DeleteDirectory , search and printDirectoryTree function work RECURSIVELY.

Move function is writen as suggested in PS.

Creating a File:

First of all listing the content in current path(root/)

Then, Chose option 3 to create a file/directory

File1.txt is created. I printed the list of content tos how it.

```
----------------------------------------------------------
Listing contents of root/ :
* home/
----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
3
----------------------------------------------------------
Current directory: root/
Create file or directory (f/d): f
Enter name for new file: file1.txt
File created: file1.txt
----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
2
----------------------------------------------------------
Listing contents of root/ :
* home/
file1.txt
----------------------------------------------------------
```

Creating the Directory:

Listing the content in current path

Choose the 3 option to create a directory

Create a directory with newDirectory name

Then listing the content again to see its created

```
---------------------------------------------------------
Listing contents of root/home/documents/ :
report.txt
readme.docx
* ss/
---------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
3
---------------------------------------------------------
Current directory: root/home/documents/
Create file or directory (f/d): d
Enter name for new directory: newDirectory
Directory created: newDirectory/
---------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
2
---------------------------------------------------------
Listing contents of root/home/documents/ :
report.txt
readme.docx
* ss/
* newDirectory/
---------------------------------------------------------
```

Printing the Tree and Delete Directory and its contents:

First of all printing the tree

Then, delete the directory which is desktop

Then printing the tree again to show directory is deleted recursively.

DeleteDirectory is recursively deleted in my code.

```
----------------------------------------------------------
Path to current directory from root:
* root/ (Current Directory)
    * home/
        * documents/
            report.txt
            readme.docx
            * ss/
    * desktop/
        * assignment1/
        * assignment2/
----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
4
----------------------------------------------------------
Current directory: root/
Enter name of file/directory to delete: desktop
Directory deleted: desktop/
----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
7
----------------------------------------------------------
Path to current directory from root:
* root/ (Current Directory)
    * home/
        * documents/
            report.txt
            readme.docx
            * ss/
----------------------------------------------------------
```

Change Directory:

Listing content in root/ path

Then change the directory to root/home/

After that,printing the list of content tos how cuurent path is changed.

```
-----------------------------------------------------------
Listing contents of root/ :
* home/
file1.txt
-----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
1
-----------------------------------------------------------
Current directory: root/
Enter new directory path: root/home
Directory changed to: root/home/
-----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
2
-----------------------------------------------------------
Listing contents of root/home/ :
* documents/
-----------------------------------------------------------
```

Delete a file:

Readme.txt is deleted. You can see the changes of the list of the content in the output below.

```
Listing contents of root/home/documents/ :
report.txt
readme.docx
* ss/
* newDirectory/
------------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
4
------------------------------------------------------------
Current directory: root/home/documents/
Enter name of file/directory to delete: readme.docx
File deleted: readme.docx
------------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
2
------------------------------------------------------------
Listing contents of root/home/documents/ :
report.txt
* ss/
* newDirectory/
------------------------------------------------------------
```

Move File:

Text1.txt is move from a directory to b directory. You can see in the output blow.

```
/
----------------------------------------------------------
Path to current directory from root:
* root/
    * a/ (Current Directory)
        text1.txt
    * b/
----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
5
----------------------------------------------------------
Current directory: root/a/
Enter the name of file/directory to move: text1.txt
Enter new directory path: root/b
File moved: text1.txt to root/b
----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
7
----------------------------------------------------------
Path to current directory from root:
* root/
    * a/ (Current Directory)
    * b/
        text1.txt
----------------------------------------------------------
```

Sorted by date:

```
----------------------------------------------------------
===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
8
----------------------------------------------------------
Sorted contents of root/home/documents/ by date created:
report.txt (2024-04-22 15:12:43.377)
*ss/ (2024-04-22 15:13:23.801)
*newDirectory/ (2024-04-22 15:24:00.928)
----------------------------------------------------------
```

Search:

Report.txt is searching and found the path. You can check its correct in tree.

```
----------------------------------------------------------
Path to current directory from root:
* root/
    * home/
        * documents/ (Current Directory)
            report.txt
            * ss/
            * newDirectory/
    file1.txt
----------------------------------------------------------

===== File Sytem Management Menu =====
1. Change Directory
2. List directory contents
3. Create file/directory
4. Delete file/directory
5. Move file/directory
6. Search file/directory
7. Print directory tree
8. Sort contents by date
9. Exit
6
----------------------------------------------------------
Search query: report.txt
Search from root...
Found: root/home/documents/report.txt
----------------------------------------------------------
```