

OS Unit 5 – Assignment

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Section : H

Roll # : 16

Question :

Write a C program to truncate the files in a directory created after a certain date and half it's original size.

Inputs :

1. Directory path
2. Date
3. Size

Source code :

```
#define _POSIX_SOURCE

#include <dirent.h>
#include <errno.h>
#include <sys/types.h>
#include <stdio.h>
#include <time.h>
#include <sys/stat.h>
#include <string.h>
#include <stdlib.h>
#include <unistd.h>

int truncate(const char* path, off_t length);

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

    if ((dir = opendir(argv[1])) == NULL) perror("\nopendir() error");

    else
    {
        printf("\ndirectory %s on : %s/%s/%s contained the following files:",
argv[1], argv[2], argv[3], argv[4]);

        while ((entry = readdir(dir)) != NULL)
        {
            char* t = (char*)calloc(100, sizeof(char));
            struct stat b;

            if (!stat(entry->d_name, &b))
            {
```

```

        strftime(t, 100, "%d/%m/%Y %H:%M:%S", localtime(&b.st_mtime));
        int day = atoi(strtok(t, "/"));
        int month = atoi(strtok(NULL, "/"));
        int year = atoi(strtok(NULL, " "));
        int _day = atoi(argv[2]);
        int _month = atoi(argv[3]);
        int _year = atoi(argv[4]);

        if (_year <= year && _month <= month && _day <= day)
        {
            printf("\nfileName : \"%s\" \n last modified at : %s", entry->
d_name, t);

            char path[100];
            strcpy(path, argv[1]);
            strcat(path, "/");
            strcat(path, entry->d_name);
            int length = b.st_size;
            truncate(path, length / 2);
        }

        else printf("error\n");

        closedir(dir);
    }

    printf("\n");

}

return 0;
}

```

Output :

```

sr42@sr42-VirtualBox:~/Desktop/os_lab/assg4$ ls -l
total 108
-rw-rw-r-- 1 sr42 sr42 10000 Apr 29 12:52 1.txt
-rw-rw-r-- 1 sr42 sr42 10000 Apr 29 12:52 2.txt
-rw-rw-r-- 1 sr42 sr42 10000 Apr 29 12:52 3.txt
-rw-rw-r-- 1 sr42 sr42 10000 Apr 29 12:52 4.txt
-rw-rw-r-- 1 sr42 sr42 10000 Apr 29 12:52 5.txt
-rw-rw-r-- 1 sr42 sr42 10000 Apr 29 12:52 6.txt
-rw-rw-r-- 1 sr42 sr42 10000 Apr 29 12:52 7.txt
-rwxrwxr-x 1 sr42 sr42 17488 Apr 29 13:06 a.out
-rw-rw-r-- 1 sr42 sr42 1013 Apr 29 13:05 truncateDateSize.c
sr42@sr42-VirtualBox:~/Desktop/os_lab/assg4$

```