

## 7/11/21 Haystack Needle Documentation

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3:50 - 4:00:

-Step 1 : Develop a plan. First, we made sure everyone was working in the correct directory. Then we created the haystack directory with the mkdir command.

**cd ~**

**mkdir haystack**

-Step 2: change directory into the haystack directory.

**cd /haystack**

-Step 3: Create 500 folders in haystack directory

**mkdir folder{1..500}**

-Step 4: Create 100 files in each folder

**touch ./folder{1..500}/file{1..100}.txt**

4:00 - 4:18:

-Step 5: Trial and error to possibly write one line of code to create 500 folders and place 100 files in each of them.

4:18 - 4:29

-Step 6: We, as a group, came up with the following....

**mkdir folder{1..500};touch ./folder{1..500}/file{1..100}.txt**

4:29 - 4:39:

-Step 7: cd back into the home directory

**cd ~**

-Step 8: Run the given command

This basically creates a file named needle.txt and places it into a random folder

**\$touch ./haystack/folder\$(shuf -i 1-500 -n 1)/needle.txt**

-Step 9: We had a decision to use find or locate command. Ricardo decided to google the best solution and we found the answer in the first google link.

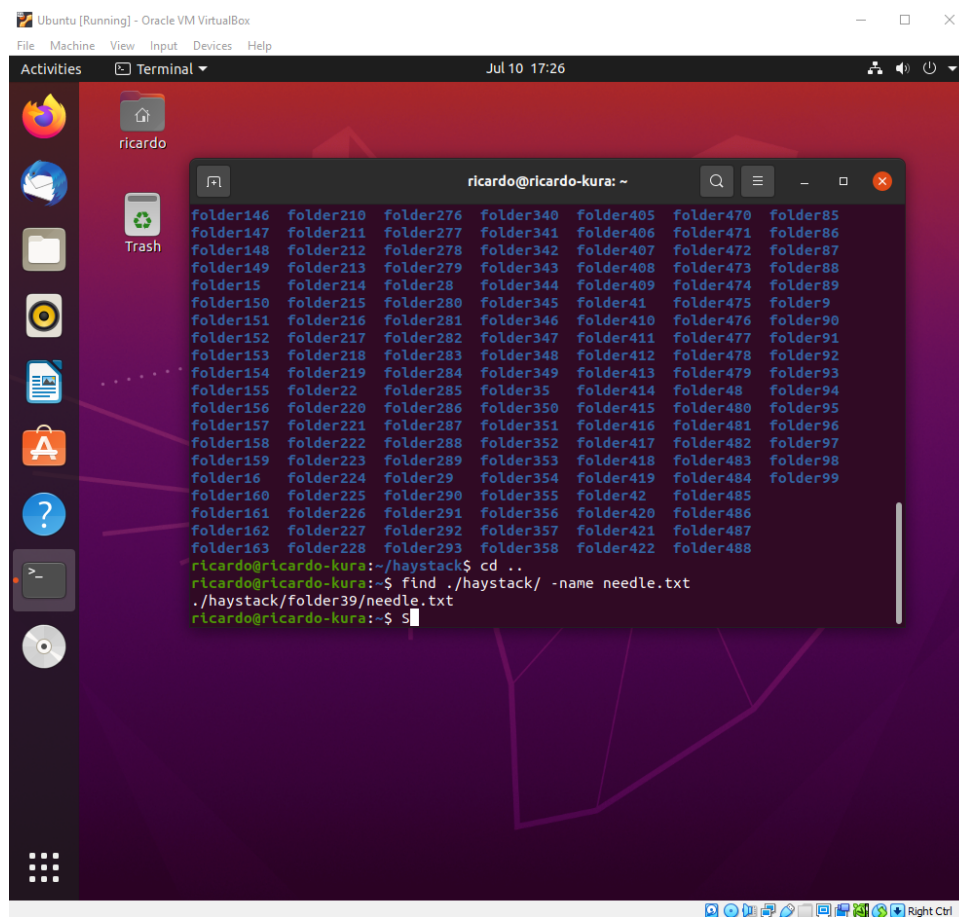
<https://www.geeksforgeeks.org/find-command-in-linux-with-examples/>

**find ./haystack/ -name needle.txt** to find the location of which folder it is in

Commands Inserted in Sequence:

```
cd ~  
mkdir haystack  
cd haystack  
mkdir folder{1..500};touch ./folder{1..500}/file{1..100}.txt  
cd ..  
touch ./haystack/folder$(shuf -i 1-500 -n 1)/needle.txt  
find ./haystack/ -name needle.txt
```

Ricardo's Haystack Location: Folder 39



Ibrahima's Haystack Location: Folder 211

```
ibrahim@ibrahim-Kura: ~  
ibrahim@ibrahim-Kura:~/haystack$ ls  
ibrahim@ibrahim-Kura:~/haystack$ mkdir folder{1..500};touch ./folder{1..500}/file{1..100}.txt  
ibrahim@ibrahim-Kura:~/haystack$ ^C  
ibrahim@ibrahim-Kura:~/haystack$ $touch ./haystack$(shuf -i 1-500 -n 1)/needle.txt  
ibrahim@ibrahim-Kura:~/haystack$ $touch ./haystack/folder$(shuf -i 1-500 -n 1)/needle.txt  
bash: ./haystack/folder236/needle.txt: No such file or directory  
ibrahim@ibrahim-Kura:~/haystack$ cd ..  
ibrahim@ibrahim-Kura:~$ $touch ./haystack/folder$(shuf -i 1-500 -n 1)/needle.txt  
bash: ./haystack/folder124/needle.txt: No such file or directory  
ibrahim@ibrahim-Kura:~$ touch ./haystack/folder$(shuf -i 1-500 -n 1)/needle.txt  
ibrahim@ibrahim-Kura:~$ find ./haystack/ -name needle.txt  
./haystack/folder211/needle.txt  
ibrahim@ibrahim-Kura:~$ ^C  
ibrahim@ibrahim-Kura:~$
```

Ian's Haystack Location: Folder 278

```
Activities Terminal Jul 10 17:24  
im@im-kura: ~/haystack/folder278  
file23.txt file39.txt file54.txt file6.txt file85.txt  
file24.txt file3.txt file55.txt file70.txt file86.txt  
im@im-kura:~/haystack/folder240$ cd ..  
im@im-kura:~/haystack$ cd ..  
im@im-kura:~$ touch ./haystack/folder$(shuf -i 1-500 -n 1)/needle.txt  
im@im-kura:~$ find ./haystack/ -name needle.txt  
./haystack/folder278/needle.txt  
im@im-kura:~$ cd haystack/folder278  
im@im-kura:~/haystack/folder278$ ls  
file100.txt file25.txt file40.txt file56.txt file71.txt file87.txt  
file10.txt file26.txt file41.txt file57.txt file72.txt file88.txt  
file11.txt file27.txt file42.txt file58.txt file73.txt file89.txt  
file12.txt file28.txt file43.txt file59.txt file74.txt file8.txt  
file13.txt file29.txt file44.txt file5.txt file75.txt file90.txt  
file14.txt file2.txt file45.txt file60.txt file76.txt file91.txt  
file15.txt file30.txt file46.txt file61.txt file77.txt file92.txt  
file16.txt file31.txt file47.txt file62.txt file78.txt file93.txt  
file17.txt file32.txt file48.txt file63.txt file79.txt file94.txt  
file18.txt file33.txt file49.txt file64.txt file7.txt file95.txt  
file19.txt file34.txt file4.txt file65.txt file80.txt file96.txt  
file1.txt file35.txt file50.txt file66.txt file81.txt file97.txt  
file20.txt file36.txt file51.txt file67.txt file82.txt file98.txt  
file21.txt file37.txt file52.txt file68.txt file83.txt file99.txt  
file22.txt file38.txt file53.txt file69.txt file84.txt file9.txt  
file23.txt file39.txt file54.txt file6.txt file85.txt needle.txt  
file24.txt file3.txt file55.txt file70.txt file86.txt  
im@im-kura:~/haystack/folder278$
```

Andrew's Haystack Location: Folder 198

file69.txt	folder145	folder222	folder30	folder378	folder455	folder82
file6.txt	folder146	folder223	folder300	folder379	folder456	folder83
file70.txt	folder147	folder224	folder301	folder38	folder457	folder84
file71.txt	folder148	folder225	folder302	folder380	folder458	folder85
file72.txt	folder149	folder226	folder303	folder381	folder459	folder86
file73.txt	folder15	folder227	folder304	folder382	folder46	folder87
file74.txt	folder150	folder228	folder305	folder383	folder460	folder88
file75.txt	folder151	folder229	folder306	folder384	folder461	folder89
file76.txt	folder152	folder23	folder307	folder385	folder462	folder9
file77.txt	folder153	folder230	folder308	folder386	folder463	folder90
file78.txt	folder154	folder231	folder309	folder387	folder464	folder91
file79.txt	folder155	folder232	folder31	folder388	folder465	folder92
file7.txt	folder156	folder233	folder310	folder389	folder466	folder93
file80.txt	folder157	folder234	folder311	folder39	folder467	folder94
file81.txt	folder158	folder235	folder312	folder390	folder468	folder95
file82.txt	folder159	folder236	folder313	folder391	folder469	folder96
file83.txt	folder16	folder237	folder314	folder392	folder47	folder97
file84.txt	folder160	folder238	folder315	folder393	folder470	folder98
file85.txt	folder161	folder239	folder316	folder394	folder471	folder99
file86.txt	folder162	folder24	folder317	folder395	folder472	
file87.txt	folder163	folder240	folder318	folder396	folder473	

```

andrew@Andrew-ThinkPad-E15:~/haystack$ locate needle.txt
/home/andrew/haystack/folder198/needle.txt
andrew@Andrew-ThinkPad-E15:~/haystack$

```

Jespson's Haystack Location: Folder 365

```

jespson@jespson-VirtualBox:~$ find
haystack/folder365/needle.txt
jespson@jespson-VirtualBox:~$

```

In depth documentation (WORK IN PROGRESS)

So first before we began, our group first introduced ourselves and figured out a game plan. We read the prompt as a group and then decided to get started. We split the problem into multiple parts and attacked the easiest part

First we had to create the haystack directory by using the mkdir command. We needed to make sure we were in the home directory so we went there using cd first.

Cd ~

Mkdir haystack

Once created we went into the haystack directory and attacked the other part of the problem which was creating 500 folders.

We figured out the best part was to use the `mkdir folder{1..500}` command.

We then had a difficult problem creating 100 files in each folder. Everyone was struggling but Ian decided it was best to use `touch ./folder{1..500}/file{1..100}.txt`

It took a lot of trial and error but that code worked

Once we created all the files, we wanted to refine the code and make it simple, so we used the semicolon to put two codes into one.

```
mkdir folder{1..500};touch ./folder{1..500}/file{1..100}.txt
```

After that it was smooth sailing.

We changed the directory back into the home directory and ran the given command.

(We did not research in depth to what this command did for TIMING reasons)

Once we had the needle placed in the haystack, we had a choice of using either `locate` or `find`. We googled some ways to find a file and the first link had the answer we were looking for.

<https://www.geeksforgeeks.org/find-command-in-linux-with-examples/>

This website was great because it answered our problem. We wanted to find a file with a specific file name.

```
find ./haystack/ -name needle.txt
```

Once we ran that code, we all got the needle location. The group all made sure we understood the problem and solution.