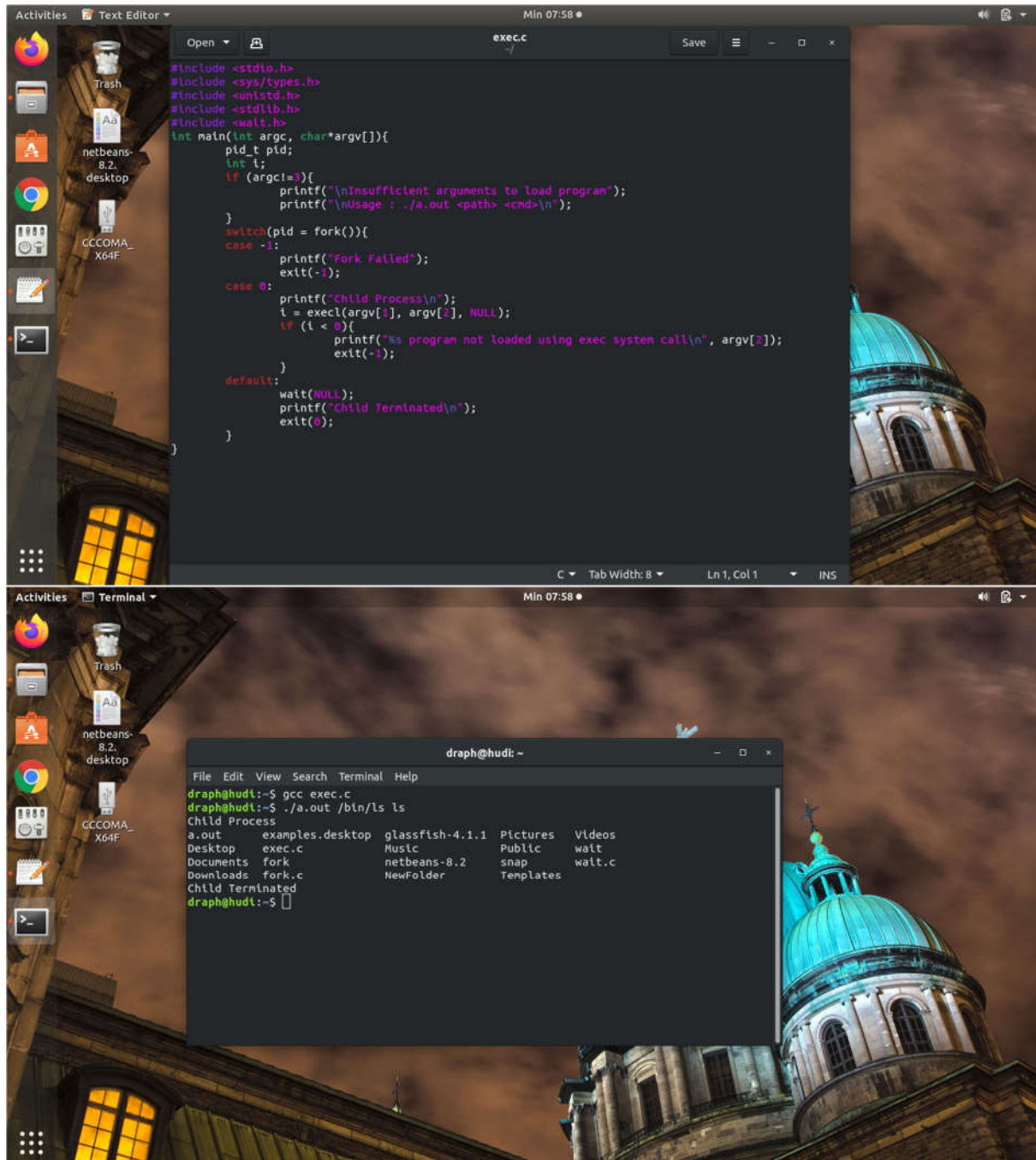


Nama : Hudi Pradjanu

NIM : L200180128

Modul 8

Exec.c



The screenshot displays a Linux desktop environment with a dark theme. The background is a photograph of a large, ornate building with a prominent dome. On the left side, there is a vertical dock containing icons for various applications: a web browser, a file manager, a terminal, and several other utility icons. The top of the screen features a panel with the 'Activities' button, a clock showing 'Min 07:58', and system status icons. Two windows are open. The first window, titled 'Text Editor', shows the source code for a C program named 'exec.c'. The code includes standard headers, defines a main function that uses 'fork()' to create a child process, and then uses 'execl()' to execute a program specified in the arguments. The second window, titled 'Terminal', shows the output of compiling and running the 'exec.c' program. The terminal output indicates that a child process was successfully created and executed, displaying a directory listing of the current directory.

```
#include <stdio.h>
#include <sys/types.h>
#include <unistd.h>
#include <stdlib.h>
#include <wait.h>

int main(int argc, char*argv[]){
    pid_t pid;
    int i;
    if (argc!=3){
        printf("\nInsufficient arguments to load program");
        printf("\nUsage : ./a.out <path> <cmd>\n");
    }
    switch(pid = fork()){
        case -1:
            printf("Fork Failed");
            exit(-1);
        case 0:
            printf("Child Process\n");
            i = execl(argv[i], argv[2], NULL);
            if (i < 0){
                printf("%s program not loaded using exec system call\n", argv[2]);
                exit(-1);
            }
        default:
            wait(NULL);
            printf("Child Terminated\n");
            exit(0);
    }
}
```

```
File Edit View Search Terminal Help
draph@hudi:~$ gcc exec.c
draph@hudi:~$ ./a.out /bin/ls ls
Child Process
a.out      examples.desktop  glassfish-4.1.1  Pictures  Videos
Desktop    exec.c            Music            Public    wait
Documents  fork              netbeans-8.2    snap      wait.c
Downloads  fork.c            NewFolder        Templates
Child Terminated
draph@hudi:~$
```

Stat.c

```
Activities Text Editor Sen 13:33
stat.c
Save

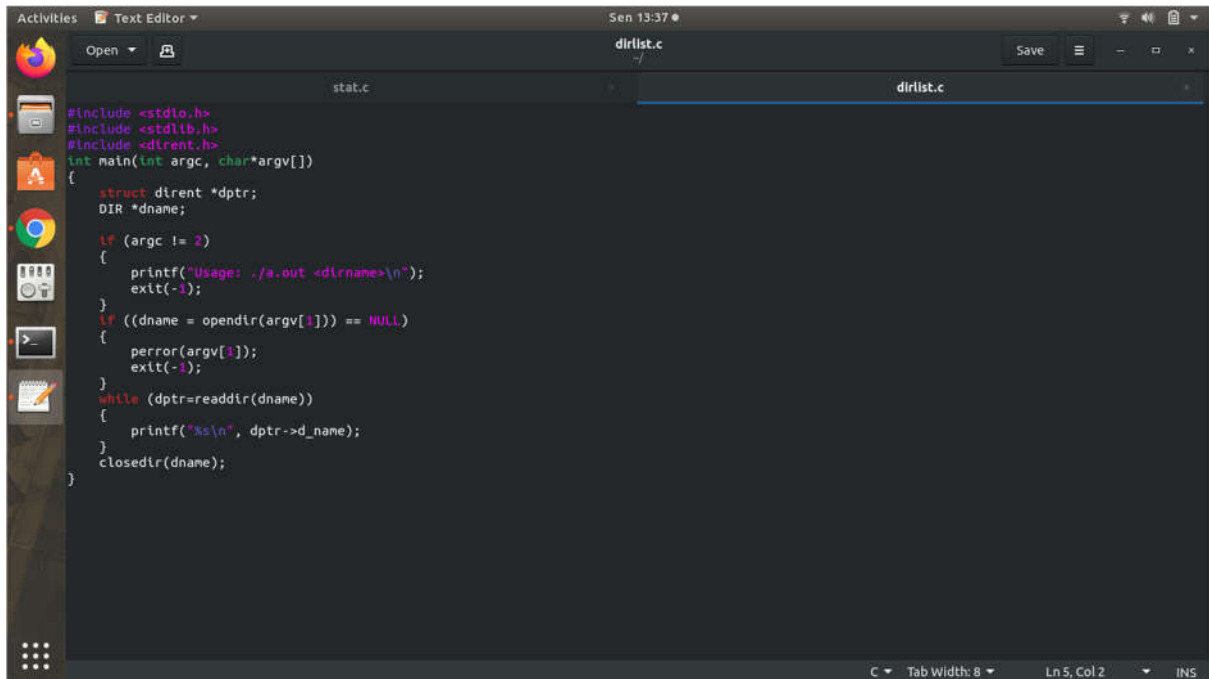
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
#include <sys/stat.h>
int main(int argc, char*argv[]){
    struct stat
    file; int n;
    if (argc != 2)
    {
        printf("Usage: ./a.out <filename>\n"); exit(-1);
    }
    if ((n = stat(argv[1], &file)) == -1)
    {
        perror(argv[1]);
        exit(-1);
    }
    printf("User id : %d\n", file.st_uid);
    printf("Group id: %d\n", file.st_gid);
    printf("Block size: %d\n", file.st_blksize);
    printf("Block allocated: %d\n", file.st_blocks);
    printf("Inode no. : %d\n", file.st_ino);
    printf("Last accessed : %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");
}
```

```
Activities Terminal Sen 13:33
stat.c
Save

#include <stdio.h>
#include <stdlib.h>
#include <time.h>
#include <sys/stat.h>
int main(int argc, char*argv[]){
    struct stat
    file; int n;
    if (argc != 2)
    {
        printf("Usage: ./a.out <filename>\n"); exit(-1);
    }
    if ((n = stat(argv[1], &file)) == -1)
    {
        perror(argv[1]);
        exit(-1);
    }
    printf("User id : %d\n", file.st_uid);
    printf("Group id: %d\n", file.st_gid);
    printf("Block size: %d\n", file.st_blksize);
    printf("Block allocated: %d\n", file.st_blocks);
    printf("Inode no. : %d\n", file.st_ino);
    printf("Last accessed : %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");
}
```

```
draph@hudi: ~
File Edit View Search Terminal Help
draph@hudi:~$ ./a.out stat.c
User id : 1000
Group id: 1000
Block size: 4096
Block allocated: 8
Inode no. : 1842995
Last accessed : Mon Dec  2 13:31:39 2019
Last modified : Tue Nov 19 13:38:19 2019
File size : 1519 bytes
No. of links : 1
Permission : -rw-r--r--
File type : Regular
draph@hudi:~$
```

Dirlist.c



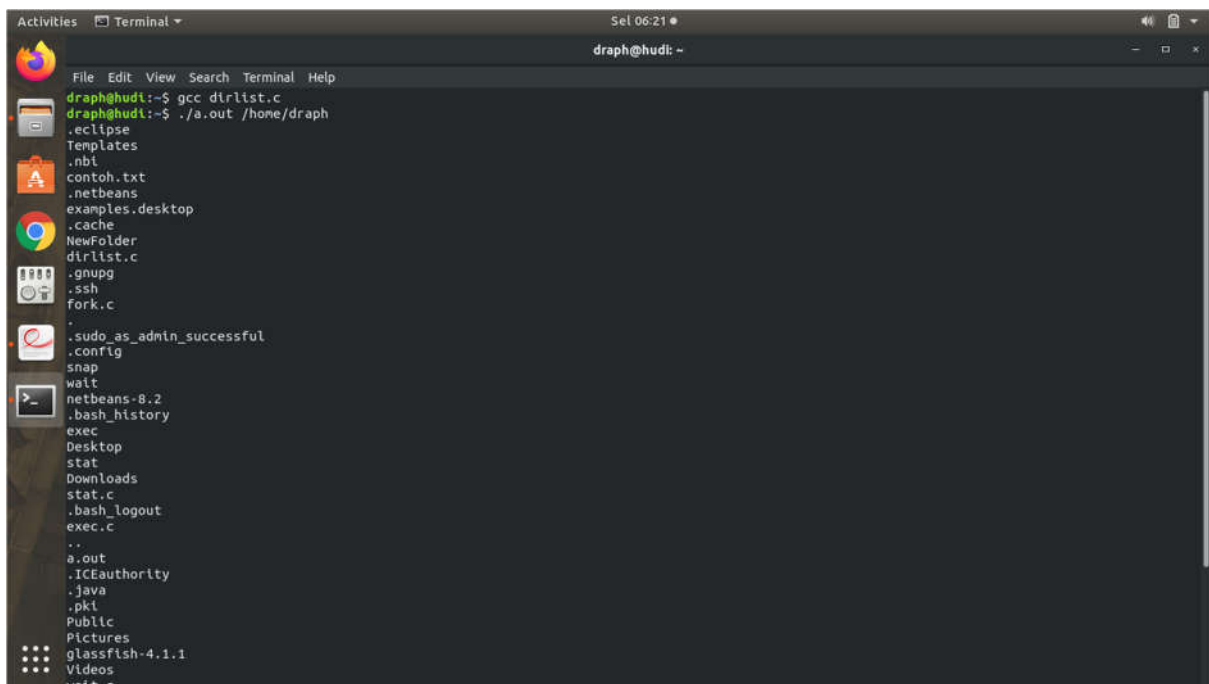
The screenshot shows a text editor window titled "dirlist.c" with the following C code:

```
#include <stdio.h>
#include <stdlib.h>
#include <dirent.h>

int main(int argc, char*argv[])
{
    struct dirent *dptr;
    DIR *dname;

    if (argc != 2)
    {
        printf("Usage: ./a.out <dirname>\n");
        exit(-1);
    }
    if ((dname = opendir(argv[1])) == NULL)
    {
        perror(argv[1]);
        exit(-1);
    }
    while (dptr=readdir(dname))
    {
        printf("%s\n", dptr->d_name);
    }
    closedir(dname);
}
```

The editor interface includes a sidebar with application icons, a top bar with "Open" and "Save" buttons, and a status bar at the bottom showing "Ln 5, Col 2" and "INS".



The screenshot shows a terminal window with the following commands and output:

```
File Edit View Search Terminal Help
draph@hudi:~$ gcc dirlist.c
draph@hudi:~$ ./a.out /home/draph
.eclipse
Templates
.nbl
contoh.txt
.netbeans
examples.desktop
.cache
NewFolder
dirlist.c
.gnupg
.ssh
fork.c
.
.sudo_as_admin_successful
.config
snap
wait
netbeans-8.2
.bash_history
exec
Desktop
stat
Downloads
stat.c
.bash_logout
exec.c
..
a.out
.ICEauthority
.java
.pki
Public
Pictures
glassfish-4.1.1
Videos
wait.c
```

The terminal window has a title bar "draph@hudi: ~" and a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help".