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# Infrastructure Engineering Assignment

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(For Linux OS)



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## Problem description:

Program in C++(For Linux OS)

- To get the information of top ten large(size) files existing in the whole system/in the specific directory.
- To sort the files from the source directory and move them to folders according to their extensions into the destination directory.

## Methods description:

### Methods Used:

- ❖ explore\_dir(char \*name)
  - This method takes path to directory as input and starts exploring the directory. With the help of this method, we can get the information of files existing in that directory and its sub-directories.
- ❖ struct node\* insert(const char \*route, char \*name, off\_t size)
- ❖ struct node\* enter(const char \*route, char \*name, off\_t size)
- ❖ struct node\* createNode(const char \*route, char \*name, off\_t size)
  - The above three methods are used to maintain the information of top ten large files in the linked list having data members path, name, size of the file.
- ❖ off\_t file\_size(const char\* path)
  - This method takes path to the file as input and returns file size in bytes.
- ❖ move\_file(char \*path)
- ❖ copy\_cut\_file(char\* sou, char\* des)
  - The above two methods are used to create the directory at the destination folder and paste files into them by copying from source respectively.

- ❖ print\_file\_info(struct node\* info)
  - This method prints out the information of top ten size files.

## Input/Output terminal images:

```

ranjith@ubuntu:~/Desktop$ g++ final.cpp
ranjith@ubuntu:~/Desktop$ ./a.out
1.Get top 10 size files in the certain directory
2.Cut files from source directory and create folders according to the file type in destination directory
Enter your option::1
1.Explore whole system
2.Explore specific directory
Enter your option::2
Enter the path to explore:~/home/ranjith
*****Top Size Files*****
*****
Path:: /home/ranjith/.cache/vmware/drag_and_drop/yaxsg0
Name:: 7-G Brundavan Colony Telugu Full Movie - Ravi Krishna, Sonia Agarwal - Sri Balaji Video.mp4
Size:: 1741 MB

Path:: /home/ranjith/Desktop
Name:: 7-G Brundavan Colony Telugu Full Movie - Ravi Krishna, Sonia Agarwal - Sri Balaji Video.mp4
Size:: 1741 MB

Path:: /home/ranjith
Name:: core
Size:: 117 MB

Path:: /home/ranjith/repos/ns-3-allinone/ns-3-dev/build
Name:: libns3-dev-lte-debug.so
Size:: 53 MB

Path:: /home/ranjith/repos/ns-3-allinone/ns-3-dev/Assignment-5_150001011/lab_5_b
Name:: lab_5.tr
Size:: 46 MB

Path:: /home/ranjith/repos/ns-3-allinone/ns-3-dev/Assignment-4/Q2
Name:: Assign4_2_1.tr
Size:: 43 MB

Path:: /home/ranjith/repos/ns-3-allinone/ns-3-dev/Assignment-4/Q2
Name:: Assign4_2_2.tr
Size:: 43 MB

Path:: /home/ranjith/repos/ns-3-allinone/ns-3-dev/build/src/lte/bindings
Name:: ns3module.cc.7.o
Size:: 38 MB

Path:: /home/ranjith/repos/ns-3-allinone/ns-3-dev/Assignment-4/Q1
Name:: Assign4_1.tr
Size:: 35 MB

Path:: /home/ranjith/repos/ns-3-allinone/ns-3-dev/Assignment-4/Q3
Name:: Assign4_3_2.tr
Size:: 34 MB

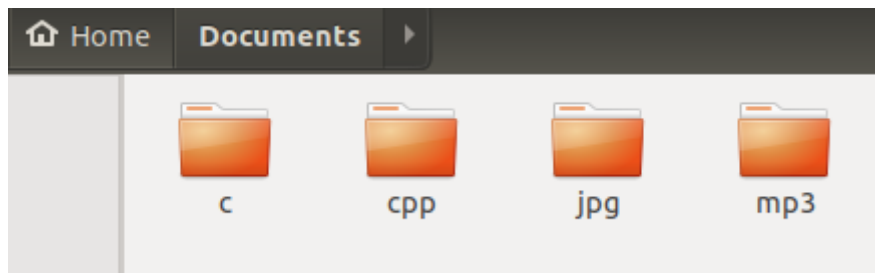
*****

```

```

ranjith@ubuntu:~/Desktop$ ./a.out
1.Get top 10 size files in the certain directory
2.Cut files from source directory and create folders according to the file type in destination directory
Enter your option::2
Enter the Source directory(path) to clean-up:~/home/ranjith/Desktop/Graphics/hello
Enter the Destination directory(path) to paste-all:~/home/ranjith/Documents

```



Here we can see that files are stored in the folders according to their extensions in the destination directory.

### Conclusion:

The program was written only by taking Linux OS into consideration due to time constraints. In future (if permits), further program can be updated to run on Windows OS also.