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**BANGLADESH UNIVERSITY OF
BUSINESS AND TECHNOLOGY**

Lab Evaluation

Course Code: CSE 310

Course Title: Operating Systems Lab

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Program: B.Sc. in CSE

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- 1) Q: Create a file year2020 that will contain a calendar from January – December for the year 2020.

Solution:

```
nowshin@Lenovoip320:~$ cat > year2020.txt
Year 2020
^C
nowshin@Lenovoip320:~$ cat year2020
nowshin@Lenovoip320:~$ cat year2020.txt
Year 2020
```

```
nowshin@Lenovoip320:~$ cal 2020
      2020
  জানুয়ারী   ফেব্রুয়ারী   মার্চ
রব সো মঙ বু বৃ শুশন বৃ শুশন শুশন শন রব সো মঙ বু বৃ শুশন বৃ শুশন শুশন শন
  1  2  3  4          1  2  3  4  5  6  7          1  2  3  4  5  6  7
  5  6  7  8  9 10 11  2  3  4  5  6  7  8          8  9 10 11 12 13 14
 12 13 14 15 16 17 18  9 10 11 12 13 14 15 15 16 17 18 19 20 21
 19 20 21 22 23 24 25 16 17 18 19 20 21 22 22 23 24 25 26 27 28
 26 27 28 29 30 31 23 24 25 26 27 28 29 29 30 31

  এপ্রিল      মে      জুন
রব সো মঙ বু বৃ শুশন বৃ শুশন শুশন শন রব সো মঙ বু বৃ শুশন বৃ শুশন শুশন শন
  1  2  3  4          1  2          1  2  3  4  5  6
  5  6  7  8  9 10 11  3  4  5  6  7  8  9          7  8  9 10 11 12 13
 12 13 14 15 16 17 18 10 11 12 13 14 15 16 14 15 16 17 18 19 20
 19 20 21 22 23 24 25 17 18 19 20 21 22 23 21 22 23 24 25 26 27
 26 27 28 29 30      24 25 26 27 28 29 30 28 29 30
                        31

  জুলাই      আগস্ট      সেপ্টেম্বর
রব সো মঙ বু বৃ শুশন বৃ শুশন শুশন শন রব সো মঙ বু বৃ শুশন বৃ শুশন শুশন শন
  1  2  3  4          1          1  2  3  4  5
  5  6  7  8  9 10 11  2  3  4  5  6  7  8          6  7  8  9 10 11 12
 12 13 14 15 16 17 18  9 10 11 12 13 14 15 13 14 15 16 17 18 19
 19 20 21 22 23 24 25 16 17 18 19 20 21 22 20 21 22 23 24 25 26
 26 27 28 29 30 31 23 24 25 26 27 28 29 27 28 29 30
                        30 31

  অক্টোবর     নভেম্বর     ডিসেম্বর
রব সো মঙ বু বৃ শুশন বৃ শুশন শুশন শন রব সো মঙ বু বৃ শুশন বৃ শুশন শুশন শন
  1  2  3          1  2  3  4  5  6  7          1  2  3  4  5
  4  5  6  7  8  9 10  8  9 10 11 12 13 14          6  7  8  9 10 11 12
 11 12 13 14 15 16 17 15 16 17 18 19 20 21 13 14 15 16 17 18 19
 18 19 20 21 22 23 24 22 23 24 25 26 27 28 20 21 22 23 24 25 26
 25 26 27 28 29 30 31 29 30                        27 28 29 30 31
```

- 2) Q: List all files whose names begin with the letter g, —have any three characters following the g, —and end with “tly.txt”.

Solution:

```
nowshin@Lenovoip320:~$ pwd
/home/nowshin
nowshin@Lenovoip320:~$ ls
abc.txt  demo_file1.txt  demo_file.txt  Desktop  Downloads  file23  fourth.sh  lab.txt  new1.txt  Pictures  sample  snap  third.sh  Work  year2020.txt
book     demo_file2.txt  demo.txt       Documents  file       file.sh  htly.txt  Music    new11    new.txt  Public  second.sh  Templates  Videos  year2020
nowshin@Lenovoip320:~$ cat > grtly.txt
^C
nowshin@Lenovoip320:~$ cat > good.txt
^C
nowshin@Lenovoip320:~$ cat > tax.txt
^C
nowshin@Lenovoip320:~$ cat > grill.txt
^C
nowshin@Lenovoip320:~$ ls -d g*
good.txt  grill.txt  grtly.txt
nowshin@Lenovoip320:~$ grep "g" tly_*
grep: tly_*: No such file or directory
nowshin@Lenovoip320:~$
```

3) Q: Sort the home directory by the size of the file.

Solution:

```
nowshin@Lenovoip320:/home$ pwd
/home
nowshin@Lenovoip320:/home$ cd nowshin
nowshin@Lenovoip320:~$ pwd
/home/nowshin
nowshin@Lenovoip320:~$ du -a /home/ | sort -n -r | head -n 5
170860 /home/
170856 /home/nowshin
126956 /home/nowshin/.cache
120796 /home/nowshin/.cache/mozilla
120792 /home/nowshin/.cache/mozilla/firefox
nowshin@Lenovoip320:~$
```

4) Q: Write a shell script sum.sh that takes an unspecified number of command line arguments (up to 9) of ints and finds their sum. Modify the code to add a number to the sum only if the number is greater than 10.

Solution:

```
nowshin@Lenovoip320:~$ pwd
/home/nowshin
nowshin@Lenovoip320:~$ cat > sum.sh
^C
nowshin@Lenovoip320:~$ ls -l
total 108
-rw-rw-r-- 1 nowshin nowshin 13 ডিসেম্বর 29 15:37 abc.txt
-rw-rw-r-- 1 nowshin nowshin 0 ডিসেম্বর 29 16:59 book
-rw-rw-r-- 1 nowshin nowshin 31 ডিসেম্বর 29 15:18 demo_file1.txt
-rw-rw-r-- 1 nowshin nowshin 8 ডিসেম্বর 29 15:34 demo_file2.txt
-rw-rw-r-- 1 nowshin nowshin 157 ডিসেম্বর 29 15:11 demo_file.txt
-rw-rw-r-- 1 nowshin nowshin 82 ডিসেম্বর 29 16:23 demo.txt
drwxr-xr-x 2 nowshin nowshin 4096 ডিসেম্বর 17 17:09 Desktop
drwxr-xr-x 4 nowshin nowshin 4096 জানু 5 16:21 Documents
drwxr-xr-x 2 nowshin nowshin 4096 ডিসেম্বর 17 17:09 Downloads
-rw-rw-r-- 1 nowshin nowshin 0 জানু 5 16:59 file
-rw-rw-r-- 1 nowshin nowshin 33 জানু 5 20:16 file23
-rwxrwxr-x 1 nowshin nowshin 40 জানু 5 15:11 file.sh
-rw-rw-r-- 1 nowshin nowshin 30 জানু 5 16:03 fourth.sh
-rw-rw-r-- 1 nowshin nowshin 0 জানু 5 20:46 good.txt
-rw-rw-r-- 1 nowshin nowshin 0 জানু 5 20:47 grill.txt
-rw-rw-r-- 1 nowshin nowshin 0 জানু 5 20:46 grtly.txt
-rw-rw-r-- 1 nowshin nowshin 0 জানু 5 20:36 htly.txt
-rw-rw-r-- 1 nowshin nowshin 10 জানু 5 17:12 lab.txt
drwxr-xr-x 2 nowshin nowshin 4096 ডিসেম্বর 17 17:09 Music
drwxrwxrwx 2 nowshin nowshin 4096 ডিসেম্বর 22 15:26 new1
drwxrwxr-x 5 nowshin nowshin 4096 জানু 5 15:44 new11
-rw-rw-r-- 1 nowshin nowshin 12 ডিসেম্বর 29 16:28 new1.txt
-rw-rw-r-- 1 nowshin nowshin 12 ডিসেম্বর 29 16:27 new.txt
drwxr-xr-x 2 nowshin nowshin 4096 ডিসেম্বর 17 17:09 Pictures
drwxr-xr-x 2 nowshin nowshin 4096 ডিসেম্বর 17 17:09 Public
-rw-rw-r-- 1 nowshin nowshin 41 ডিসেম্বর 29 17:13 sample
-rwxrwxr-x 1 nowshin nowshin 145 জানু 5 15:42 second.sh
drwxr-xr-x 3 nowshin nowshin 4096 ডিসেম্বর 28 22:08 snap
-rw-rw-r-- 1 nowshin nowshin 0 জানু 5 21:11 sum.sh
-rw-rw-r-- 1 nowshin nowshin 0 জানু 5 20:47 tax.txt
drwxr-xr-x 2 nowshin nowshin 4096 ডিসেম্বর 17 17:09 Templates
-rw-rw-r-- 1 nowshin nowshin 181 জানু 5 16:01 third.sh
drwxr-xr-x 2 nowshin nowshin 4096 ডিসেম্বর 17 17:09 Videos
drwxrwxr-x 2 nowshin nowshin 4096 ডিসেম্বর 28 22:07 Work
-rw-rw-r-- 1 nowshin nowshin 0 জানু 5 16:59 year2020
-rw-rw-r-- 1 nowshin nowshin 3248 জানু 5 19:42 year2020.txt
nowshin@Lenovoip320:~$ chmod a+x sum.sh
nowshin@Lenovoip320:~$ ./sum.sh
nowshin@Lenovoip320:~$
```

```
nowshin@Lenovoip320:~$ cat > sum.sh
i = 1
while [ $i -le 9 ]
do
    echo $i
    i=$((i+1))
done
^C
nowshin@Lenovoip320:~$ cat sum.sh
i = 1
while [ $i -le 9 ]
do
    echo $i
    i=$((i+1))
done
nowshin@Lenovoip320:~$ ^C
nowshin@Lenovoip320:~$ chmod a+x sum.sh
nowshin@Lenovoip320:~$ ./sum.sh
./sum.sh: line 1: i: command not found
./sum.sh: line 2: [: -le: unary operator expected
```