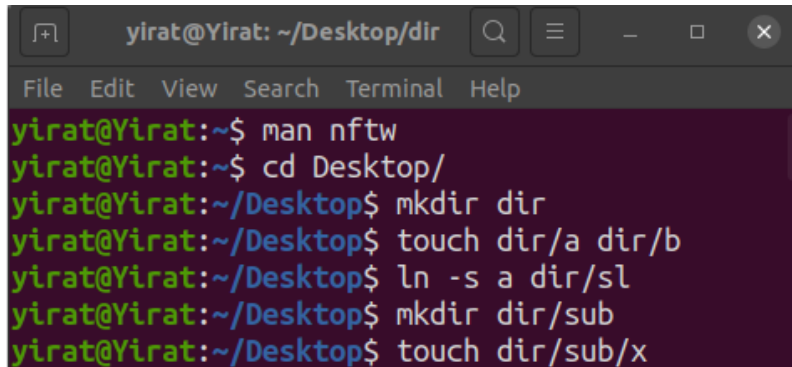


The running output for the specified example:

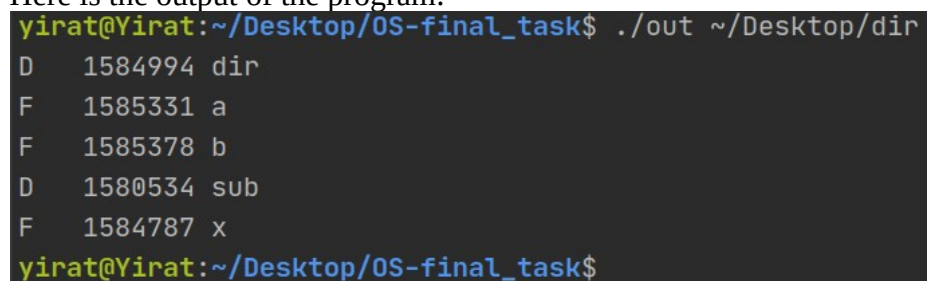
At first, we created the directories and files according to the commands brought by the lecturer:

A terminal window titled 'yirat@Yirat: ~/Desktop/dir' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a series of commands and their outputs: 'man nftw', 'cd Desktop/', 'mkdir dir', 'touch dir/a dir/b', 'ln -s a dir/sl', 'mkdir dir/sub', and 'touch dir/sub/x'.

```
yirat@Yirat:~$ man nftw
yirat@Yirat:~$ cd Desktop/
yirat@Yirat:~/Desktop$ mkdir dir
yirat@Yirat:~/Desktop$ touch dir/a dir/b
yirat@Yirat:~/Desktop$ ln -s a dir/sl
yirat@Yirat:~/Desktop$ mkdir dir/sub
yirat@Yirat:~/Desktop$ touch dir/sub/x
```

Then, we ran the program on the “dir” directory.

Here is the output of the program:

A terminal window titled 'yirat@Yirat: ~/Desktop/OS-final_task\$' showing the output of a program. The output lists directory and file information: 'D 1584994 dir', 'F 1585331 a', 'F 1585378 b', 'D 1580534 sub', and 'F 1584787 x'.

```
yirat@Yirat:~/Desktop/OS-final_task$ ./out ~/Desktop/dir
D 1584994 dir
F 1585331 a
F 1585378 b
D 1580534 sub
F 1584787 x
yirat@Yirat:~/Desktop/OS-final_task$
```

Now, to know that the output is correct, we ran the “stat” command:

```
yirat@Yirat: ~/Desktop/dir
File Edit View Search Terminal Help
yirat@Yirat:~/Desktop$ stat dir
File: dir
Size: 4096      Blocks: 8      IO Block: 4096  directory
Device: 10305h/66309d Inode: 1584994 Links: 3
Access: (0775/drwxrwxr-x)  Uid: ( 1000/   yirat)   Gid: ( 1000/   yirat)
Access: 2020-08-04 13:47:29.166982422 +0300
Modify: 2020-08-04 13:45:08.277971905 +0300
Change: 2020-08-04 13:45:08.277971905 +0300
Birth: -
yirat@Yirat:~/Desktop$ cd dir
yirat@Yirat:~/Desktop/dir$ stat a
File: a
Size: 0      Blocks: 0      IO Block: 4096  regular empty file
Device: 10305h/66309d Inode: 1585331 Links: 1
Access: (0664/-rw-rw-r--) Uid: ( 1000/   yirat)   Gid: ( 1000/   yirat)
Access: 2020-08-04 13:44:25.844399958 +0300
Modify: 2020-08-04 13:44:25.844399958 +0300
Change: 2020-08-04 13:44:25.844399958 +0300
Birth: -
yirat@Yirat:~/Desktop/dir$ stat b
File: b
Size: 0      Blocks: 0      IO Block: 4096  regular empty file
Device: 10305h/66309d Inode: 1585378 Links: 1
Access: (0664/-rw-rw-r--) Uid: ( 1000/   yirat)   Gid: ( 1000/   yirat)
Access: 2020-08-04 13:44:25.844399958 +0300
Modify: 2020-08-04 13:44:25.844399958 +0300
Change: 2020-08-04 13:44:25.844399958 +0300
Birth: -
yirat@Yirat:~/Desktop/dir$ stat sub
File: sub
Size: 4096      Blocks: 8      IO Block: 4096  directory
Device: 10305h/66309d Inode: 1580534 Links: 2
Access: (0775/drwxrwxr-x)  Uid: ( 1000/   yirat)   Gid: ( 1000/   yirat)
Access: 2020-08-04 13:47:29.170982242 +0300
Modify: 2020-08-04 13:45:21.397256597 +0300
Change: 2020-08-04 13:45:21.397256597 +0300
Birth: -
yirat@Yirat:~/Desktop/dir$ cd sub
yirat@Yirat:~/Desktop/dir/sub$ stat x
File: x
Size: 0      Blocks: 0      IO Block: 4096  regular empty file
Device: 10305h/66309d Inode: 1584787 Links: 1
Access: (0664/-rw-rw-r--) Uid: ( 1000/   yirat)   Gid: ( 1000/   yirat)
Access: 2020-08-04 13:45:21.397256597 +0300
Modify: 2020-08-04 13:45:21.397256597 +0300
Change: 2020-08-04 13:45:21.397256597 +0300
Birth: -
yirat@Yirat:~/Desktop/dir/sub$ cd ..
yirat@Yirat:~/Desktop/dir$ stat sl
File: sl -> a
Size: 1      Blocks: 0      IO Block: 4096  symbolic link
Device: 10305h/66309d Inode: 1580345 Links: 1
Access: (0777/lrwxrwxrwx) Uid: ( 1000/   yirat)   Gid: ( 1000/   yirat)
Access: 2020-08-04 13:44:53.402802442 +0300
Modify: 2020-08-04 13:44:51.398915970 +0300
Change: 2020-08-04 13:44:51.398915970 +0300
Birth: -
yirat@Yirat:~/Desktop/dir$
```

As we can see, the stat command shows us, among other things, the file name (in the yellow square), the file type (in the green square), and the Inode of the file (in the red square).

Now, we know that the output is correct:

All file types appear in the output except for the “sl” file, whose type is symbolic link (which we were asked not to print).