PRAKTIKUM SISTEM OPERASI

MODUL 8

Nama : NICKY JULYATRIKA SARI

NIM : L200200101

PROGRAM STUDI

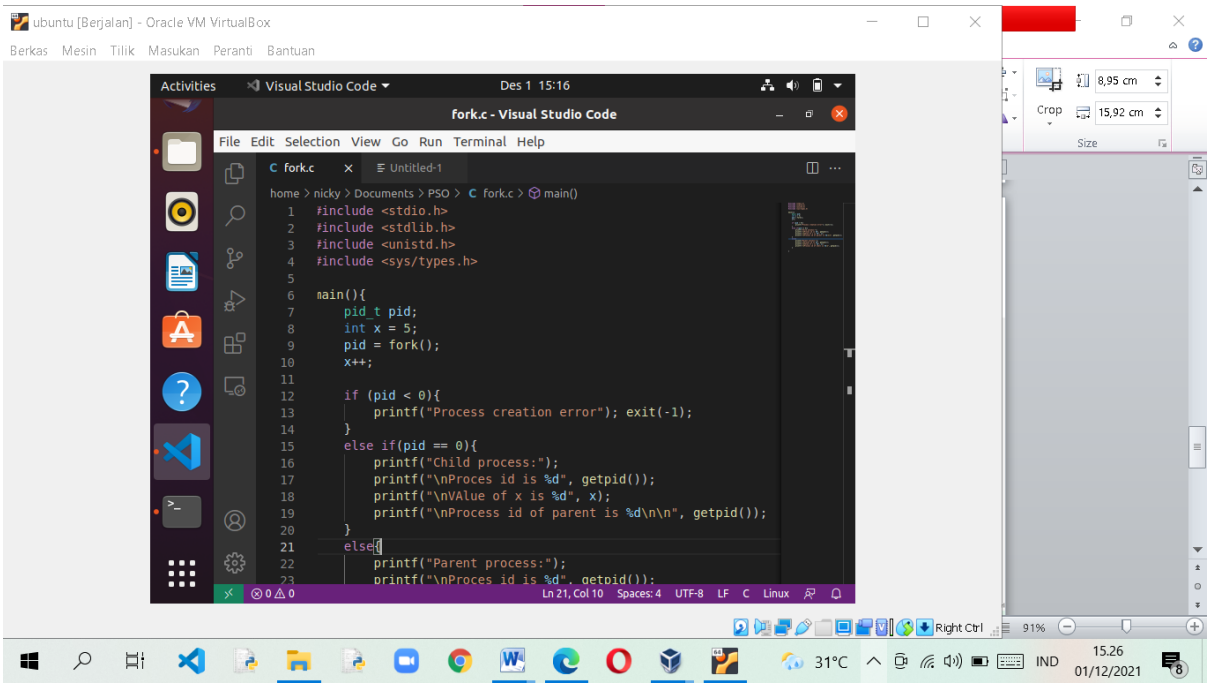
INFORMATIKA

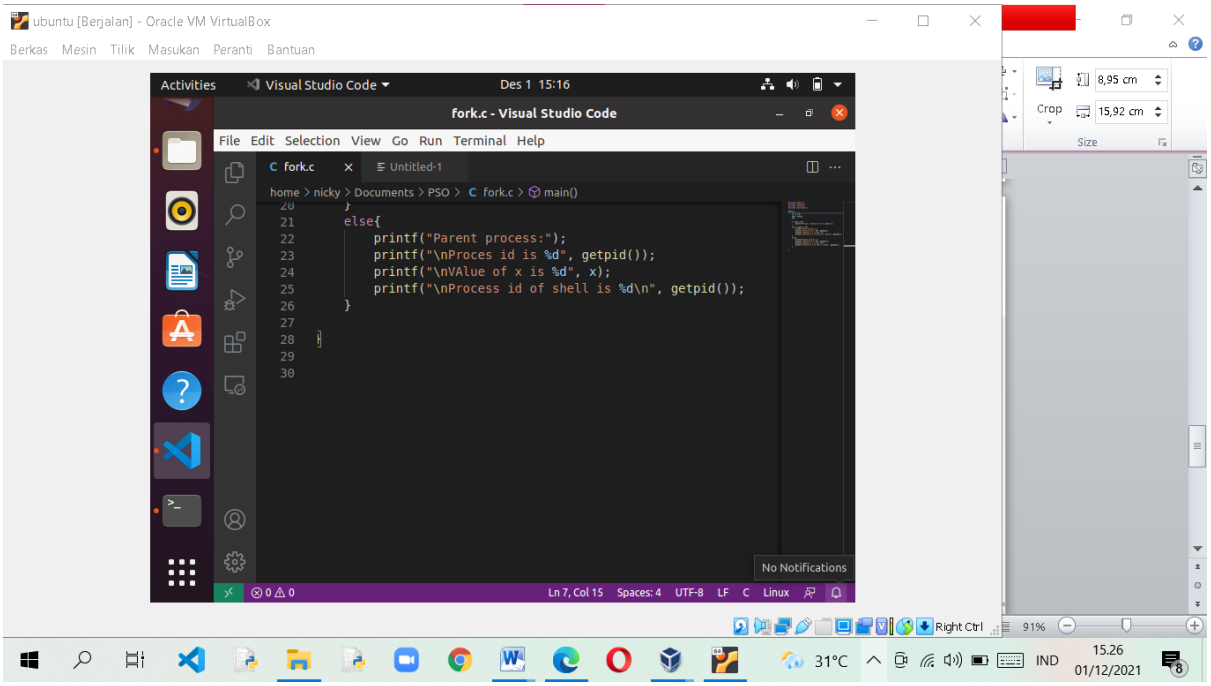
FAKULTAS KOMUNIKASI DAN INFORMATIKA

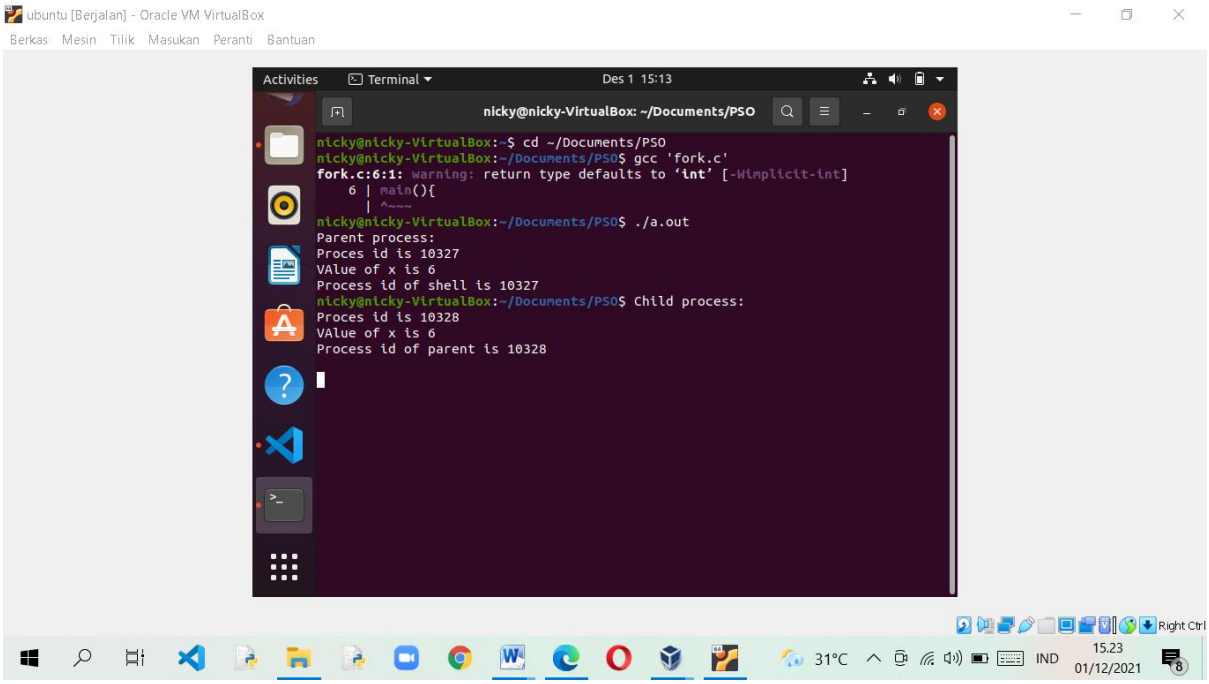
UNIVERSITAS MUHAMMADIYAH SURAKARTA

TAHUN 2021/2022

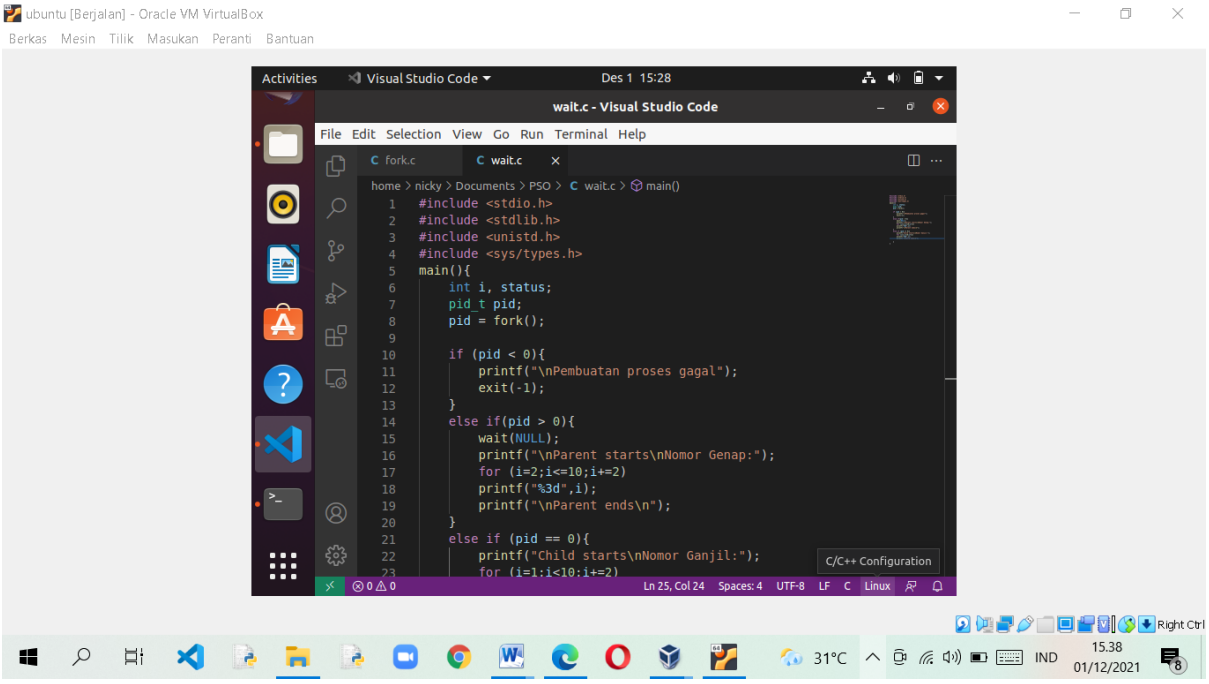
1. Membuat sebuah ‘child process’ (proses baru) dengan menggunakan system call ‘fork’

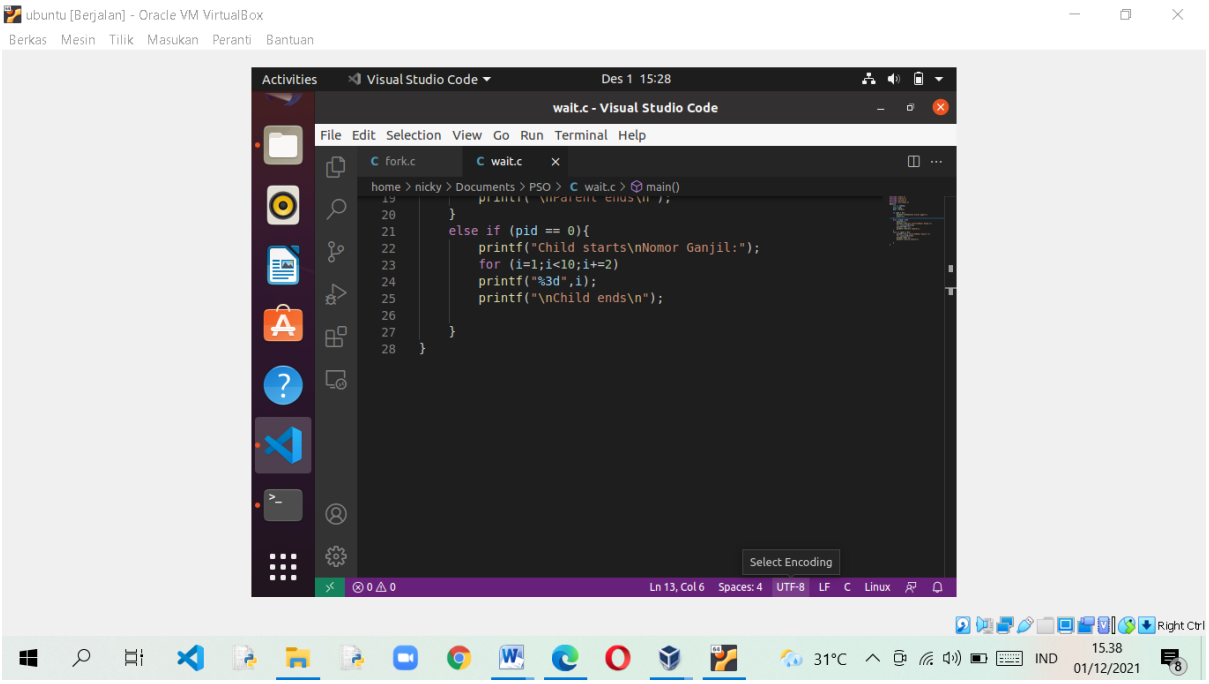


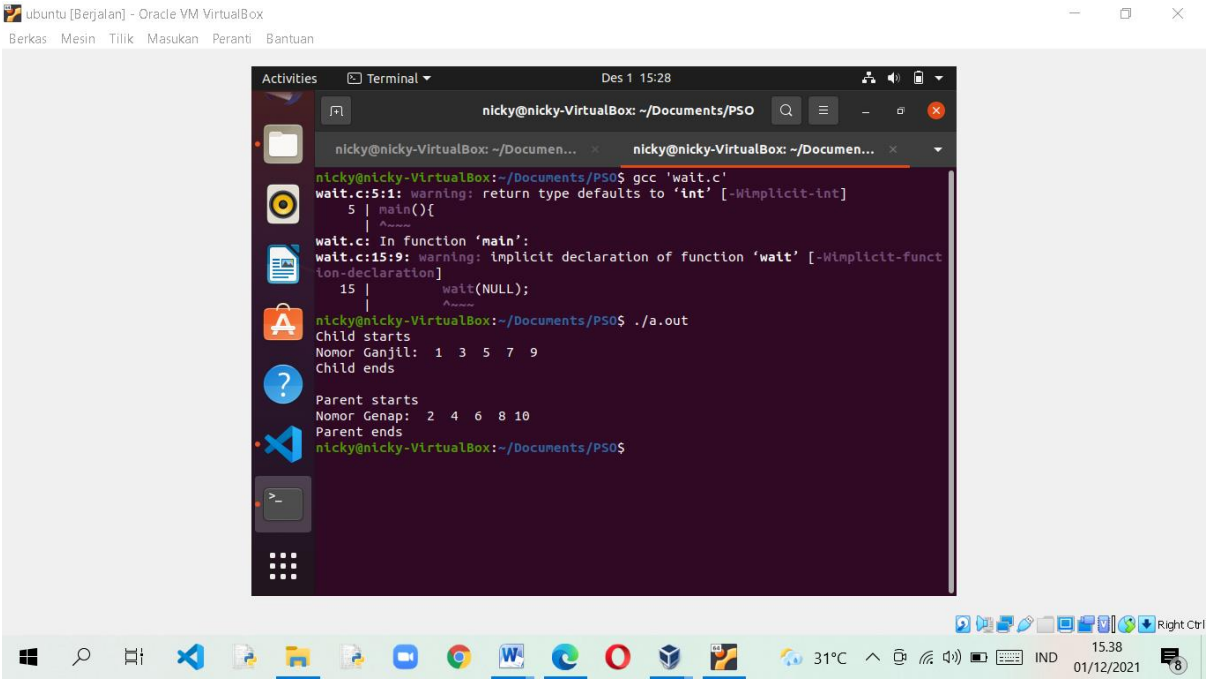




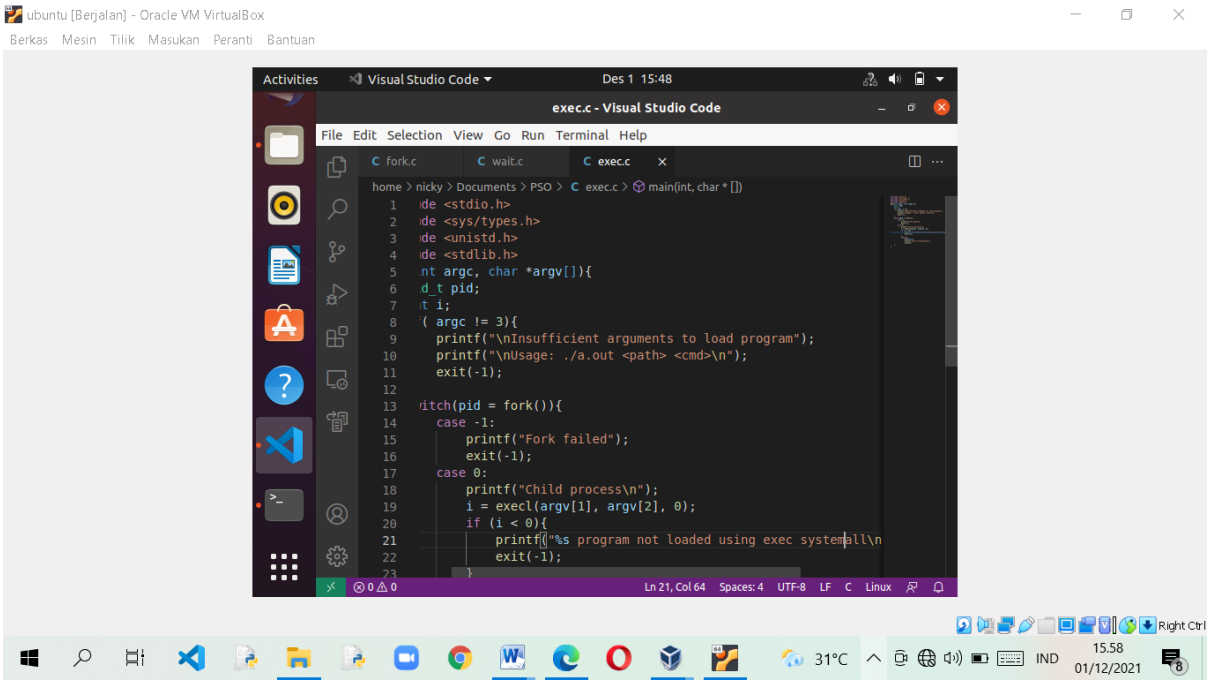
2. Menghentikan sementara (block) proses parent sampai dengan proses child selesai, menggunkaan perintah system call ‘wait’.







3. Loading program yang dapat dieksekusi dalam sebuah ‘child’ proses menggunakan perintah system call ‘exec’.


ubuntu [Berjalan] - Oracle VM VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
Activities
Visual Studio Code
Des 1 15:48
exec.c - Visual Studio Code
File Edit Selection View Go Run Terminal Help
fork.c
wait.c
exec.c
home > nicky > Documents > PSO > exec.c > main(int, char * [])
ide <stdio.h>
ide <sys/types.h>
ide <unistd.h>
ide <stdlib.h>
nt argc, char *argv[]){
d_t pid;
t i;
(argc != 3){
printf("\nInsufficient arguments to load program");
printf("\nUsage: ./a.out <path> <cmd>\n");
exit(-1);
itch(pid = fork()){
case -1:
printf("Fork failed");
exit(-1);
case 0:
printf("Child process\n");
i = execl(argv[1], argv[2], 0);
if (i < 0){
printf("%s program not loaded using exec systemall\n
exit(-1);
}
Ln 21, Col 64 Spaces: 4 UTF-8 LF C Linux
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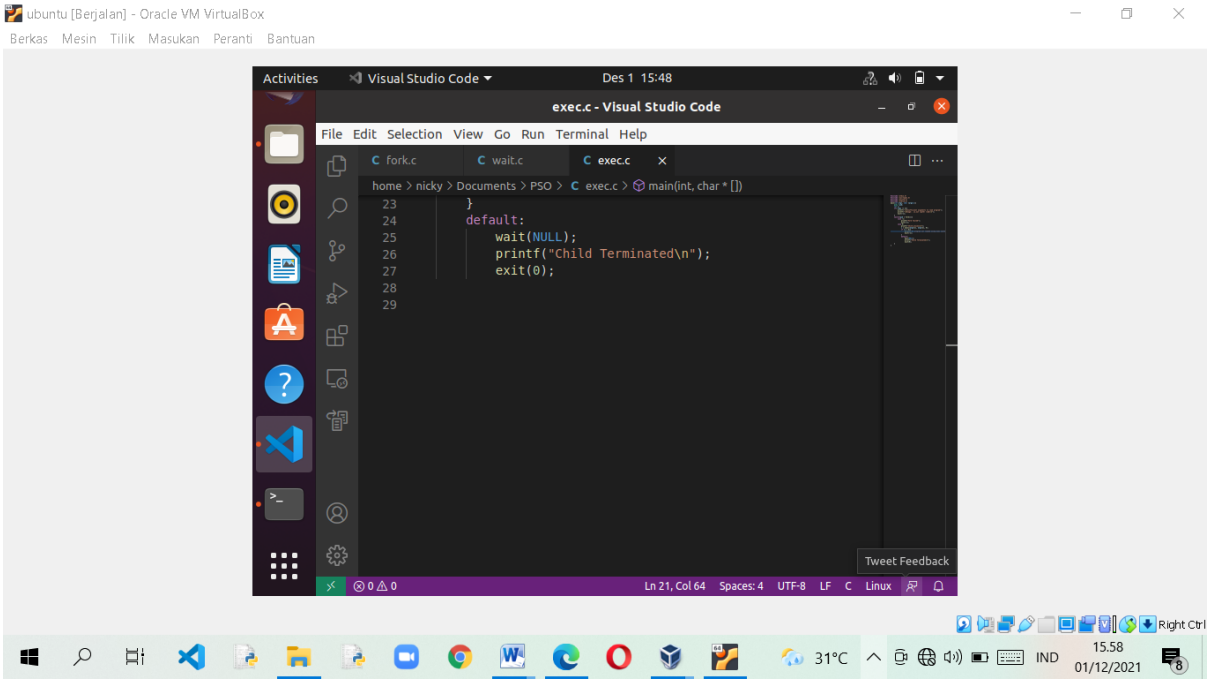
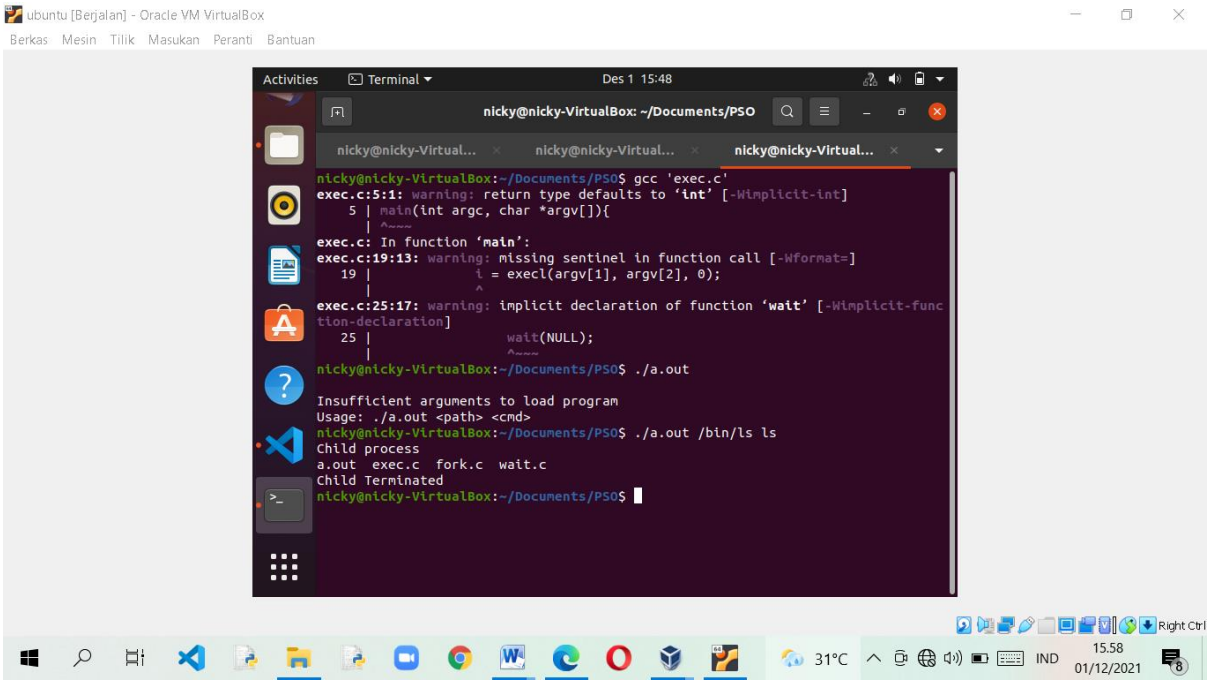
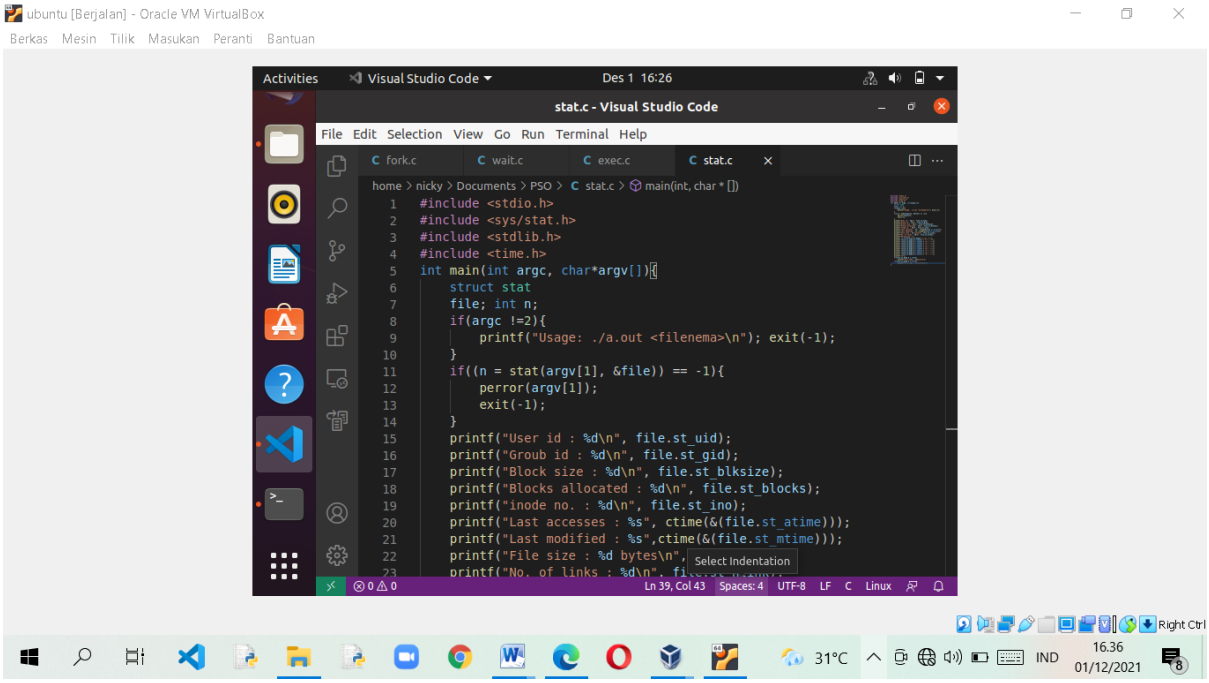
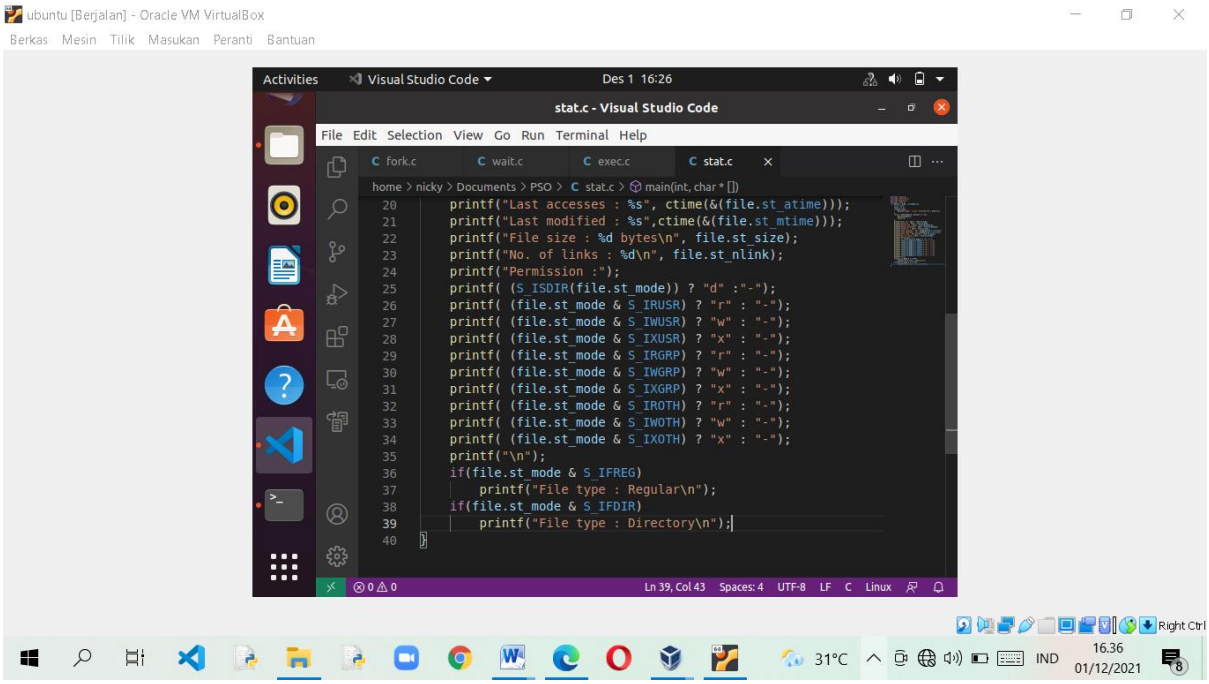
15.58
01/12/2021

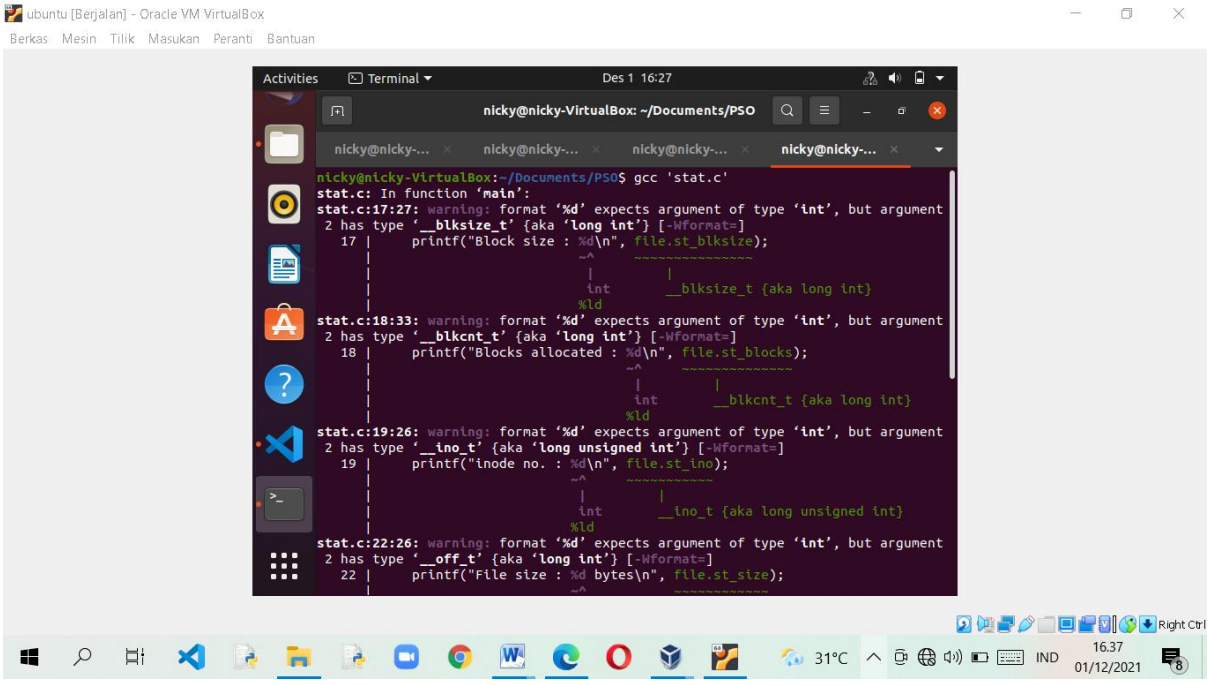

ubuntu [Berjalan] - Oracle VM VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
Activities
Visual Studio Code
Des 1 15:48
exec.c - Visual Studio Code
File Edit Selection View Go Run Terminal Help
fork.c
wait.c
exec.c
home > nicky > Documents > PSO > exec.c > main(int, char * [])
}
default:
wait(NULL);
printf("Child Terminated\n");
exit(0);
Tweet Feedback
Ln 21, Col 64 Spaces: 4 UTF-8 LF C Linux
Right Ctrl
31°C
IND
15.58
01/12/2021

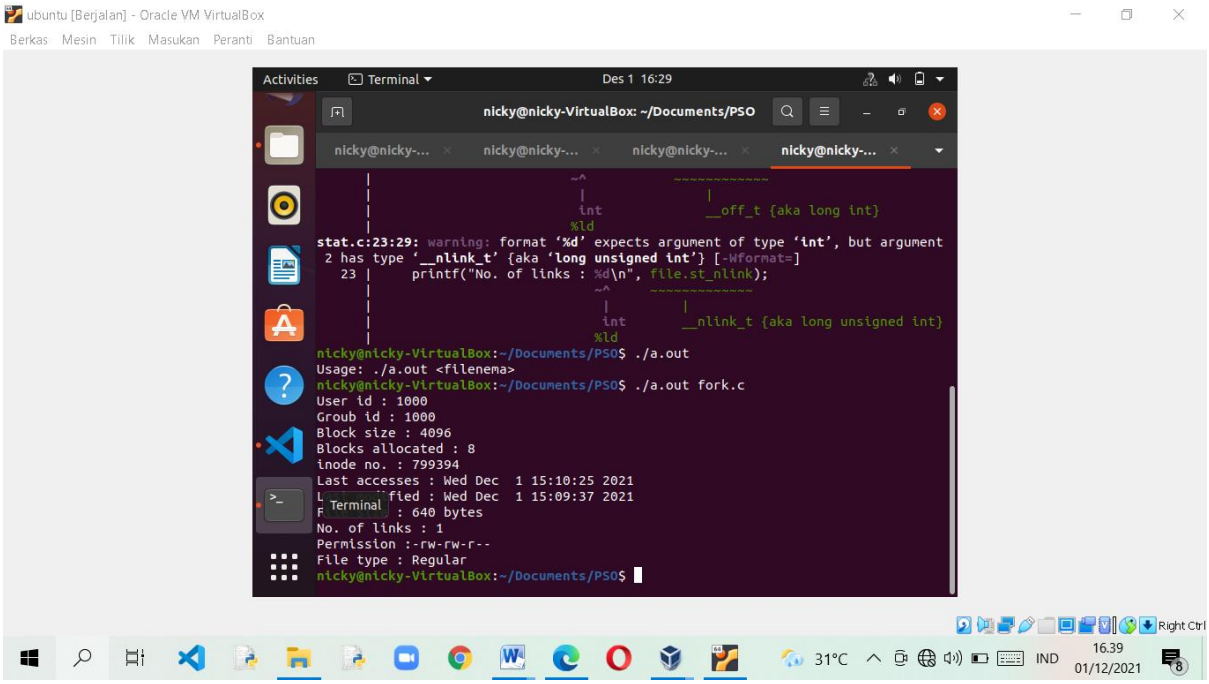


4. Menampilkan status file menggunakan perintah system call ‘stat’

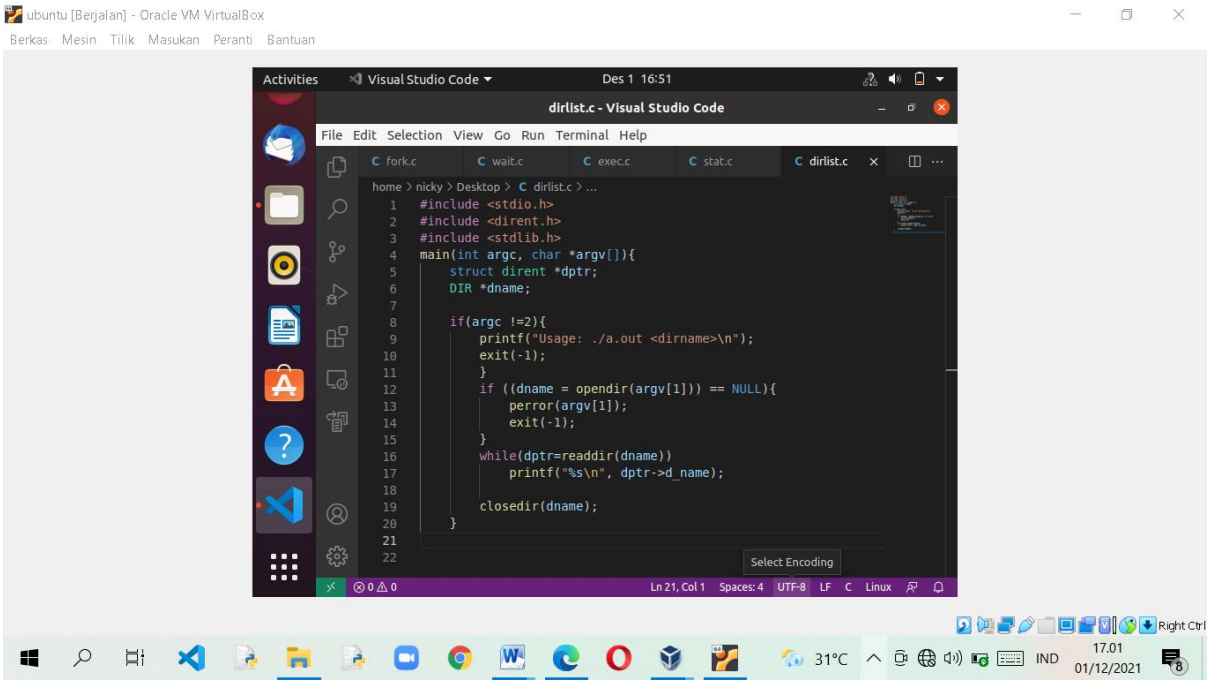


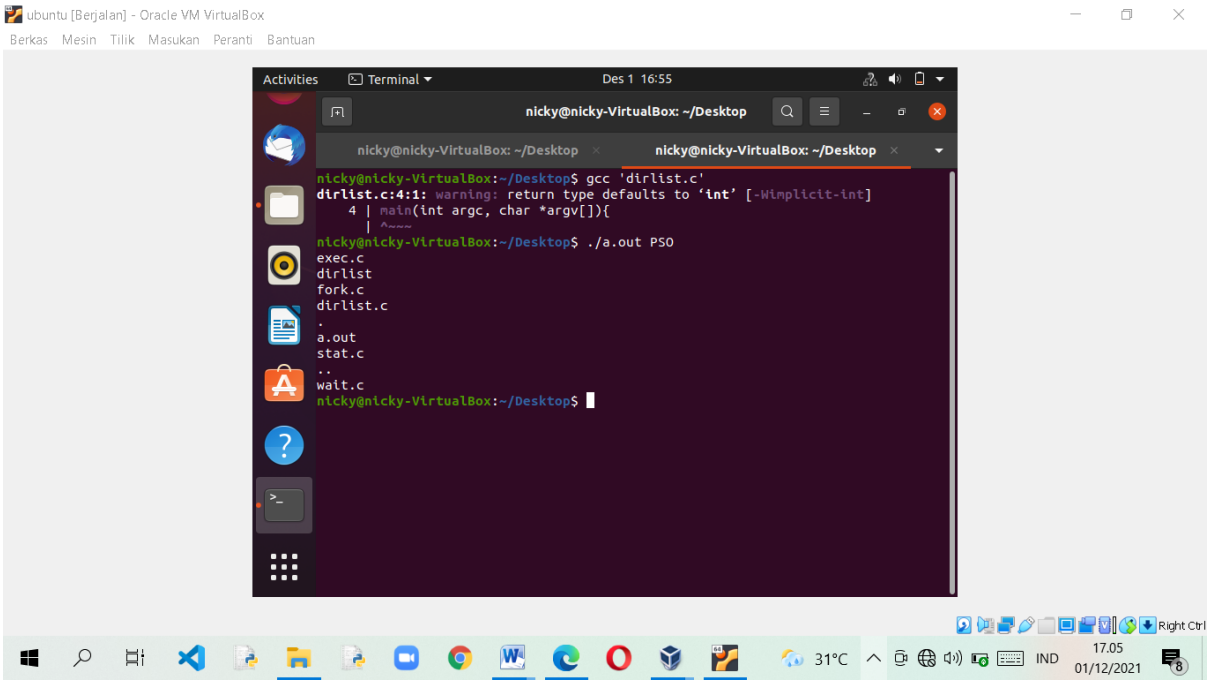

ubuntu [Berjalan] - Oracle VM VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
Activities
Visual Studio Code
Des 1 16:26
stat.c - Visual Studio Code
File Edit Selection View Go Run Terminal Help
fork.c
wait.c
exec.c
stat.c
home > nicky > Documents > PSO > stat.c > main(int, char * [])
printf("Last accesses : %s", ctime(&(file.st_atime)));
printf("Last modified : %s",ctime(&(file.st_mtime)));
printf("File size : %d bytes\n", file.st_size);
printf("No. of links : %d\n", file.st_nlink);
printf("Permission :");
printf((S_ISDIR(file.st_mode)) ? "d" :"-");
printf((file.st_mode & S_IRUSR) ? "r" : "-");
printf((file.st_mode & S_IWUSR) ? "w" : "-");
printf((file.st_mode & S_IXUSR) ? "x" : "-");
printf((file.st_mode & S_IRGRP) ? "r" : "-");
printf((file.st_mode & S_IWGRP) ? "w" : "-");
printf((file.st_mode & S_IXGRP) ? "x" : "-");
printf((file.st_mode & S_IROTH) ? "r" : "-");
printf((file.st_mode & S_IWOTH) ? "w" : "-");
printf((file.st_mode & S_IXOTH) ? "x" : "-");
printf("\n");
if(file.st_mode & S_IFREG)
printf("File type : Regular\n");
if(file.st_mode & S_IFDIR)
printf("File type : Directory\n");
}
Ln 39, Col 43 Spaces: 4 UTF-8 LF C Linux
Right Ctrl
31°C
IND
16.36
01/12/2021


ubuntu [Berjalan] - Oracle VM VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
Activities
Terminal
Des 1 16:27
nicky@nicky-VirtualBox: ~/Documents/PSO
nicky@nicky-...
nicky@nicky-...
nicky@nicky-...
nicky@nicky-...
nicky@nicky-VirtualBox:~/Documents/PSO$ gcc 'stat.c'
stat.c: In function 'main':
stat.c:17:27: warning: format '%d' expects argument of type 'int', but argument 2 has type '__blksize_t' {aka 'long int'} [-Wformat=]
17 | printf("Block size : %d\n", file.st_blksize);
| ~^ ~~~~~~~~~~~~~~~
| | |
| int __blksize_t {aka long int}
| %ld
stat.c:18:33: warning: format '%d' expects argument of type 'int', but argument 2 has type '__blkcnt_t' {aka 'long int'} [-Wformat=]
18 | printf("Blocks allocated : %d\n", file.st_blocks);
| ~^ ~~~~~~~~~~~~~~~~
| | |
| int __blkcnt_t {aka long int}
| %ld
stat.c:19:26: warning: format '%d' expects argument of type 'int', but argument 2 has type '__ino_t' {aka 'long unsigned int'} [-Wformat=]
19 | printf("inode no. : %d\n", file.st_ino);
| ~^ ~~~~~~~~~~~
| | |
| int __ino_t {aka long unsigned int}
| %ld
stat.c:22:26: warning: format '%d' expects argument of type 'int', but argument 2 has type '__off_t' {aka 'long int'} [-Wformat=]
22 | printf("File size : %d bytes\n", file.st_size);
| ~^ ~~~~~~~~~~~~
Right Ctrl
31°C
IND
16.37
01/12/2021



5. Menampilkan isi direktori menggunakan perintah system call ‘readdir’




ubuntu [Berjalan] - Oracle VM VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
Activities
Terminal
Des 1 16:55
nicky@nicky-VirtualBox: ~/Desktop
nicky@nicky-VirtualBox: ~/Desktop
nicky@nicky-VirtualBox: ~/Desktop
nicky@nicky-VirtualBox:~/Desktop$ gcc 'dirlist.c'
dirlist.c:4:1: warning: return type defaults to 'int' [-Wimplicit-int]
4 | main(int argc, char *argv[]){
| ^~~~
nicky@nicky-VirtualBox:~/Desktop$ ./a.out PSO
exec.c
dirlist
fork.c
dirlist.c
.
a.out
stat.c
..
wait.c
nicky@nicky-VirtualBox:~/Desktop$
Right Ctrl
31°C
IND
17.05
01/12/2021