

**LAPORAN E-UAS PRAKTIKUM SISTEM OPERASI
DARING**



Oleh:

| | |
|--------------|--------------------------------|
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1. Buatlah file <nim>.sh untuk menampilkan informasi:

- a. Mencetak “Assalamu,alaikum”, nama komputer, info OS
- b. User terakhir yang login, nama user, id

1. Pertama, buka Terminal lalu ketikan “mkdir \$HOME/bin” jika belum membuat folder bin, disini saya sudah membutnya.

```
└── bodhi@bodhi-VirtualBox:~$ mkdir $HOME/bin  
└── bodhi@bodhi-VirtualBox:~$ mkdir: cannot create directory '/home/bodhi/bin': File exists  
└── bodhi@bodhi-VirtualBox:~$
```

2. Lalu masuk ke directory \$Home/bin dengan mengetikan “cd \$Home/bin” .

```
└── bodhi@bodhi-VirtualBox:~/bin$  
└── bodhi@bodhi-VirtualBox:~$ mkdir $HOME/bin  
└── bodhi@bodhi-VirtualBox:~$ mkdir: cannot create directory '/home/bodhi/bin': File exists  
└── bodhi@bodhi-VirtualBox:~$ cd $HOME/bin  
└── bodhi@bodhi-VirtualBox:~/bin$
```

3. Install software untuk mengedit .sh, disini saya menggunakan MC(Midnight Commander), dengan mengetikan “sudo apt install mc”.

```
└── bodhi@bodhi-VirtualBox:~/bin$  
└── bodhi@bodhi-VirtualBox:~$ mkdir $HOME/bin  
└── bodhi@bodhi-VirtualBox:~$ mkdir: cannot create directory '/home/bodhi/bin': File exists  
└── bodhi@bodhi-VirtualBox:~$ cd $HOME/bin  
└── bodhi@bodhi-VirtualBox:~/bin$ sudo apt install mc  
[sudo] password for bodhi:  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
mc is already the newest version (3:4.8.19-1).  
The following packages were automatically installed and are no longer required:  
  libid3tag0 libimlib2 libtorrent19 libxmlrpc-core-c3  
Use 'sudo apt autoremove' to remove them.  
0 upgraded, 0 newly installed, 0 to remove and 126 not upgraded.  
└── bodhi@bodhi-VirtualBox:~/bin$
```

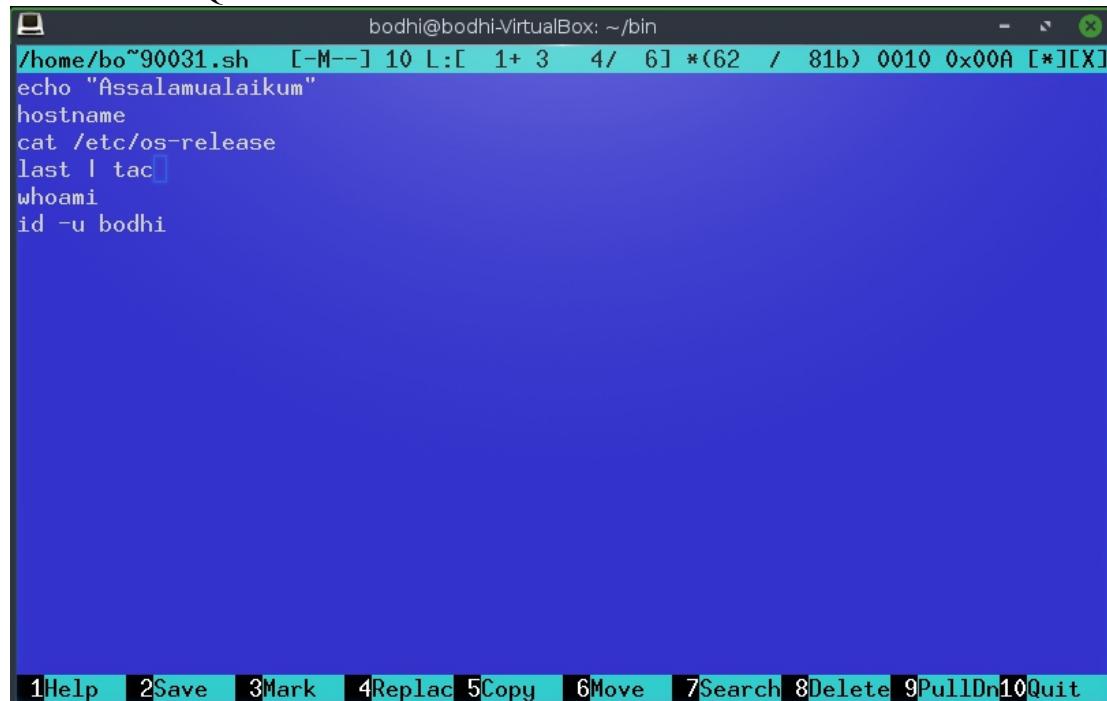
4. Ketikan mcedit L200190031.sh untuk mengedit file L200190031.sh

```
└── bodhi@bodhi-VirtualBox:~/bin$  
└── bodhi@bodhi-VirtualBox:~$ mkdir $HOME/bin  
└── bodhi@bodhi-VirtualBox:~$ mkdir: cannot create directory '/home/bodhi/bin': File exists  
└── bodhi@bodhi-VirtualBox:~$ cd $HOME/bin  
└── bodhi@bodhi-VirtualBox:~/bin$ sudo apt install mc  
[sudo] password for bodhi:  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
mc is already the newest version (3:4.8.19-1).  
The following packages were automatically installed and are no longer required:  
  libid3tag0 libimlib2 libtorrent19 libxmlrpc-core-c3  
Use 'sudo apt autoremove' to remove them.  
0 upgraded, 0 newly installed, 0 to remove and 126 not upgraded.  
└── bodhi@bodhi-VirtualBox:~/bin$ mcedit L200190031.sh
```

5. Edit file L200190031.sh dan ketikan kode berikut:

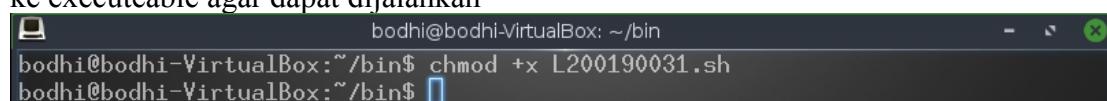
- echo "Assalamualaikum" > mencetak kata Assalamualaikum.
- hostname untuk mengetahui nama komputer.
- cat /etc/os-release untuk mengetahui info OS.
- last | tac untuk mengetahui user terakhir yang login.
- whoami untuk mengetahui nama user.
- id -u bodhi untuk mengetahui id.

Lalu Save dan Quit.



```
/home/bodhi~90031.sh [-M--] 10 L:[ 1+ 3 4/ 6] *(62 / 81b) 0010 0x00A [*][X]
echo "Assalamualaikum"
hostname
cat /etc/os-release
last | tac
whoami
id -u bodhi
```

6. Ketikan chmod +x L200190031.sh untuk memberikan izin dan merubah file ke executeable agar dapat dijalankan



```
bodhi@bodhi-VirtualBox:~/bin$ chmod +x L200190031.sh
bodhi@bodhi-VirtualBox:~/bin$ 
```

7. Ketikan ./L200190031.sh untuk execute file tersebut dan tekan enter



```
bodhi@bodhi-VirtualBox:~/bin$ ./L200190031.sh
bodhi@bodhi-VirtualBox:~/bin$ 
```

8. Hasilnya akan seperti ini:

The screenshot shows two terminal windows side-by-side. The left window displays system configuration variables from a script named L200190031.sh. The right window shows a history of system boot and shutdown events.

```
bodhi@bodhi-VirtualBox:~/bin$ ./L200190031.sh
Assalamualaikum
bodhi-VirtualBox
NAME="Ubuntu"
VERSION="18.04.5 LTS (Bionic Beaver)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 18.04.5 LTS"
VERSION_ID="18.04"
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
VERSION_CODENAME=bionic
UBUNTU_CODENAME=bionic
wtmp begins Sat Oct 17 13:06:13 2020

reboot    system boot  4.15.0-88-generi Sat Oct 17 13:06 - 13:36 (00:30)
bodhi     tty7        :0                  Sat Oct 17 13:06 - 13:36 (00:30)
reboot    system boot  4.15.0-88-generi Sun Oct 18 11:18 - 12:08 (00:50)
bodhi     tty7        :0                  Sun Oct 18 11:18 - 12:08 (00:50)
reboot    system boot  4.15.0-88-generi Thu Oct 22 13:17 - 13:20 (00:03)
bodhi     tty7        :0                  Thu Oct 22 13:17 - 13:19 (00:02)

bodhi@bodhi-VirtualBox:~/bin$
```

| User | TTY | Time | Event |
|--------------------------------|-------------|------------------|------------------------------------|
| 12001900 | tty7 | :0 | Fri Nov 27 20:39 - 20:41 (00:01) |
| bodhi | tty7 | :0 | Fri Nov 27 20:41 - 20:42 (00:00) |
| bodhi | tty7 | :0 | Fri Nov 27 20:42 - 20:48 (00:06) |
| 12001900 | tty7 | :0 | Fri Nov 27 20:49 - 20:49 (00:00) |
| 12001900 | tty7 | :0 | Fri Nov 27 20:49 - 20:49 (00:00) |
| 12001900 | tty7 | :0 | Fri Nov 27 20:50 - crash (00:48) |
| reboot | system boot | 4.15.0-88-generi | Fri Nov 27 21:38 still running |
| bodhi | tty7 | :0 | Fri Nov 27 21:38 - 21:41 (00:02) |
| bodhi | tty7 | :0 | Fri Nov 27 21:41 - 21:55 (00:13) |
| 12001900 | tty7 | :0 | Fri Nov 27 21:55 - 22:12 (00:16) |
| bodhi | tty7 | :0 | Fri Nov 27 22:12 - 22:16 (00:03) |
| 12001900 | tty7 | :0 | Fri Nov 27 22:16 - 22:25 (00:09) |
| bodhi | tty7 | :0 | Fri Nov 27 22:25 - 22:41 (00:15) |
| 12001900 | tty7 | :0 | Fri Nov 27 22:41 - crash (22:31) |
| reboot | system boot | 4.15.0-88-generi | Sat Nov 28 21:12 still running |
| bodhi | tty7 | :0 | Sat Nov 28 21:12 - 21:13 (00:00) |
| 12001900 | tty7 | :0 | Sat Nov 28 21:13 - 22:16 (3+01:03) |
| bodhi | tty7 | :0 | Tue Dec 1 22:16 - crash (57+11:34) |
| reboot | system boot | 4.15.0-88-generi | Thu Jan 28 09:51 still running |
| bodhi | tty7 | :0 | Thu Jan 28 09:51 gone - no logout |
| bodhi | | | |
| 1000 | | | |
| bodhi@bodhi-VirtualBox:~/bin\$ | | | |

2. Dengan terminal di linux kerjakanlah soal dibawah ini:

a) menggunakan terminal buatlah directory dengan nim masing-masing!

touch L200190031 untuk membuat directory.

```
bodhi@bodhi-VirtualBox:~$ touch L200190031
```

b) Mengubah permission User, Group dan Others.

Ketikan chmod "angka" nim, lalu jalankan dengan ls -l

Keterangan :

r = read

w = write

x = execute

chmod 645 untuk mengubah permissin ke R-w- r-- r-x

```
bodhi@bodhi-VirtualBox:~$ chmod 645 L200190031
bodhi@bodhi-VirtualBox:~$ ls -l
total 36
drwxrwxr-x 2 bodhi bodhi 4096 Jan 28 11:20 bin
drwxr-xr-x 2 bodhi bodhi 4096 Okt 22 14:17 Desktop
drwxr-xr-x 3 bodhi bodhi 4096 Jan 28 13:22 Documents
drwxr-xr-x 2 bodhi bodhi 4096 Jan 28 12:59 Downloads
-rw-r--r-x 1 bodhi bodhi 0 Jan 28 16:19 L200190031 ←——
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Music
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Pictures
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Public
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Templates
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Videos
```

chmod 127 untuk mengubah permissin ke --x -w- Rwx

```
bodhi@bodhi-VirtualBox:~$ chmod 127 L200190031
bodhi@bodhi-VirtualBox:~$ ls -l
total 36
drwxrwxr-x 2 bodhi bodhi 4096 Jan 28 11:20 bin
drwxr-xr-x 2 bodhi bodhi 4096 Okt 22 14:17 Desktop
drwxr-xr-x 3 bodhi bodhi 4096 Jan 28 13:22 Documents
drwxr-xr-x 2 bodhi bodhi 4096 Jan 28 12:59 Downloads
---x-w-rwx 1 bodhi bodhi 0 Jan 28 16:19 L200190031 ←——
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Music
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Pictures
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Public
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Templates
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Videos
```

chmod 703 untuk mengubah permissin ke rwx --- -wx

```
bodhi@bodhi-VirtualBox:~$ chmod 703 L200190031
bodhi@bodhi-VirtualBox:~$ ls -l
total 36
drwxrwxr-x 2 bodhi bodhi 4096 Jan 28 11:20 bin
drwxr-xr-x 2 bodhi bodhi 4096 Okt 22 14:17 Desktop
drwxr-xr-x 3 bodhi bodhi 4096 Jan 28 13:22 Documents
drwxr-xr-x 2 bodhi bodhi 4096 Jan 28 12:59 Downloads
-rwx----wx 1 bodhi bodhi 0 Jan 28 16:19 L200190031 ←——
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Music
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Pictures
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Public
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Templates
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Videos
```

chmod 222 untuk mengubah permissin ke -w- -w- -w-

```
bodhi@bodhi-VirtualBox:~$ chmod 222 L200190031
bodhi@bodhi-VirtualBox:~$ ls -l
total 36
drwxrwxr-x 2 bodhi bodhi 4096 Jan 28 11:20 bin
drwxr-xr-x 2 bodhi bodhi 4096 Okt 22 14:17 Desktop
drwxr-xr-x 3 bodhi bodhi 4096 Jan 28 13:22 Documents
drwxr-xr-x 2 bodhi bodhi 4096 Jan 28 12:59 Downloads
--w--w--w- 1 bodhi bodhi 0 Jan 28 16:19 L200190031 ←——
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Music
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Pictures
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Public
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Templates
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Videos
```

chmod 777 untuk mengubah permissin ke rwx Rwx Rwx

```
bodhi@bodhi-VirtualBox:~$ chmod 777 L200190031
bodhi@bodhi-VirtualBox:~$ ls -l
total 36
drwxrwxr-x 2 bodhi bodhi 4096 Jan 28 11:20 bin
drwxr-xr-x 2 bodhi bodhi 4096 Okt 22 14:17 Desktop
drwxr-xr-x 3 bodhi bodhi 4096 Jan 28 13:22 Documents
drwxr-xr-x 2 bodhi bodhi 4096 Jan 28 12:59 Downloads
-rwxrwxrwx 1 bodhi bodhi 0 Jan 28 16:19 L200190031 ←——
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Music
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Pictures
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Public
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Templates
drwxr-xr-x 2 bodhi bodhi 4096 Okt 17 13:06 Videos
```

c) change the file above with permission 000 then with operand command change the permision.

chmod 000 untuk tidak memberikan permissin apapun.

```
bodhi@bodhi-VirtualBox:~$ chmod 000 L200190031
bodhi@bodhi-VirtualBox:~$ ls -l L200190031
----- 1 bodhi bodhi 0 Jan 28 16:19 L200190031
```

-w- Rw- r-x

chmod u+w untuk menambahkan write di User
chmod g+rw menambahkan read dan write di Group
chmod o+rx menambahkan read dan execute di Other

```
bodhi@bodhi-VirtualBox:~$ chmod u+w L200190031
bodhi@bodhi-VirtualBox:~$ chmod g+rw L200190031
bodhi@bodhi-VirtualBox:~$ chmod o+rx L200190031
```

```
bodhi@bodhi-VirtualBox:~$ ls -l L200190031
```

```
--w-rw-r-x 1 bodhi bodhi 0 Jan 28 16:19 L200190031
```

Rw- Rw- R-w-

chmod u+r untuk menambahkan read di User
chmod o+w untuk menambahkan write di Other
chmod o-x untuk menghapus execute di Other

```
bodhi@bodhi-VirtualBox:~$ chmod u+r L200190031
bodhi@bodhi-VirtualBox:~$ chmod o+w L200190031
bodhi@bodhi-VirtualBox:~$ chmod o-x L200190031
bodhi@bodhi-VirtualBox:~$ ls -l L200190031
-rw-rw-rw- 1 bodhi bodhi 0 Jan 28 16:19 L200190031
```

rwx Rwx Rwx

chmod u+x untuk menambahkan execute di User
chmod g+x untuk menambahkan execute di Group
chmod o+x untuk menambahkan execute di Other

```
bodhi@bodhi-VirtualBox:~$ chmod u+x L200190031
bodhi@bodhi-VirtualBox:~$ chmod g+x L200190031
bodhi@bodhi-VirtualBox:~$ chmod o+x L200190031
bodhi@bodhi-VirtualBox:~$ ls -l L200190031
-rwxrwxrwx 1 bodhi bodhi 0 Jan 28 16:19 L200190031
```

-wx -w- -wx

chmod u-r untuk menghapus read di User
chmod g-r dan g-x untuk menghapus read dan execute di Group
chmod o-r untuk menghapus read di Other

```
bodhi@bodhi-VirtualBox:~$ chmod u-r L200190031
```

```
bodhi@bodhi-VirtualBox:~$ chmod g-r L200190031
```

```
bodhi@bodhi-VirtualBox:~$ chmod g-x L200190031
```

```
bodhi@bodhi-VirtualBox:~$ chmod o-r L200190031
```

```
bodhi@bodhi-VirtualBox:~$ ls -l L200190031
```

```
--wx-w--wx 1 bodhi bodhi 0 Jan 28 16:19 L200190031
```

--x -wx --x

chmod u-w untuk menghapus write di User
chmod g+x untuk menambahkan execute di Group
chmod o-w untuk menghapus write di Other

```
bodhi@bodhi-VirtualBox:~$ chmod u-w L200190031
```

```
bodhi@bodhi-VirtualBox:~$ chmod g+x L200190031
```

```
bodhi@bodhi-VirtualBox:~$ chmod o-w L200190031
```

```
bodhi@bodhi-VirtualBox:~$ ls -l L200190031
```

```
---x-wx--x 1 bodhi bodhi 0 Jan 28 16:19 L200190031
```

3.Jelaskan langkah memasang aplikasi pada Linux OS menggunakan terminal!

(2 aplikasi)

- Aplikasi pemutar video
- Aplikasi file editor

Pertama buka Terminal lalu ketikan sudo apt-get update dahulu, untuk mengupdate repository.

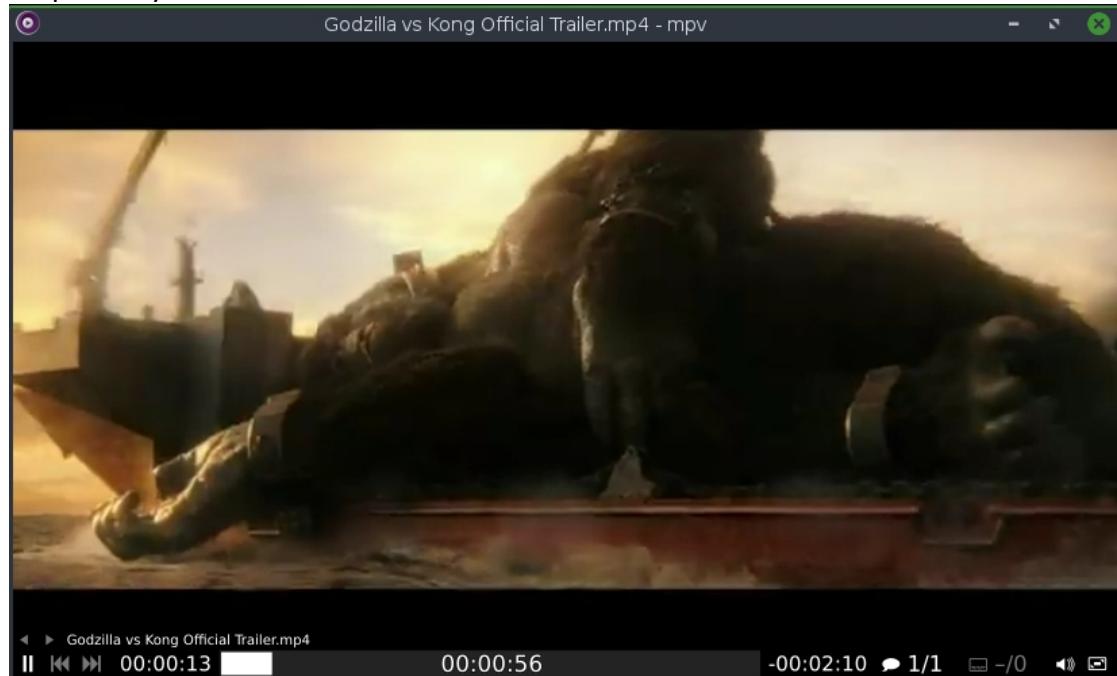
```
bodhi@bodhi-VirtualBox:~$ sudo apt-get update
[sudo] password for bodhi:
Ign:1 http://packages.bodhilinux.com/bodhi bionic InRelease
Hit:2 http://us.archive.ubuntu.com/ubuntu bionic InRelease
Hit:3 https://download.sublimetext.com apt/stable/ InRelease
Hit:4 http://packages.bodhilinux.com/bodhi bionic Release
Get:5 http://us.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Ign:6 http://packages.bodhilinux.com/bodhi bionic Release.gpg
Get:7 http://us.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Fetched 163 kB in 5s (35.6 kB/s)
Reading package lists... Done
```

a. Aplikasi Pemutar Video

1. Ketikan sudo apt-get install mpv (disini saya menggunakan MPV Player untuk pemutar video), tunggu proses sampai selesai.

```
bodhi@bodhi-VirtualBox:~$ sudo apt-get install mpv
[sudo] password for bodhi:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libid3tag0 libimlib2 libtorrent19 libxmlrpc-core-c3
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  geoclue-2.0 iio-sensor-proxy libgeoclue-2-0 libqt5positioning5
  libqt5printsupport5 libqt5qml15 libqt5quick5 libqt5sensors5 libqt5webchannel15
  libqt5webkit5 libuchardet0 phantomjs python3-pyxattr rtmpdump youtube-dl
Suggested packages:
  qt5-qmltooling-plugins python3-pyxattr-dbg python-pyxattr-doc
The following NEW packages will be installed:
  geoclue-2.0 iio-sensor-proxy libgeoclue-2-0 libqt5positioning5
  libqt5printsupport5 libqt5qml15 libqt5quick5 libqt5sensors5 libqt5webchannel15
  libqt5webkit5 libuchardet0 mpv phantomjs python3-pyxattr rtmpdump youtube-dl
0 upgraded, 16 newly installed, 0 to remove and 126 not upgraded.
Need to get 14,2 MB/17,1 MB of archives.
After this operation, 69,3 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 libqt5webkit5 am
d64 5.212.0~alpha2-7ubuntu1 [11,8 MB]
```

2. Aplikasinya :



b. Aplikasi file editor

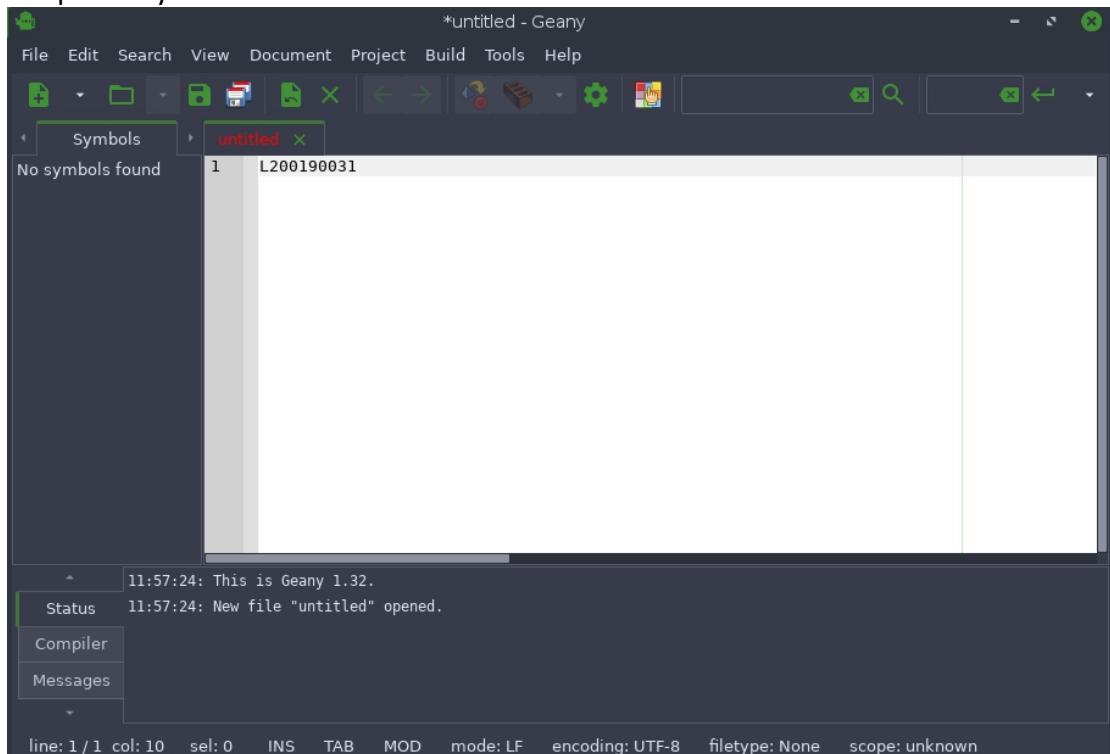
1. Ketikan sudo apt-get install geany (disini saya menggunakan Geany untuk file editornya), tunggu proses selesai.

```

bodhi@bodhi-VirtualBox:~$ y
y: command not found
bodhi@bodhi-VirtualBox:~$ sudo apt-get install geany
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libid3tag0 libimlib2 libtorrent19 libxmlrpc-core-c3
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  geany-common
Suggested packages:
  doc-base
The following NEW packages will be installed:
  geany geany-common
0 upgraded, 2 newly installed, 0 to remove and 126 not upgraded.
Need to get 2.849 kB of archives.
After this operation, 11.1 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 geany-common all
  1.32-2 [1.816 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 geany amd64 1.32
  -2 [1.033 kB]
Fetched 2.849 kB in 15s (185 kB/s)

```

2. Aplikasinya :



4. Ketiklah program berikut!

Program-a

```

#include <stdlib.h>
#include <string.h>
#include <fcntl.h>
main (int argc, char *argv[]){
int fd, n;
char buf[100];

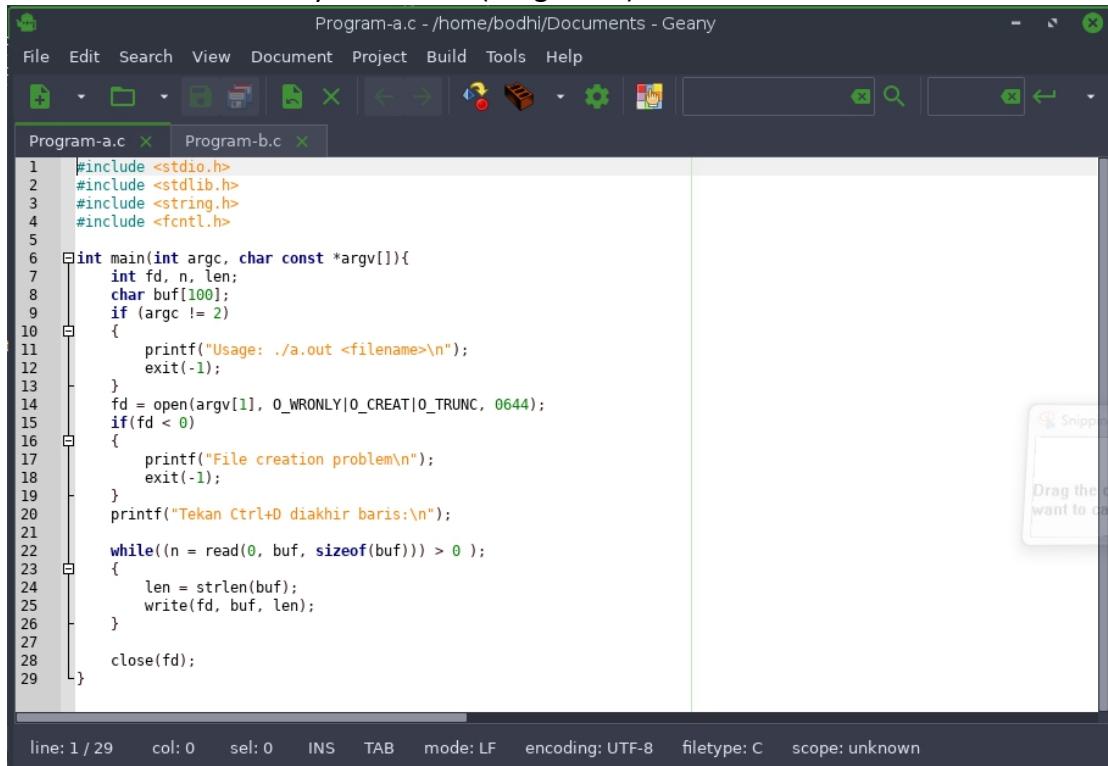
```

```

if (argc != 2)
{
printf("Usage: ./a.out <filename>\n");
exit(-1);
}
fd = open(argv[1], O_WRONLY|O_CREAT|O_TRUNC, 0644);
if(fd < 0)
{
printf("File creation problem\n");
exit(-1);
}
printf("Tekan Ctrl+D di akhir baris:\n");
while((n = read(0, buf, sizeof(buf))) > 0)
{
len = strlen(buf);
write(fd, buf, len);
}
close(fd);
}

```

- Buat program C lalu masukan code , save lalu simpan ke folder yang diinginkan.
Kode dibawah sudah saya benarkan (Program-a.c).



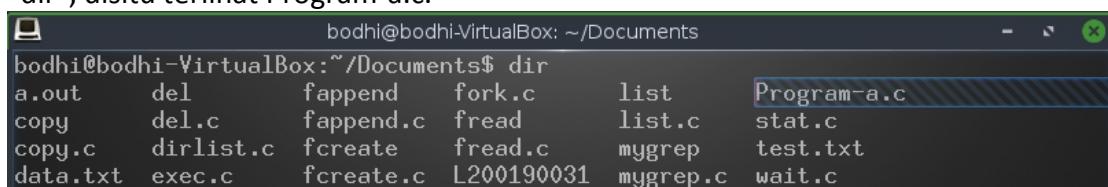
The screenshot shows the Geany IDE interface with the title "Program-a.c - /home/bodhi/Documents - Geany". The menu bar includes File, Edit, Search, View, Document, Project, Build, Tools, and Help. Below the menu is a toolbar with various icons. The main window displays two tabs: "Program-a.c" and "Program-b.c". The "Program-a.c" tab contains the C code shown in the previous block. The status bar at the bottom shows "line: 1 / 29" and other file metadata.

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4 #include <fcntl.h>
5
6 int main(int argc, char const *argv[]){
7     int fd, n, len;
8     char buf[100];
9     if (argc != 2)
10    {
11        printf("Usage: ./a.out <filename>\n");
12        exit(-1);
13    }
14    fd = open(argv[1], O_WRONLY|O_CREAT|O_TRUNC, 0644);
15    if(fd < 0)
16    {
17        printf("File creation problem\n");
18        exit(-1);
19    }
20    printf("Tekan Ctrl+D diakhir baris:\n");
21
22    while((n = read(0, buf, sizeof(buf))) > 0 )
23    {
24        len = strlen(buf);
25        write(fd, buf, len);
26    }
27
28    close(fd);
29 }

```

- Masuk ke directory Documents “cd Documents”, untuk mengecek file tadi, ketikan “dir”, disitu terlihat Program-a.c.



The screenshot shows a terminal window with the command "bodhi@bodhi-VirtualBox: ~/Documents\$ dir" entered. The output lists several files: a.out, del, fappend, fork.c, list, Program-a.c, copy, del.c, fappend.c, fread, list.c, stat.c, copy.c, dirlist.c, fcreate, fread.c, mygrep, test.txt, data.txt, exec.c, fcreate.c, L200190031, mygrep.c, and wait.c. The file "Program-a.c" is highlighted in blue.

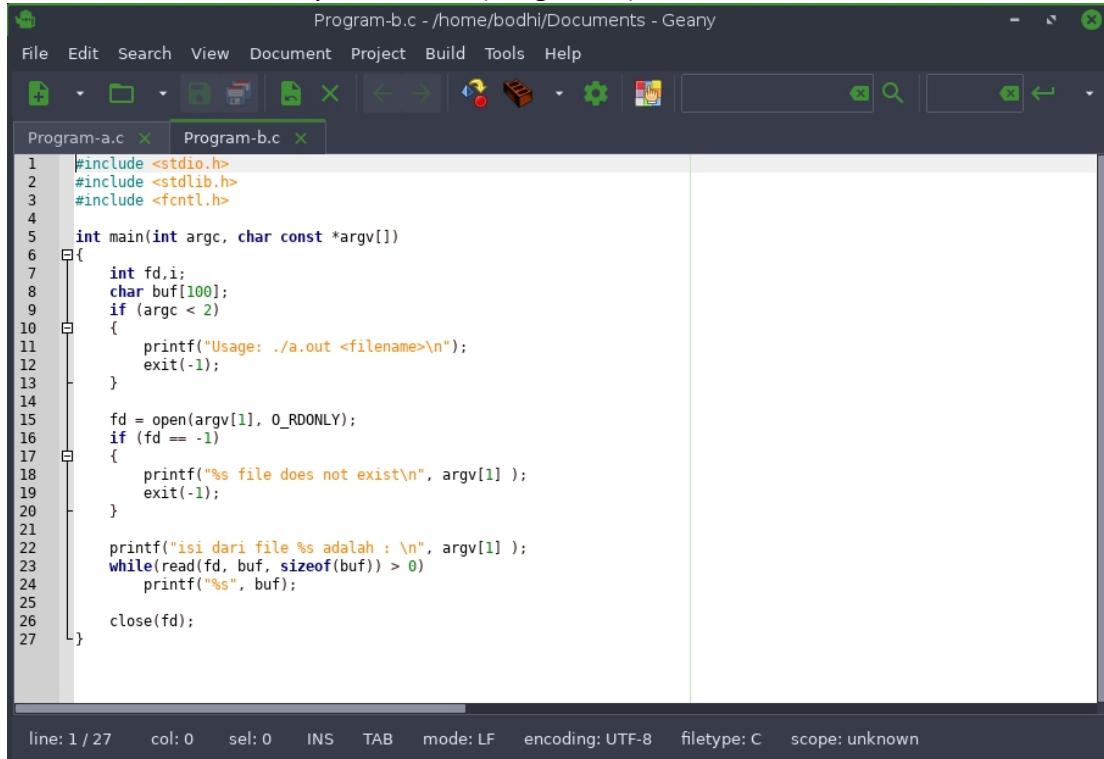
3. Compile file tersebut dengan “gcc -o Program-a Program-a.c”. Lalu ketikan “./Program-a data.txt” untuk membuat file dengan nama data.txt, isi kan kata yang diinginkan “Daffa Pura Alwansyh (L200190031) UAS Praktikum SO”, klik “Shift+Enter” lalu “Ctrl+D” untuk exit.

```
bodhi@bodhi-VirtualBox:~/Documents$ gcc -o Program-a Program-a.c
Program-a.c: In function `main':
Program-a.c:22:13: warning: implicit declaration of function `read'; did you mean `fread'? [-Wimplicit-function-declaration]
    while((n = read(0, buf, sizeof(buf))) > 0 );
              ^~~~~
              fread
Program-a.c:25:3: warning: implicit declaration of function `write'; did you mean `fwrite'? [-Wimplicit-function-declaration]
    write(fd, buf, len);
          ^~~~~
          fwrite
Program-a.c:28:2: warning: implicit declaration of function `close'; did you mean `pclose'? [-Wimplicit-function-declaration]
    close(fd);
          ^~~~~
          pclose
bodhi@bodhi-VirtualBox:~/Documents$ ./Program-a data.txt
Tekan Ctrl+D diakhir baris:
Daffa Putra Alwansyah (L200190031) UAS Praktikum SO
bodhi@bodhi-VirtualBox:~/Documents$ █
```

Program-b

```
#include <stdlib.h>
#include <fcntl.h>
main(int argc, char *argv[]){
int i;
char buf[100];
if (argc < 2)
{
printf("Usage: .a/.out <filename>\n");
exit(-1)
fd = open(argv[1], O_RDONLY);
if(fd == -1)
{
printf("%s file does not exist\n", argv [1]);
exit(-1);
}
printf("Isi dari file %s adalah : \n", argv[1]);
while(read(fd, buf, sizeof(buf)) > 0)
printf("%s", buf);
(fd);
}
```

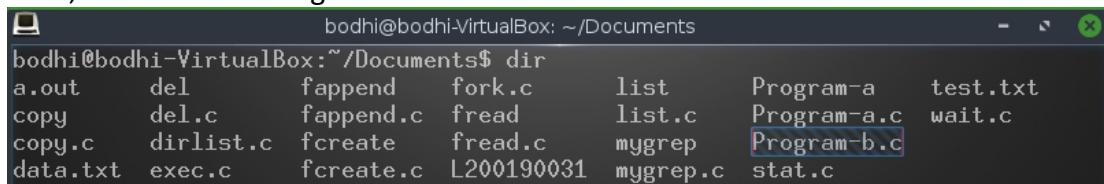
1. Buat program C lalu masukan code , save lalu simpan ke folder yang diinginkan. Kode dibawah sudah saya benarkan (Program-b).



```
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <fcntl.h>
4
5 int main(int argc, char const *argv[])
6 {
7     int fd,i;
8     char buf[100];
9     if (argc < 2)
10    {
11        printf("Usage: ./a.out <filename>\n");
12        exit(-1);
13    }
14
15    fd = open(argv[1], O_RDONLY);
16    if (fd == -1)
17    {
18        printf("%s file does not exist\n", argv[1] );
19        exit(-1);
20    }
21
22    printf("isi dari file %s adalah : \n", argv[1] );
23    while(read(fd, buf, sizeof(buf)) > 0)
24        printf("%s", buf);
25
26    close(fd);
27 }
```

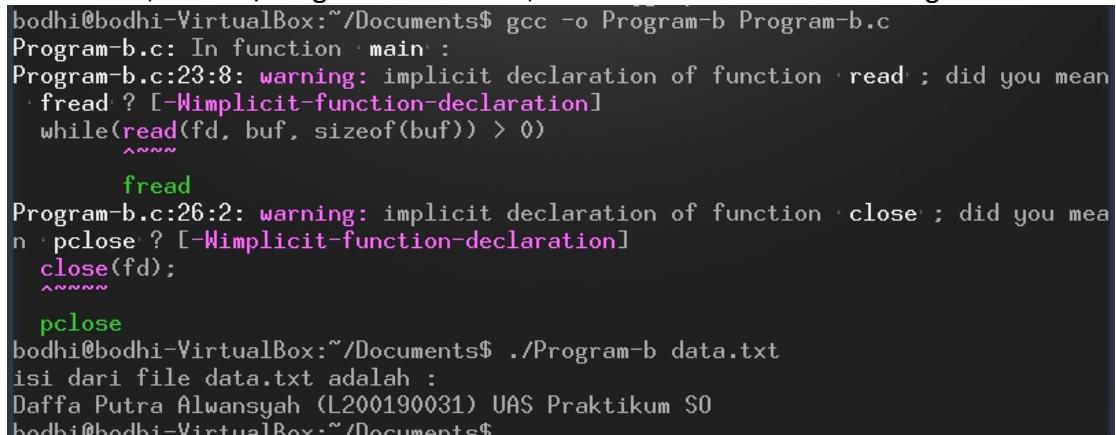
line: 1 / 27 col: 0 sel: 0 INS TAB mode: LF encoding: UTF-8 filetype: C scope: unknown

2. Masuk ke directory Documents “cd Documents”, untuk mengecek file tadi ketikan “dir”, disitu terlihat Program-b.c.



```
bodhi@bodhi-VirtualBox: ~/Documents$ dir
a.out      del      fappend   fork.c      list      Program-a    test.txt
copy       del.c    fappend.c  fread      list.c    Program-a.c  wait.c
copy.c     dirlist.c  fcreate   fread.c   mygrep   Program-b.c
data.txt   exec.c   fcreate.c L200190031 mygrep.c stat.c
```

3. Compile file “gcc -o Program-b Program-b.c”, untuk melihat isi text yang telah dibuat tadi, ketik “./Program-b data.txt”, Isi dari text tadi bisa dilihat digambar.



```
bodhi@bodhi-VirtualBox:~/Documents$ gcc -o Program-b Program-b.c
Program-b.c: In function 'main':
Program-b.c:23:8: warning: implicit declaration of function 'read' ; did you mean
  'fread' ? [-Wimplicit-function-declaration]
  while(read(fd, buf, sizeof(buf)) > 0)
          ^
          fread
Program-b.c:26:2: warning: implicit declaration of function 'close' ; did you mean
  'pclose' ? [-Wimplicit-function-declaration]
  close(fd);
          ^
          pclose
bodhi@bodhi-VirtualBox:~/Documents$ ./Program-b data.txt
isi dari file data.txt adalah :
Daffa Putra Alwansyah (L200190031) UAS Praktikum S0
bodhi@bodhi-VirtualBox:~/Documents$
```