the file, then `gcc list.c` to compile it. A warning is shown about an implicit declaration of `getcwd`. The user then runs `./a.out list.c` to execute the program. The terminal output shows the directory listing for the current directory.

```
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
.
Public
Templates
Tugas
Videos
.bash_history
.bash_logout
.bashrc
.cache
.config
.gnupg
.local
.local
Downloads
Music
profile
Pictures
ssh
.vboxclient-clipboard.pid.vboxclient-display.pid.vboxclient-draganddrop.pid.vboxclient-seamless.pidDesktop
dirlist
dirlist.c
list.c
stat
stat.c
```



A terminal window showing the source code of `list.c` in the nano editor. The code includes `stdio.h` and `dirent.h`, and implements a `main` function that uses `scandir` to list the contents of a directory.

```
GNU nano 4.3
#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++)
        {
            if (strcmp(str+k, argv[1]) == 0)
            {
                printf("%s\n", str);
                break;
            }
        }
    }
}
```

```
ahloct@osboxes:~$ nano mygrep.c
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];

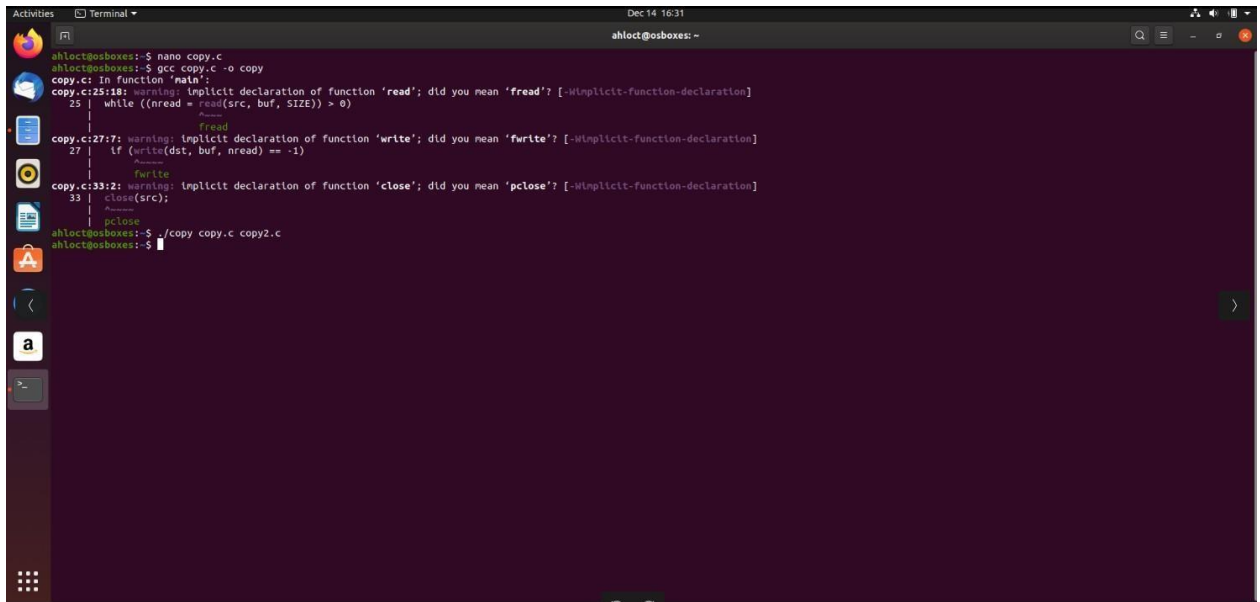
    if (argc != 3)
    {
        printf("Usage: gcc mygrep.c -o mygrep\n");
        printf("Usage: ./mygrep <search_text> <filename>\n");
        exit(-1);
    }

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

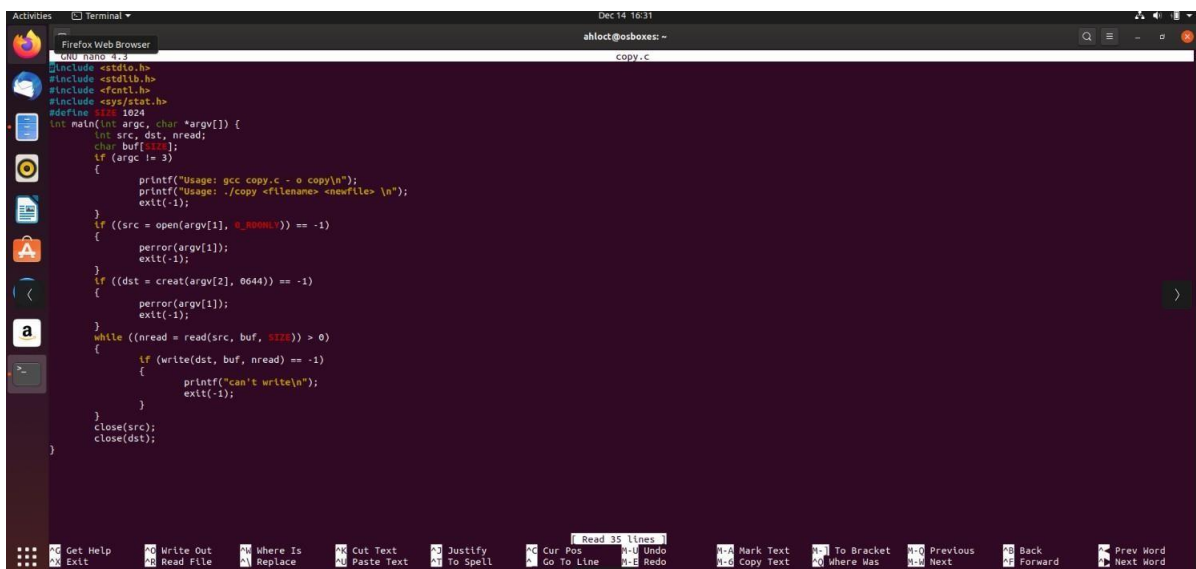
    while (!feof(fd))
    {
        i = 0;
        while (1)
        {
            c = fgetc(fd);
            if (feof(fd))
            {
                str[i++] = '\0'; break;
            }
            if (c == '\n')
            {
                str[i++] = '\0'; break;
            }
            str[i++]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

3. Copy



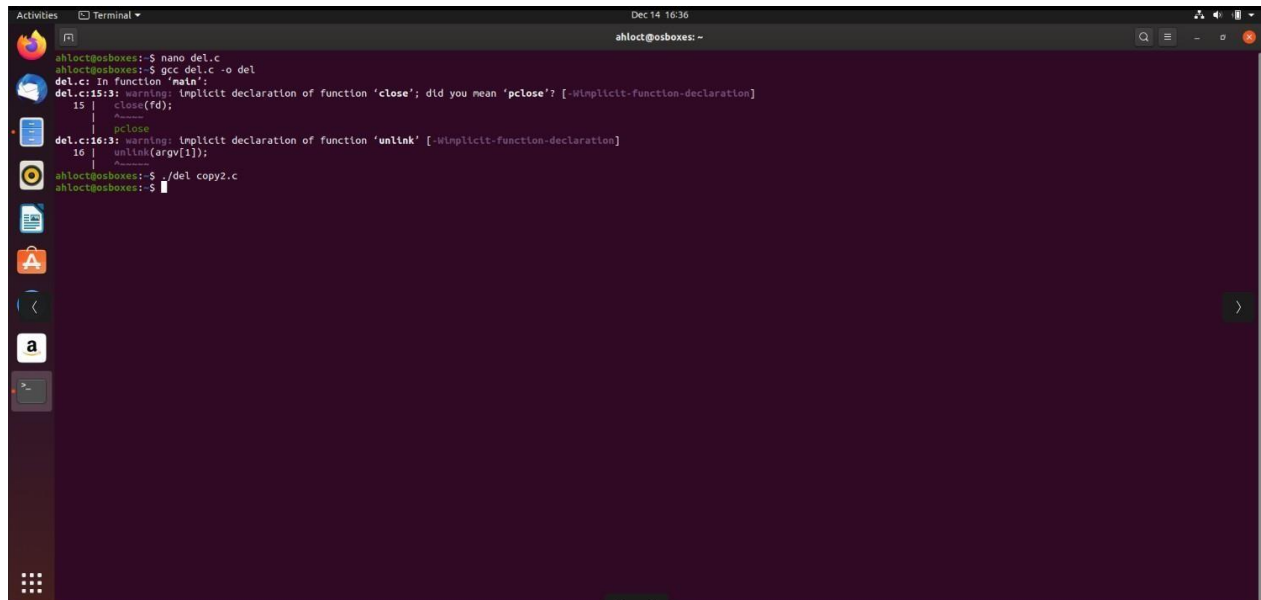
```
ahloct@osboxes:~$ nano copy.c
ahloct@osboxes:~$ gcc copy.c -o copy
copy.c: In function 'main':
copy.c:25:18: warning: implicit declaration of function 'read'; did you mean 'fread'? [-Wimplicit-function-declaration]
25 | while ((nread = read(src, buf, SIZE)) > 0)
   |                  ^~~~~
   |                  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:~$
```



```
ahloct@osboxes:~$ nano copy.c
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>
#include <sys/stat.h>
#define SIZE 1024

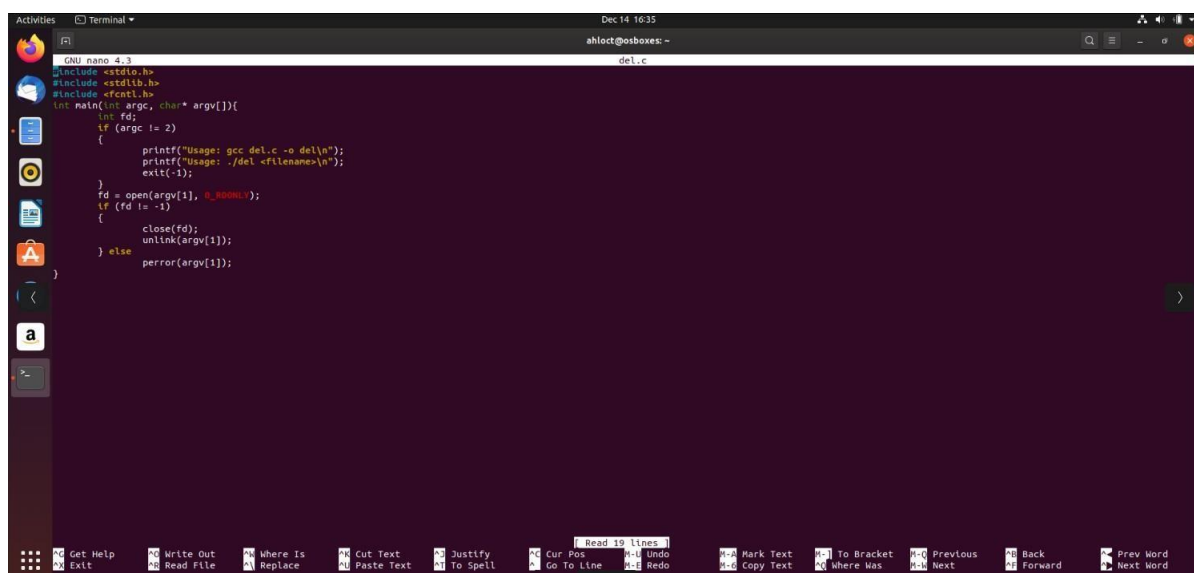
int main(int argc, char *argv[]) {
    int src, dst, nread;
    char buf[SIZE];
    if (argc != 3) {
        printf("Usage: gcc copy.c -o copy\n");
        printf("Usage: ./copy <filename> <newfile> \n");
        exit(-1);
    }
    if ((src = open(argv[1], O_RDONLY)) == -1) {
        perror(argv[1]);
        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 has opened the file 'del.c' in the nano editor. The source code is as follows:

```
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 status bar displays various keyboard shortcuts for the nano editor, including 'Get Help', 'Write Out', 'Where Is', 'Cut Text', 'Justify', 'Cur Pos', 'Go To Line', 'Undo', 'Mark Text', 'Copy Text', 'To Bracket', 'Where Was', 'Previous', 'Next', 'Back', 'Forward', 'Prev Word', and 'Next Word'.