

Week 1

1) i)

```
$ bash
student@dslab:~$ mkdir main
student@dslab:~$ cd main
student@dslab:~/main$ mkdir sub_1 sub_2
student@dslab:~/main$ ls
sub_1  sub_2
```

ii)

```
student@dslab:~/main$ cd sub_1
student@dslab:~/main/sub_1$ cat>file1.txt
this is the first file
student@dslab:~/main/sub_1$ cat file1.txt
this is the first file
student@dslab:~/main/sub_1$ cat>file2.txt
this is the second file
student@dslab:~/main/sub_1$ cat file2.txt
this is the second file
student@dslab:~/main/sub_1$ cat>file3.txt
this is the third file
student@dslab:~/main/sub_1$ cat file3.txt
this is the third file
```

iii)

```
student@dslab:~/main/sub_1$ cp file1.txt /home/student/main/sub_2
student@dslab:~/main/sub_1$ cd /home/student/main/sub_2
student@dslab:~/main/sub_2$ ls
file1.txt
student@dslab:~/main/sub_2$ cat file1.txt
this is the first file
```

iv)

```
student@dslab:~/main/sub_2$ cat>new_file.txt
student@dslab:~/main/sub_2$ ls
file1.txt  new_file.txt
student@dslab:~/main/sub_2$ who | wc -l>>new_file.txt
student@dslab:~/main/sub_2$ ls | wc -l>>new_file.txt
student@dslab:~/main/sub_2$ cat new_file.txt
1
2
```

v)

```
student@dslab:~/main$ ls a*
ls: cannot access 'a*': No such file or directory
student@dslab:~/main$ cat>a.txt
student@dslab:~/main$ cat>A.txt
student@dslab:~/main$ ls
a.txt  A.txt  sub_1  sub_2
student@dslab:~/main$ ls [aA]*
a.txt  A.txt
```

vi)

```
student@dslab:~/main$ ls -l | grep "^-" | wc -l
2
student@dslab:~/main$ ls
a.txt  A.txt  sub_1  sub_2
```

vii)

```
#include<stdio.h>
int main()
{
    printf("hello world");
}
```

```
student@dslab:~/main$ cc /home/student/Desktop/test.c && ./a.out
hello worldstudent@dslab:~/main$
```

viii)

```
student@dslab:~/main$ cat /home/student/main/sub_1/file1.txt
this is the first file
student@dslab:~/main$ wc -l /home/student/main/sub_1/file1.txt
1 /home/student/main/sub_1/file1.txt
```

2)

i)

```
student@dslab:~/main$ date
Mon Feb  8 09:44:13 IST 2021
```

ii)

```
student@dslab:~/main$ ls
a.out  a.txt  A.txt  sub_1  sub_2
```

iii)

```
student@dslab:~/main$ pwd
/home/student/main
```

Week 2

1)

```
cd $1
ls *.*
```

```
student@dslab:~/main$ cat>week2_1.sh
cd $1
ls *.*
student@dslab:~/main$ chmod +x week2_1.sh
student@dslab:~/main$ ./week2_1.sh /home/student/Desktop/
test.c test.o
```

ii)

```
cd $1  
ls | grep $2
```

```
student@dslab:~/main$ cat>week2_2.sh  
cd $1  
ls | grep $2  
student@dslab:~/main$ chmod +x week2_2.sh  
student@dslab:~/main$ ./week2_2.sh ~/main/ a  
a.txt
```

iii)

```
echo "The number of users logged in is: `who | wc -l`"
```

```
student@dslab:~/main$ cat>week2_3.sh  
echo "The number of users logged in is: `who | wc -l`"  
student@dslab:~/main$ chmod +x week2_3.sh  
student@dslab:~/main$ ./week2_3.sh  
The number of users logged in is: 1
```

iv)

```
echo "The number of files in the current directory is: `ls -l | grep "^-" | wc -l`"
```

```
student@dslab:~/main$ cat>week2_4.sh  
echo "The number of files in the current directory is: `ls -l | grep "^-" | wc  
-l`"  
student@dslab:~/main$ chmod +x week2_4.sh  
student@dslab:~/main$ ./week2_4.sh  
The number of files in the current directory is: 7  
student@dslab:~/main$ ls  
a.txt  hello.b  sub_2  week2_1.sh  week2_3.sh  
A.txt  sub_1     test   week2_2.sh  week2_4.sh
```

v)

```
cat $1 > merge  
cat $2 >> merge  
sort -n merge | uniq > sorted_merged  
cat sorted_merged
```

```

student@dslab:~/main$ cat>nfile1.txt
1
2
3
4
student@dslab:~/main$ cat>nfile2.txt
1
2
3
student@dslab:~/main$ cat>week2_5.sh
cat $1 > merge
cat $2 >> merge
sort -n merge | uniq > sorted_merged
cat sorted_merged
student@dslab:~/main$ chmod +x week2_5.sh
student@dslab:~/main$ ./week2_5.sh nfile1.txt nfile2.txt
1
2
3
4

```

vi)

```
cp `ls *$1` $2
```

```

student@dslab:~/main$ cat>week2_6.sh
cp `ls *$1` $2
student@dslab:~/main$ chmod +x week2_6.sh
student@dslab:~/main$ ./week2_5.sh .sh ./test
cat: .sh: No such file or directory
./week2_5.sh: line 5: warning: here-document at line 2 delimited by end-of-file (wanted `merge')
cat: ./test: Is a directory
student@dslab:~/main$ ./week2_6.sh .sh ./test
student@dslab:~/main$ cd test
student@dslab:~/main/test$ ls
week2_1.sh week2_2.sh week2_3.sh week2_4.sh week2_5.sh week2_6.sh

```