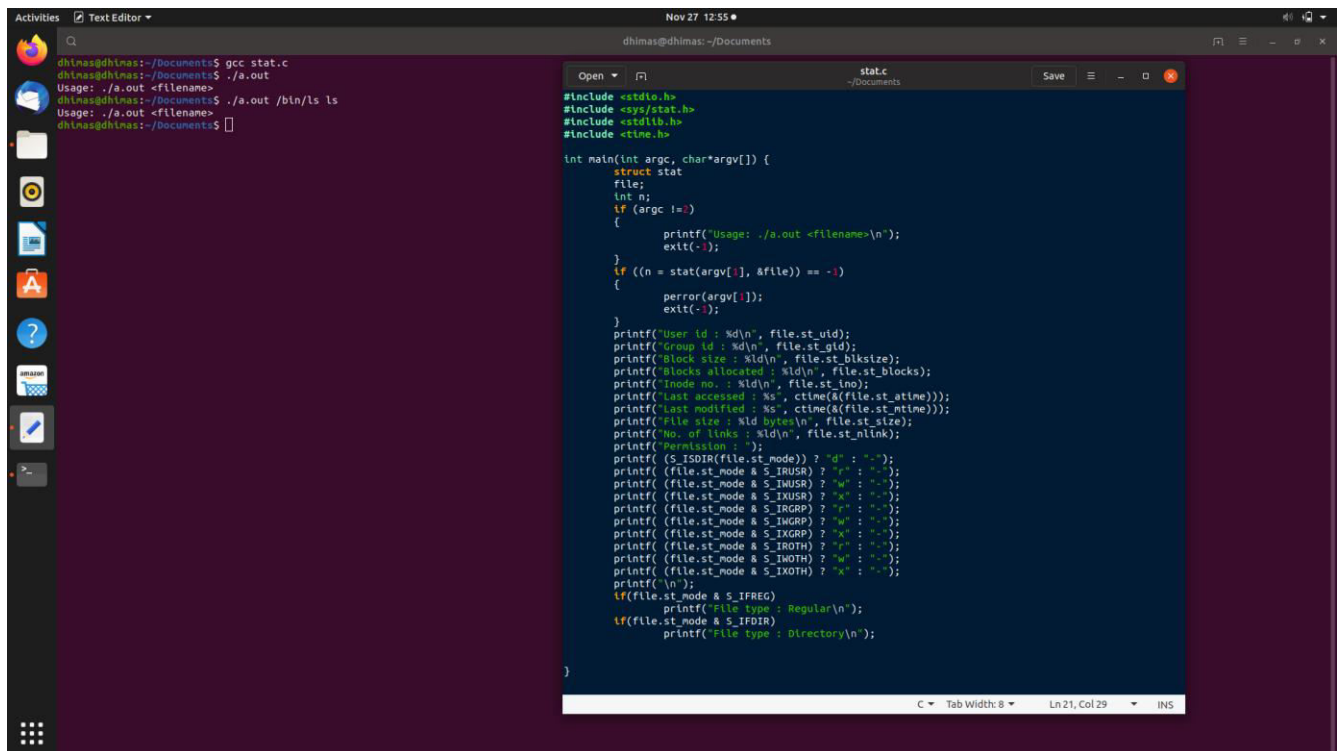


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MODUL 8 (System Call) Praktikum Sistem Operasi

stat.c



The screenshot shows a Linux desktop environment. On the left, a terminal window displays the following commands and output:

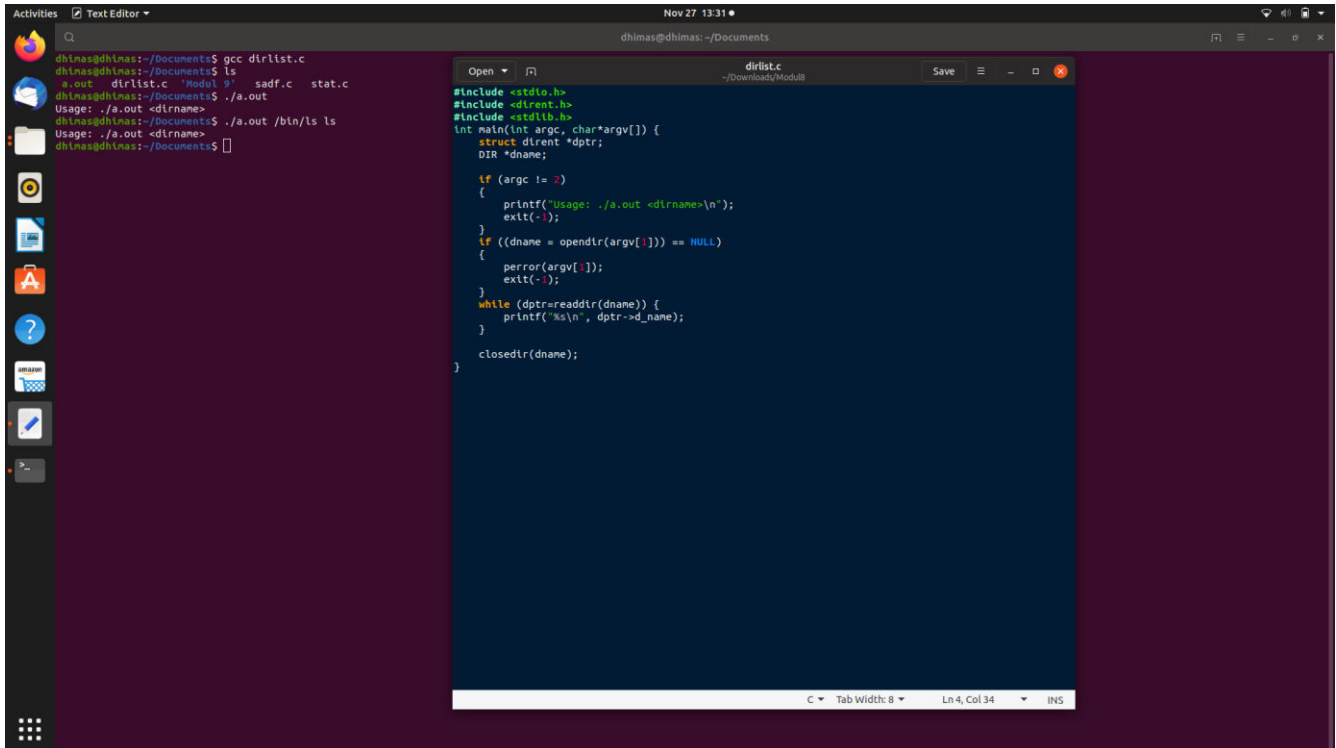
```
dhimas@dhimas:~/Documents$ gcc stat.c
dhimas@dhimas:~/Documents$ ./a.out
Usage: ./a.out <filename>
dhimas@dhimas:~/Documents$ ./a.out /bin/ls ls
Usage: ./a.out <filename>
dhimas@dhimas:~/Documents$
```

On the right, a text editor window titled "stat.c" shows the source code of the program:

```
#include <stdio.h>
#include <sys/stat.h>
#include <stdlib.h>
#include <time.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("Blocks 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");
    if(file.st_mode & S_IFREG)
        printf("File type : Regular\n");
    if(file.st_mode & S_IFDIR)
        printf("File type : Directory\n");
}
```

dirlist.c



The screenshot shows a Linux desktop environment with a terminal window and a text editor window. The terminal window displays the following commands and output:

```
dhimas@dhimas:~/Documents$ gcc dirlist.c
dhimas@dhimas:~/Documents$ ls
a.out  dirlist.c  'Modul 9'  sadf.c  stat.c
dhimas@dhimas:~/Documents$ ./a.out
Usage: ./a.out <dirname>
dhimas@dhimas:~/Documents$ ./a.out /bin/ls ls
Usage: ./a.out <dirname>
dhimas@dhimas:~/Documents$
```

The text editor window, titled "dirlist.c", shows the source code of the program:

```
#include <stdio.h>
#include <dirent.h>
#include <stdlib.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 status bar at the bottom of the text editor indicates "C", "Tab Width: 8", "Ln 4, Col 34", and "115".