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Create the following hierarchy for folders and files (with necessary distinct contents along with name of the files) using suitable commands

Desktop ---> Tutorial2

Tutorial2 ---> Question, Solution, Sample1, Sample2

Question ---> tut-quest.odt

Solution ---> tut-solution.odt

Sample1 ---> file1.txt, file2.txt, file3.txt, unixsample.docx, dir1, dir2

Sample2 ---> dir3, user, file4.txt, file5.txt

Write a command to view the above-mentioned hierarchy

cs1058@ssn7:~$ cd Desktop

cs1058@ssn7:~/Desktop$ mkdir tutorial2

cs1058@ssn7:~/Desktop$ cd tutorial2

cs1058@ssn7:~/Desktop/tutorial2$ mkdir question solution sample1 sample2

cs1058@ssn7:~/Desktop/tutorial2$ ls

question sample1 sample2 solution

cs1058@ssn7:~/Desktop/tutorial2$ cd question

cs1058@ssn7:~/Desktop/tutorial2/question$ cat tut-quest.odt

cat: tut-quest.odt: No such file or directory

cs1058@ssn7:~/Desktop/tutorial2/question$ cat >tut-quest.odt

^Z

[1]+ Stopped   cat > tut-quest.odt

cs1058@ssn7:~/Desktop/tutorial2/question$ cd ..

cs1058@ssn7:~/Desktop/tutorial2$ cd solution

cs1058@ssn7:~/Desktop/tutorial2/solution$ cat >tut-solution.odt

^Z

[2]+ Stopped   cat > tut-solution.odt

cs1058@ssn7:~/Desktop/tutorial2/solution$ cd ..

cs1058@ssn7:~/Desktop/tutorial2$ cd sample1

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat >file1.txt

^Z

[3]+ Stopped   cat > file1.txt

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat >file2.txt

^Z

[4]+ Stopped   cat > file2.txt

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat file3.txt

cat: file3.txt: No such file or directory

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat >file3.txt

^Z

[5]+ Stopped   cat > file3.txt

cs1058@ssn7:~/Desktop/tutorial2/sample1$

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat >unixsample.docx

^Z

[6]+ Stopped   cat > unixsample.docx

cs1058@ssn7:~/Desktop/tutorial2/sample1$ mkdir dir1 dir2

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cd ..

cs1058@ssn7:~/Desktop/tutorial2$ cd sample2

cs1058@ssn7:~/Desktop/tutorial2/sample2$ mkdir dir3 user

cs1058@ssn7:~/Desktop/tutorial2/sample2$ cat >file4.txt

^Z

[7]+ Stopped   cat > file4.txt

cs1058@ssn7:~/Desktop/tutorial2/sample2$ cat >file5.txt

^Z

[8]+ Stopped   cat > file5.txt

cs1058@ssn7:~/Desktop/tutorial2/sample2$ cd ..

cs1058@ssn7:~/Desktop/tutorial2$ ls -Rp

.:

question/ sample1/ sample2/ solution/

./question:

tut-quest.odt

./sample1:

dir1/ dir2/ file1.txt file2.txt file3.txt unixsample.docx

./sample1/dir1:

./sample1/dir2:

./sample2:

dir3/ file4.txt file5.txt user/

./sample2/dir3:

./sample2/user:

./solution:

tut-solution.odt

cs1058@ssn7:~/Desktop/tutorial2$

TASK 2

Write commands to copy the file **file2.txt** to **user** directory for the

following

- current directory is Tutorial2
- current directory is dir2
- current directory is dir3
- current directory is Sample1

cs1058@ssn7:~/Desktop/tutorial2$ cp sample1/file2.txt sample2/user

cs1058@ssn7:~/Desktop/tutorial2$ cd sample1

cs1058@ssn7:~/Desktop/tutorial2/sample1$ ls

dir1 dir2 file1.txt file2.txt file3.txt unixsample.docx

```
cs1058@ssn7:~/Desktop/tutorial2/sample1$ cd dir2
cs1058@ssn7:~/Desktop/tutorial2/sample1/dir2$ cp ../file2.txt ../../sample2/user
cs1058@ssn7:~/Desktop/tutorial2/sample1/dir2$ cd ..
cs1058@ssn7:~/Desktop/tutorial2/sample1$ cd ..
cs1058@ssn7:~/Desktop/tutorial2$ cd sample2
cs1058@ssn7:~/Desktop/tutorial2/sample2$ cd dir3
cs1058@ssn7:~/Desktop/tutorial2/sample2/dir3$ cp ../../sample1/file2.txt
../usercs1058@ssn7:~/Desktop/tutorial2/sample2/dir3$ cd ..
cs1058@ssn7:~/Desktop/tutorial2/sample2$ cd ..
cs1058@ssn7:~/Desktop/tutorial2$ cd sample1
cs1058@ssn7:~/Desktop/tutorial2/sample1$ cp file2.txt ../sample2/user
cs1058@ssn7:~/Desktop/tutorial2/sample1$ cd ..
cs1058@ssn7:~/Desktop/tutorial2$ ls -Rp
.:
question/  sample1/  sample2/  solution/

./question:
tut-quest.odt

./sample1:
dir1/  dir2/  file1.txt  file2.txt  file3.txt  unixsample.docx

./sample1/dir1:

./sample1/dir2:

./sample2:
dir3/  file4.txt  file5.txt  user/

./sample2/dir3:

./sample2/user:
file2.txt
```

./solution:

tut-solution.odt

- Write commands to create hard link and soft link for the file1.txt in **Sample1** directory and
- demonstrate the working of it.
- What about the inodes created for hard and symbolic links?
- Can we access the contents of file using the any link? How are they accessed?

cs1058@ssn7:~/Desktop/tutorial2$ cd sample1

cs1058@ssn7:~/Desktop/tutorial2/sample1$ ls

dir1 dir2 file1.txt file2.txt file3.txt unixsample.docx

cs1058@ssn7:~/Desktop/tutorial2/sample1$ ln file1.txt lfile1.txt

cs1058@ssn7:~/Desktop/tutorial2/sample1$ ls

dir1 dir2 file1.txt file2.txt file3.txt lfile1.txt unixsample.docx

cs1058@ssn7:~/Desktop/tutorial2/sample1$ ln -s file1.txt sfile1.txt

cs1058@ssn7:~/Desktop/tutorial2/sample1$ ls

dir1 file1.txt file3.txt   sfile1.txt

dir2 file2.txt lfile1.txt unixsample.docx

cs1058@ssn7:~/Desktop/tutorial2/sample1$ ls -ai

 408017 .   407138 dir2   408400 file3.txt   408409 unixsample.docx

9438351 ..   408394 file1.txt   408394 lfile1.txt

 407095 dir1   408396 file2.txt   407970 sfile1.txt

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat lfile1.txt

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat >>file1.txt

hii nice to meet you

^Z

[9]+ Stopped   cat >> file1.txt

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat lfile1.txt

hii nice to meet you

cs1058@ssn7:~/Desktop/tutorial2/sample1$ cat sfile1.txt

hii nice to meet you

- Print the number files created given the date
- Print the number of files created given the type
- Print the commands used in your system given the date

cs1058@ssn9:~/Desktop/tutorial2$ find . -type f -ls | grep 'Jul' |grep '3' | wc -l

10

cs1058@ssn9:~/Desktop/tutorial2$ find . -type f -ls | grep "odt" | wc -l

2

cs1058@ssn9:~/Desktop/tutorial2$ find . -type f -ls | grep "txt" | wc -l

7

cs1058@ssn9:~/Desktop/tutorial2/sample2$ history |grep "10/07/19"

```
   1  10/07/19 14:57:02 javac Firstprog.java
   2  10/07/19 14:57:02 ls Firstprog.java
   3  10/07/19 14:57:02 ls Firstprog.class
   4  10/07/19 14:57:02 java Firstprog
   5  10/07/19 14:57:02 javac 1a1.java
   6  10/07/19 14:57:02 ls 1a1.java
   7  10/07/19 14:57:02 ls 1a1.class
   8  10/07/19 14:57:02 javac A1.java
   9  10/07/19 14:57:02 ls A1.java
  10  10/07/19 14:57:02 ls A1.class
  11  10/07/19 14:57:02 java A1
  12  10/07/19 14:57:02 javac Firstprog.java
  13  10/07/19 14:57:02 java Firstprog
  14  10/07/19 14:57:02 ls Firstprog.java
```

15 10/07/19 14:57:02 ls Firstprog.class
16 10/07/19 14:57:02 java Firstprog 3 5
17 10/07/19 14:57:02 javac Compute.java
18 10/07/19 14:57:02 ls Compute.java
19 10/07/19 14:57:02 ls Compute.class
20 10/07/19 14:57:02 java Compute 3 5
21 10/07/19 14:57:02 javac A2.java
22 10/07/19 14:57:02 ls A2.java
23 10/07/19 14:57:02 ls A2.class
24 10/07/19 14:57:02 java A2 5
25 10/07/19 14:57:02 javac A2.java
26 10/07/19 14:57:02 ls A2.java
27 10/07/19 14:57:02 ls A2.class
28 10/07/19 14:57:02 java A2 5
29 10/07/19 14:57:02 javac A2.java
30 10/07/19 14:57:02 ls A2.java
31 10/07/19 14:57:02 ls A2.class
32 10/07/19 14:57:02 java A2 5
33 10/07/19 14:57:02 javac A2.java
34 10/07/19 14:57:02 ls A2.java
35 10/07/19 14:57:02 ls A2.class
36 10/07/19 14:57:02 java A2 5
37 10/07/19 14:57:02 javac A3.java
38 10/07/19 14:57:02 ls A3.java
39 10/07/19 14:57:02 ls A3.class
40 10/07/19 14:57:02 java A3 5
41 10/07/19 14:57:02 javac A3mod.java
42 10/07/19 14:57:02 ls A3mod.java
43 10/07/19 14:57:02 ls A3mod.class
44 10/07/19 14:57:02 java A3mod 5 4 3 2 1 5
45 10/07/19 14:57:02 java A3mod 5 4 3 2 1
46 10/07/19 14:57:02 javac A3mod.java
47 10/07/19 14:57:02 ls A3mod.java
48 10/07/19 14:57:02 ls A3mod.class

49 10/07/19 14:57:02 java A3mod 5 4 3 2 1
50 10/07/19 14:57:02 javac A4.java
51 10/07/19 14:57:02 javac A3mod.java
52 10/07/19 14:57:02 ls A3mod.java
53 10/07/19 14:57:02 ls A3mod.class
54 10/07/19 14:57:02 java A3mod 5 4 3 2 1
55 10/07/19 14:57:02 javac A4.java
56 10/07/19 14:57:02 ls A4.java
57 10/07/19 14:57:02 ls A4.class
58 10/07/19 14:57:02 java A4 371
59 10/07/19 14:57:02 javac A4.java
60 10/07/19 14:57:02 ls A4.java
61 10/07/19 14:57:02 ls A4.class
62 10/07/19 14:57:02 java A4 371
63 10/07/19 14:57:02 java A4 372
64 10/07/19 14:57:02 javac A5.java
65 10/07/19 14:57:02 ls A5.java
66 10/07/19 14:57:02 ls A5.class
67 10/07/19 14:57:02 java A5 harshu
68 10/07/19 14:57:02 java A3mod 5 4 3 2 -1
69 10/07/19 14:57:02 java A4 1
70 10/07/19 14:57:02 java A4 0
71 10/07/19 14:57:02 java A4 1
72 10/07/19 14:57:02 javac A5.java
73 10/07/19 14:57:02 ls A5.java
74 10/07/19 14:57:02 ls A5.class
75 10/07/19 14:57:02 java A5 harshu 4 cse 90 95 97
76 10/07/19 14:57:02 javac A5.java
77 10/07/19 14:57:02 ls A5.java
78 10/07/19 14:57:02 ls A5.class
79 10/07/19 14:57:02 java A5 harshu 4 cse 90 95 97 cse
80 10/07/19 14:57:02 cd Desktop
81 10/07/19 14:57:02 javac Lin_bin
82 10/07/19 14:57:02 javac Linbin

```
 83  10/07/19 14:57:02 javac Linbin.java
 84  10/07/19 14:57:02 java Linbin
 85  10/07/19 14:57:02 javac Linbin.java
 86  10/07/19 14:57:02 java Linbin
 87  10/07/19 14:57:02 javac Linbin.java
 88  10/07/19 14:57:02 java Linbin
 89  10/07/19 14:57:02 javac Linbin.java
 90  10/07/19 14:57:02 java Linbin
 91  10/07/19 14:57:02 javac Eb.java
 92  10/07/19 14:57:02 java Eb
 93  10/07/19 14:57:02 javac Eb.java
 94  10/07/19 14:57:02 java Eb
 95  10/07/19 14:57:02 cd Desktop
 96  10/07/19 14:57:02 mkdir -p tutorial2/question/solution/sample1/sample2
 97  10/07/19 14:57:02 ls tutorial2
 98  10/07/19 14:57:02 cd question
 99  10/07/19 14:57:02 ls -Rp
100  10/07/19 14:57:02 cd Desktop
101  10/07/19 14:57:02 mkdir tutorial2
102  10/07/19 14:57:02 mkdir -p question/solution/sample1/sample2
103  10/07/19 14:57:02 ls tutorial2
104  10/07/19 14:57:02 ls -Rp tutorial2
105  10/07/19 14:57:02 cd Desktop
106  10/07/19 14:57:02 mkdir -p tutorial2/question/solution/sample1/sample2
107  10/07/19 14:57:02 ls -Rp
108  10/07/19 14:57:02 cd Desktop
109  10/07/19 14:57:02 mkdir tutorial2
110  10/07/19 14:57:02 cd tutorial2
111  10/07/19 14:57:02 mkdir question solution sample1 sample2
112  10/07/19 14:57:02 ls tutorial2
113  10/07/19 14:57:02 ls
114  10/07/19 14:57:02 cd question
115  10/07/19 14:57:02 cat tut-quest.odt
116  10/07/19 14:57:02 cat >tut-quest.odt
```

117 10/07/19 14:57:02 cd..

118 10/07/19 14:57:02 cd ..

119 10/07/19 14:57:02 cd solution

120 10/07/19 14:57:02 cat >tut-solution.odt

121 10/07/19 14:57:02 cd ..

122 10/07/19 14:57:02 cd sample1

123 10/07/19 14:57:02 cat >file1.txt

124 10/07/19 14:57:02 cat >file2.txt

125 10/07/19 14:57:02 cat file3.txt

126 10/07/19 14:57:02 cat >file3.txt

127 10/07/19 14:57:02 cat >unixsample.docx

128 10/07/19 14:57:02 mkdir dir1 dir2

129 10/07/19 14:57:02 cd ..

130 10/07/19 14:57:02 cd sample2

131 10/07/19 14:57:02 mkdir dir3 user

132 10/07/19 14:57:02 cat >file4.txt

133 10/07/19 14:57:02 cat >file5.txt

134 10/07/19 14:57:02 cd ..

135 10/07/19 14:57:02 ls -Rp

136 10/07/19 14:57:02 cp sample1/file2.txt sample2/user

137 10/07/19 14:57:02 ls -Rp

138 10/07/19 14:57:02 cd sample1

139 10/07/19 14:57:02 ls

140 10/07/19 14:57:02 cd dir2

141 10/07/19 14:57:02 cp sample1/file2.txt ../../sample2/user

142 10/07/19 14:57:02 cp ../file2.txt ../../sample2/user

143 10/07/19 14:57:02 ls -Rp

144 10/07/19 14:57:02 cd ..

145 10/07/19 14:57:02 ls -Rp

146 10/07/19 14:57:02 cd sample2

147 10/07/19 14:57:02 cd dir3

148 10/07/19 14:57:02 cp ../../sample1/file2.txt ../user

149 10/07/19 14:57:02 cd ..

150 10/07/19 14:57:02 ls -Rp

151 10/07/19 14:57:02 cd sample1

152 10/07/19 14:57:02 cp file2.txt ../sample2/user

153 10/07/19 14:57:02 cd ..

154 10/07/19 14:57:02 ls -Rp

155 10/07/19 14:57:02 cd sample1

156 10/07/19 14:57:02 ls

157 10/07/19 14:57:02 ln file1.txt lfile1.txt

158 10/07/19 14:57:02 ls

159 10/07/19 14:57:02 ls -s file1.txt sfile1.txt

160 10/07/19 14:57:02 ln -s file1.txt sfile1.txt

161 10/07/19 14:57:02 ls

162 10/07/19 14:57:02 ls -ai

163 10/07/19 14:57:02 cat lfile1

164 10/07/19 14:57:02 cat lfile1.txt

165 10/07/19 14:57:02 cat >>file1.txt

166 10/07/19 14:57:02 cat lfile.txt

167 10/07/19 14:57:02 cat lfile1.txt

168 10/07/19 14:57:02 cat sfile1.txt

169 10/07/19 14:57:02 cd ..

170 10/07/19 14:57:02 ls -ltr

171 10/07/19 14:57:02 ls -ltr

172 10/07/19 14:57:02 cd tutorial2

173 10/07/19 14:57:02 ls -ltr

174 10/07/19 14:57:02 cd Desktop

175 10/07/19 14:57:02 cat >cse.txt

176 10/07/19 14:57:02 ls -i cse.txt

177 10/07/19 14:57:02 ls -la

178 10/07/19 14:57:02 cd Desktop

179 10/07/19 14:57:02 cat >cse.txt

180 10/07/19 14:57:50 cd Desktop

181 10/07/19 15:00:36 ls -l | grep "jul 3"

182 10/07/19 15:01:32 ls -l | grep "jul 3" | awk '{print $9" "$6" "$7" "$8}'

183 10/07/19 15:02:04 cd tutorial2

184 10/07/19 15:02:06 ls -l | grep "jul 3" | awk '{print $9" "$6" "$7" "$8}'

```
185  10/07/19 15:07:19 ls -l | grep "jul 3"
186  10/07/19 15:07:26 ls -l | grep "jul 3" -print
187  10/07/19 15:07:45 ls -l
188  10/07/19 15:07:55 ls -l | grep "Jul 3"
189  10/07/19 15:08:17 ls -l | type grep "Jul 3"
190  10/07/19 15:08:26 type ls -l | type grep "Jul 3"
191  10/07/19 15:08:46 ls -l | grep "Jul 3"
192  10/07/19 15:08:59 ls -l
193  10/07/19 15:09:07 ls -l | grep "Jul "
194  10/07/19 15:09:31 ls -l | grep "Jul  3"
195  10/07/19 15:11:46 find . -type f -ls -l | grep "Jul 3"
196  10/07/19 15:11:59 find . -type f ls -l | grep "Jul 3"
197  10/07/19 15:12:09 find . -type f -ls l | grep "Jul 3"
198  10/07/19 15:12:31 find . -type f -l | grep "Jul 3"
199  10/07/19 15:13:15 find . -type f -ls | grep "Jul 3"
200  10/07/19 15:14:01 find . -type f -ls | grep 'Jul' |grep '3'
201  10/07/19 15:14:46 find . -type f -ls
202  10/07/19 15:15:02 find . -type .txt -ls
203  10/07/19 15:15:16 find . -type f.txt -ls
204  10/07/19 15:16:02 find . -type f -ls | grep "txt"
205  10/07/19 15:16:14 find . -type f -ls | grep "odt"
206  10/07/19 15:17:30 find . -type f -ls | grep "odt" | wc -l
207  10/07/19 15:17:41 find . -type f -ls | grep "txt" | wc -l
208  10/07/19 15:18:03 find . -type f -ls | grep 'Jul' |grep '3' | wc -l
209  10/07/19 15:23:54 history | grep "Jul 9"
210  10/07/19 15:23:59 history | grep "Jul 3"
211  10/07/19 15:24:57 history | grep 2019-07-03
212  10/07/19 15:25:59 history | grep dnf | grep 'Jul' | grep '3'
213  10/07/19 15:28:45 cp sample1/{file2.txt,file3.txt}
214  10/07/19 15:28:52 cd dir1
215  10/07/19 15:29:03 cd sample1
216  10/07/19 15:29:11 cd dir1
217  10/07/19 15:29:54 cp ../{file2.txt,file3.txt} ../dir2
218  10/07/19 15:30:00 cd ..
```

219 10/07/19 15:30:09 ls -Rp

220 10/07/19 15:33:13 cd sample2

221 10/07/19 15:34:07 cp -p file4.txt file5.txt

222 10/07/19 15:34:23 ls -i

223 10/07/19 15:35:07 ls -l

224 10/07/19 15:35:20 cp file4.txt file5.txt

225 10/07/19 15:35:23 ls -l

226 10/07/19 15:38:19 history | grep "2019-07-03"

227 10/07/19 15:38:40 history |grep "03-07-19"

228 10/07/19 15:38:51 history|grep "03-07-19"

229 10/07/19 15:40:32 HISTTIMEFORMAT="%d/%m/%y %T "

230 10/07/19 15:40:46 history

231 10/07/19 15:41:25 03/07/19

232 10/07/19 15:41:56 ~/.bashrc

233 10/07/19 15:42:23 history |grep "03/07/19"

234 10/07/19 15:42:42 history |grep "10/07/19"

TASK 5

Write a command to copy a set of specific files (file2.txt, file3.txt) from   dir1 to dir2

s1058@ssn9:~/Desktop/tutorial2$ cd sample1

cs1058@ssn9:~/Desktop/tutorial2/sample1$ cd dir1

cs1058@ssn9:~/Desktop/tutorial2/sample1/dir1$ cp ../{file2.txt,file3.txt} ../dir2

cs1058@ssn9:~/Desktop/tutorial2/sample1/dir1$ cd ..

cs1058@ssn9:~/Desktop/tutorial2/sample1$ cd ..

cs1058@ssn9:~/Desktop/tutorial2$ ls -Rp

.:

question/ sample1/ sample2/ solution/

./question:

tut-quest.odt

./sample1:
dir1/ file1.txt file3.txt   sfile1.txt
dir2/ file2.txt lfile1.txt unixsample.docx

./sample1/dir1:

./sample1/dir2:
file2.txt file3.txt

./sample2:
dir3/ file4.txt file5.txt user/

./sample2/dir3:

./sample2/user:
file2.txt

./solution:
tut-solution.odt

TASK 6

Write necessary commands to demonstrate copying the file4.txt in Sample2 to file5.txt by
        preserving and not preserving the file permissions

cs1058@ssn9:~/Desktop/tutorial2$ cd sample2
cs1058@ssn9:~/Desktop/tutorial2/sample2$ cp -p file4.txt file5.txt //preserving
permission

cs1058@ssn9:~/Desktop/tutorial2/sample2$ ls -l

total 8

drwxrwxr-x 2 cs1058 cs1058 4096 Jul 3 09:05 dir3

-rw-rw-r-- 1 cs1058 cs1058   0 Jul 3 09:05 file4.txt

-rw-rw-r-- 1 cs1058 cs1058   0 Jul 3 09:05 file5.txt

drwxrwxr-x 2 cs1058 cs1058 4096 Jul 3 09:14 user

cs1058@ssn9:~/Desktop/tutorial2/sample2$ cp file4.txt file5.txt   // not preserving permission

cs1058@ssn9:~/Desktop/tutorial2/sample2$ ls -l

total 8

drwxrwxr-x 2 cs1058 cs1058 4096 Jul 3 09:05 dir3

-rw-rw-r-- 1 cs1058 cs1058   0 Jul 3 09:05 file4.txt

-rw-rw-r-- 1 cs1058 cs1058   0 Jul 3 09:05 file5.txt

drwxrwxr-x 2 cs1058 cs1058 4096 Jul 3 09:14 user

TASK 7

Find a file specifying a random directory

Write commands to be used

- if the directory is empty
- if the directory is not empty

cs1058@ssn9:~/Desktop/tutorial2$ find question tut-quest.odt -print

question

question/tut-quest.odt

cs1058@ssn9:~/Desktop/tutorial2$ mkdir store

cs1058@ssn9:~/Desktop/tutorial2$ find store tut-quest.odt -print

store

find: 'tut-quest.odt': No such file or directory