CT5052 Networks Operating Systems

Week 7 Workshop

Step 1: Navigate to your home directory, Create the parent directories and create the subdirectories.
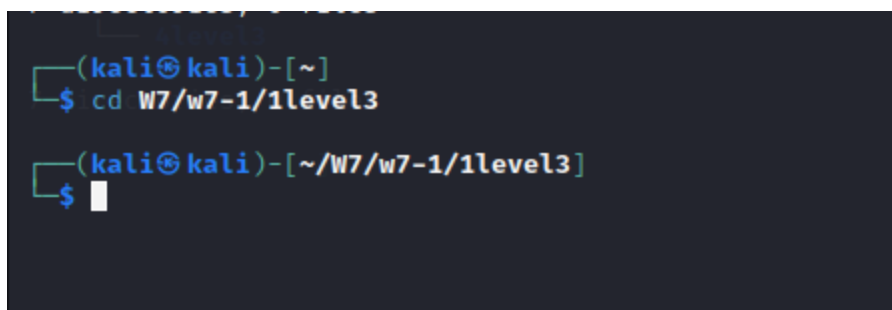
Step 2: Using the tree command to display the structure like this.

Step 3: Change to the 1level3 directory using a relative pathname.

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Step 4: Changing directories in directory structure from 1level3 to 2level3, from 2level3 to 4level3, from 4level3 to W7, etc. Use names of parent and child directories.

```
┌──(kali☉kali)-[~]
└─$ cd W7/w7-1/1level3

┌──(kali☉kali)-[~/W7/w7-1/1level3]
└─$ cd ../2level3

┌──(kali☉kali)-[~/W7/w7-1/2level3]
└─$ cd ../../W7-2/4level3
cd: no such file or directory: ../../W7-2/4level3

┌──(kali☉kali)-[~/W7/w7-1/2level3]
└─$ cd ../../w7-2/4level3

┌──(kali☉kali)-[~/W7/w7-2/4level3]
└─$ cd ..

┌──(kali☉kali)-[~/W7/w7-2]
└─$ cd w7-1/3level3
cd: no such file or directory: w7-1/3level3

┌──(kali☉kali)-[~/W7/w7-2]
└─$ cd ~/W7

┌──(kali☉kali)-[~/W7]
└─$ cd w7-1/3level3

┌──(kali☉kali)-[~/W7/w7-1/3level3]
└─$ cd ~

┌──(kali☉kali)-[~]
└─$ ▮
```

Step 5: Change to 1level3, create a file named example.txt, enter text and save the file by pressing Ctrl+D.

```
┌──(kali☉kali)-[~]
└─$ cd ~/W7/w7-1/1level3

┌──(kali☉kali)-[~/W7/w7-1/1level3]
└─$ cat > example.txt
Hello, this is a test file.

┌──(kali☉kali)-[~/W7/w7-1/1level3]
└─$ ls
example.txt

┌──(kali☉kali)-[~/W7/w7-1/1level3]
└─$ ▮
```

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Step 6: Copy example.txt to 1level3 with the name file1, Copy example.txt to 2level3, Copy example.txt to 3level3 with a different name.

```
┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ cp example.txt file1

┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ cp example.txt ../2level3/

┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ cp example.txt ../3level3/file3.txt
```

Step 7: Verify the Files in Corresponding Directories.

```
┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ ls
example.txt  file1

┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ ls ../2level3
example.txt

┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ ls ../3level3
file3.txt

┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ 
```

Step 8: Move the File to 4level3, Verify the File in 4level3 and Verify the File is No Longer in 1level3.

```
┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ mv file1 ../../w7-2/4level3/

┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ ls ../../w7-2/4level3
file1

┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ ls
example.txt

┌──(kali㊀kali)-[~/W7/w7-1/1level3]
└─$ 
```

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Step 9: Use echo command to print the texts.

```
┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ echo "Hello! I can do it"
Hello! I can do it

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ echo "5 > (20: 8) < (30 * 2)"
5 > (20: 8) < (30 * 2)

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ -e "Line 1\nline 2"
-e: command not found

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ -e "Line 1\nLine 2"
-e: command not found

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ echo -e "Line 1\1nLine 2"
Line 1\1nLine 2

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ echo "a-b, A-B, -, +, <, >, #, $, %, &."
a-b, A-B, -, +, <, >, #, $, %, &.

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ ▮
```

Step 10: Use printf command to print the texts.

```
┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ printf "Hello! I can do it\n"
Hello! I can do it

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ printf "5 > (20: 8) < (30 * 2)\n"
5 > (20: 8) < (30 * 2)

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ printf "Line 1\nLine 2\n"
Line 1
Line 2

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ printf "a-b, A-B, -, +, <, >, #, $, %, &.\n"
```

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Step 11: Use ls command Without options and With -a option.

Step 12: With -d option, With -g option and With -l option.

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Step 13: With -R option.

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Step 14: W7 Directory (~/W7) Without options, With -a option, With -d option, With -g option, With -l option and With -R option.

Step 15: Use W7-1 Directory (~/W7/w7-1) Without options, With -a option, With -d option, With -g option, With -l option and With -R option.

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Step 16: Use 1level3 Directory (~/W7/w7-1/1level3) Without options, With -a option, With -d option, With -g option, With -l option and With -R option.

```
┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ ls ~/W7/w7-1/1level3
example.txt

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ la -a ~/W7/w7-1/1level3
.  ..  example.txt

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ ls -d ~/W7/w7-1/1level3
/home/kali/W7/w7-1/1level3

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ ls -g ~/W7/w7-1/1level3
total 4
-rw-r--r-- 1 kali 28 Dec 15 22:45 example.txt

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ ls -l ~/W7/w7-1/1level3
total 4
-rw-r--r-- 1 kali kali 28 Dec 15 22:45 example.txt

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ la -R ~/W7/w7-1/1level3
/home/kali/W7/w7-1/1level3:
example.txt

┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ 
```

Step 17: Change to the W7 Directory and Remove w7-2, 3level3, and 4level3 Directories.

```
┌──(kali㉿kali)-[~/W7/w7-1/1level3]
└─$ cd ~/W7

┌──(kali㉿kali)-[~/W7]
└─$ rm -i ~/W7/w7-2/*
zsh: sure you want to delete all the files in /home/kali/W7/w7-2 [yn]? y
rm: cannot remove '/home/kali/W7/w7-2/4level3': Is a directory

┌──(kali㉿kali)-[~/W7]
└─$ rm -ri w7-2
rm: descend into directory 'w7-2'? y
rm: descend into directory 'w7-2/4level3'? y
rm: remove regular file 'w7-2/4level3/file1'? y
rm: remove directory 'w7-2/4level3'? y
rm: remove directory 'w7-2'? y

┌──(kali㉿kali)-[~/W7]
└─$ 
```

Step 18: Change to w7-1 Directory

```
kali@kali: ~/W7/w7-1
File  Actions  Edit  View  Help
┌──(kali㉿kali)-[~]
└─$ cd ~/W7/w7-1
```

Step 19: Display Access Permissions for file1 in 1level3.

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ ls -l ~/W7/w7-1/1level3/file1
-rw-r--r-- 1 kali kali 0 Dec 19 08:30 /home/kali/W7/w7-1/1level3/file1
```

Step 20: Remove All Access Permissions for file1

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ chmod 000 ~/W7/w7-1/1level3/file1
```

Step 21: Display Access Permissions for file1 Again

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ ls -l ~/W7/w7-1/1level3/file1
─────────── 1 kali kali 0 Dec 19 08:30 /home/kali/W7/w7-1/1level3/file1
```

Step 22: Try to Read file1 Using a Utility (e.g., cat)

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ cat ~/W7/w7-1/1level3/file1
cat: /home/kali/W7/w7-1/1level3/file1: Permission denied
```

Step 23: Try to Write to file1 Using a Utility (e.g., cat with >>)

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ echo "test" >> ~/W7/w7-1/1level3/file1
zsh: permission denied: /home/kali/W7/w7-1/1level3/file1
```

Step 24: Add Read and Write Access Permissions for Yourself

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ chmod u+rw ~/W7/w7-1/1level3/file1
```

Step 25: Display Access Permissions for file1 Again

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ ls -l ~/W7/w7-1/1level3/file1
-rw─────── 1 kali kali 0 Dec 19 08:30 /home/kali/W7/w7-1/1level3/file1
```

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Step 26: Try to Read file1 Using a Utility

```
┌──(kali㊉kali)-[~/W7/w7-1]
└─$ cat ~/W7/w7-1/1level3/file1
```

Step 27: Try to Write to file1 Using a Utility

```
┌──(kali㊉kali)-[~/W7/w7-1]
└─$ echo "test" >> ~/W7/w7-1/1level3/file1
```

Step 28: Display Access Permissions for 1level3

```
┌──(kali㊉kali)-[~/W7/w7-1]
└─$ ls -ld ~/W7/w7-1/1level3

drwxr-xr-x 2 kali kali 4096 Dec 19 08:30 /home/kali/W7/w7-1/1level3
```

Step 29: Remove All Access Permissions for 1level3

```
┌──(kali㊉kali)-[~/W7/w7-1]
└─$ chmod 000 ~/W7/w7-1/1level3
```

Step 30: Display Access Permissions for 1level3 Again

```
┌──(kali㊉kali)-[~/W7/w7-1]
└─$ ls -ld ~/W7/w7-1/1level3

d───────── 2 kali kali 4096 Dec 19 08:30 /home/kali/W7/w7-1/1level3
```

Step 31: Display Access Permissions for 1level3 Again

```
┌──(kali㊉kali)-[~/W7/w7-1]
└─$ cat ~/W7/w7-1/1level3/file1

cat: /home/kali/W7/w7-1/1level3/file1: Permission denied
```

Step 32: Try to Put a File into 1level3

```
┌──(kali㊉kali)-[~/W7/w7-1]
└─$ touch ~/W7/w7-1/1level3/newfile

touch: cannot touch '/home/kali/W7/w7-1/1level3/newfile': Permission denied
```

Step 33: Try to Search in 1level3

```
┌──(kali㊉kali)-[~/W7/w7-1]
└─$ ls ~/W7/w7-1/1level3

ls: cannot open directory '/home/kali/W7/w7-1/1level3': Permission denied
```

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Step 34: Add Read, Write, and Execute Permissions for Yourself

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ chmod u+rwx ~/W7/w7-1/1level3
```

Step 35: Display Access Permissions for 1level3 Again

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ ls -ld ~/W7/w7-1/1level3

drwx──────  2 kali kali 4096 Dec 19 08:30 /home/kali/W7/w7-1/1level3
```

Step 36: Try to Read a File from 1level3

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ cat ~/W7/w7-1/1level3/file1

test
```

Step 37: Try to Put a File into 1level3

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ touch ~/W7/w7-1/1level3/newfile
```

Step 38: Try to Search in 1level3

```
┌──(kali㉿kali)-[~/W7/w7-1]
└─$ ls ~/W7/w7-1/1level3

example.txt  file1  newfile
```

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