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BE 623 – Biocomputing

Sem1 2025-2026

Assignment 1

1- Open terminal and find out the path of the folder being displayed in the terminal. (Hint- Use pwd command to check the current location in terminal and cd command to change the directory)

```
sandhya@Sandhya:~$ pwd  
/home/sandhya
```

2- Change directory to the folder with files uploaded on classroom. Create a new folder named “BE623_labsession_1” (Hint- Use mkdir command)

```
sandhya@Sandhya:~$ mkdir BE623_LabSession_1  
sandhya@Sandhya:~$ pwd  
/home/sandhya  
sandhya@Sandhya:~$ ls  
BE623_LabSession_1
```

3- Enter BE623_labsession_1 folder (Hint use cd command)

```
sandhya@Sandhya:~/BE623_LabSession_1$ cd /home/sandhya/BE623_LabSession_1  
sandhya@Sandhya:~/BE623_LabSession_1$
```

4- Confirm that your current folder is “BE623_labsession_1” (Hint use pwd command)

```
sandhya@Sandhya:~/BE623_LabSession_1$ pwd  
/home/sandhya/BE623_LabSession_1
```

5- List all the files and folders in the directory (Hint use ls command)

```
sandhya@Sandhya:~/BE623_LabSession_1$ ls  
sandhya@Sandhya:~/BE623_LabSession_1$
```

For assignment question no.6, GEN AI tool has been used.

6- Copy “sequence.fasta and protein.fasta” file to current folder (Hint cp ../sequence.fasta ./)

```
sandhya@Sandhya: ~/BE623_LabSession_1$ cp /mnt/c/Users/sandh/OneDrive/Desktop/protein.fasta /home/sandhya/BE623_LabSession_1
sandhya@Sandhya: ~/BE623_LabSession_1$ cp /mnt/c/Users/sandh/OneDrive/Desktop/sequence.fasta /home/sandhya/BE623_LabSession_1
```

7- List all the files and folders in the directory (Hint use ls command)

```
sandhya@Sandhya: ~/BE623_LabSession_1$ cd /home/sandhya/BE623_LabSession_1
sandhya@Sandhya: ~/BE623_LabSession_1$ ls
protein.fasta  sequence.fasta
sandhya@Sandhya: ~/BE623_LabSession_1$
```

8- Find out if there is any hidden file or folder in the directory (Hint: ls -al)

```
sandhya@Sandhya: ~/BE623_LabSession_1$ ls -al
total 16
drwxr-xr-x 2 sandhya sandhya 4096 Aug  8 17:28 .
drwxr-x--- 5 sandhya sandhya 4096 Aug  8 17:20 ..
-rwxr-xr-x 1 sandhya sandhya  467 Aug  8 17:27 protein.fasta
-rwxr-xr-x 1 sandhya sandhya  467 Aug  8 17:28 sequence.fasta
sandhya@Sandhya: ~/BE623_LabSession_1$
```

9- Find out permissions associated with files in the folder (Hint: ls -al)

```
sandhya@Sandhya: ~/BE623_LabSession_1$ ls -al
total 16
drwxr-xr-x 2 sandhya sandhya 4096 Aug  8 17:28 .
drwxr-x--- 5 sandhya sandhya 4096 Aug  8 17:20 ..
-rwxr-xr-x 1 sandhya sandhya  467 Aug  8 17:27 protein.fasta
-rwxr-xr-x 1 sandhya sandhya  467 Aug  8 17:28 sequence.fasta
sandhya@Sandhya: ~/BE623_LabSession_1$
```

10- Find out the permissions of the files and folders in /

```
sandhya@Sandhya:~/BE623_LabSession_1$ cd /
sandhya@Sandhya:/$ ls -al
total 2748
drwxr-xr-x  22 root root    4096 Aug  8 16:45 .
drwxr-xr-x  22 root root    4096 Aug  8 16:45 ..
lrwxrwxrwx   1 root root      7 Apr 22  2024 bin -> usr/bin
drwxr-xr-x   2 root root    4096 Feb 26  2024 bin.usr-is-merged
drwxr-xr-x   2 root root    4096 Apr 22  2024 boot
drwxr-xr-x  15 root root   3860 Aug  8 16:45 dev
drwxr-xr-x  88 root root    4096 Aug  8 17:19 etc
drwxr-xr-x   3 root root    4096 Aug  6 08:27 home
-rwxrwxrwx   1 root root 2724480 Jun  9 18:32 init
lrwxrwxrwx   1 root root      7 Apr 22  2024 lib -> usr/lib
drwxr-xr-x   2 root root    4096 Apr  8  2024 lib.usr-is-merged
lrwxrwxrwx   1 root root      9 Apr 22  2024 lib64 -> usr/lib64
drwx-----  2 root root   16384 Aug  6 08:05 lost+found
drwxr-xr-x   2 root root    4096 Feb 15 08:09 media
drwxr-xr-x   6 root root    4096 Aug  6 08:05 mnt
drwxr-xr-x   2 root root    4096 Feb 15 08:09 opt
dr-xr-xr-x 248 root root      0 Aug  8 16:45 proc
drwx-----  3 root root    4096 Feb 15 08:11 root
drwxr-xr-x  19 root root    560 Aug  8 16:45 run
lrwxrwxrwx   1 root root      8 Apr 22  2024/sbin -> usr/sbin
drwxr-xr-x   2 root root    4096 Mar 31  2024/sbin.usr-is-merged
drwxr-xr-x   2 root root    4096 Aug  6 08:05 snap
drwxr-xr-x   2 root root    4096 Feb 15 08:09 srv
dr-xr-xr-x  13 root root      0 Aug  8 16:54 sys
drwxrwxrwt   8 root root    4096 Aug  8 17:32 tmp
drwxr-xr-x  12 root root    4096 Feb 15 08:09 usr
drwxr-xr-x  13 root root    4096 Aug  6 08:05 var
sandhya@Sandhya:/$
```

11- Change the permissions of the file “protein.fasta” so that it is readable, writable and executable by everyone (Hint use chmod). Change the permissions back to what they were.

```
sandhya@Sandhya:~/BE623_LabSession_1$ chmod ugo+rwx protein.fasta
sandhya@Sandhya:~/BE623_LabSession_1$ ls -al
total 16
drwxr-xr-x  2 sandhya sandhya 4096 Aug  8 17:28 .
drwxr-xr-x  5 sandhya sandhya 4096 Aug  8 17:20 ..
-rwxrwxrwx  1 sandhya sandhya  467 Aug  8 17:27 protein.fasta
-rwxr-xr-x  1 sandhya sandhya  467 Aug  8 17:28 sequence.fasta
sandhya@Sandhya:~/BE623_LabSession_1$
```

```
sandhya@Sandhya:~/BE623_LabSession_1$ chmod g-w protein.fasta
sandhya@Sandhya:~/BE623_LabSession_1$ chmod o-w protein.fasta
sandhya@Sandhya:~/BE623_LabSession_1$ ls -al
total 16
drwxr-xr-x 2 sandhya sandhya 4096 Aug  8 17:28 .
drwxr-x--- 5 sandhya sandhya 4096 Aug  8 17:20 ..
-rwxr-xr-x 1 sandhya sandhya  467 Aug  8 17:27 protein.fasta
-rwxr-xr-x 1 sandhya sandhya  467 Aug  8 17:28 sequence.fasta
sandhya@Sandhya:~/BE623_LabSession_1$
```