



**EAST WEST UNIVERSITY**

Department of Computer Science and Engineering

Spring 2022

Course Code: CSE325

Course Title: Operating Systems

### **Lab-1**

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**Section:** 02

**Date:** 2<sup>nd</sup> March 2022

Submitted to:

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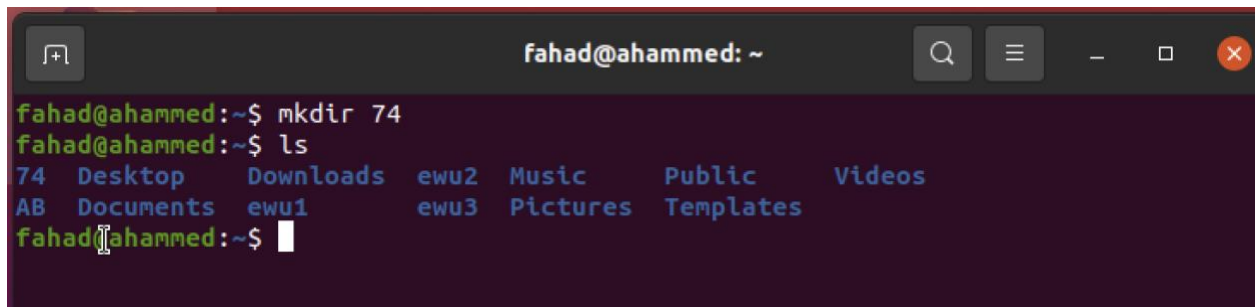
Professor

Department of Computer Science and Engineering

East West University

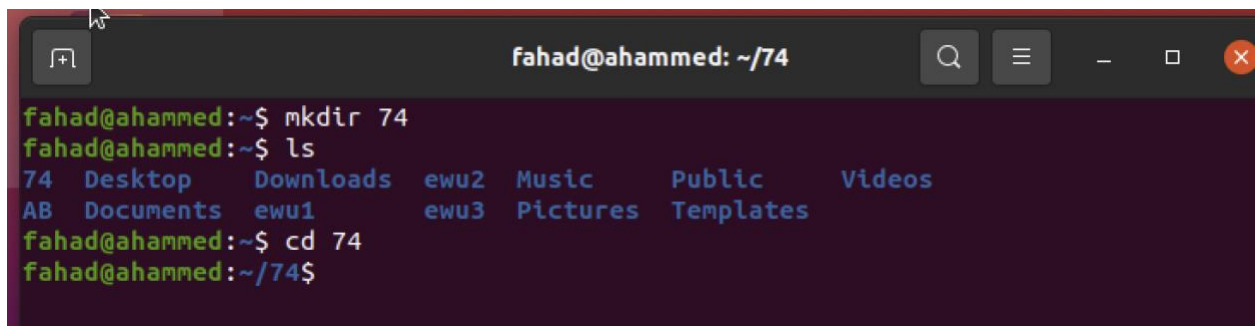
AB = 74  
C = mango  
D = banana  
E = CSE325

1. Create a directory named *AB*



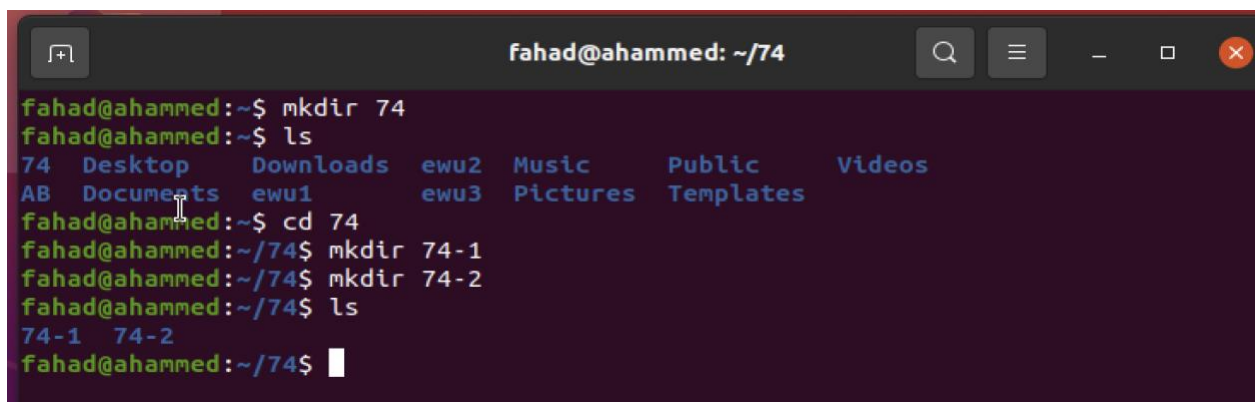
```
fahad@ahammed: ~  
fahad@ahammed:~$ mkdir 74  
fahad@ahammed:~$ ls  
74 Desktop Downloads ewu2 Music Public Videos  
AB Documents ewu1 ewu3 Pictures Templates  
fahad@ahammed:~$
```

2. Position your session in the *AB* directory.



```
fahad@ahammed: ~/74  
fahad@ahammed:~$ mkdir 74  
fahad@ahammed:~$ ls  
74 Desktop Downloads ewu2 Music Public Videos  
AB Documents ewu1 ewu3 Pictures Templates  
fahad@ahammed:~$ cd 74  
fahad@ahammed:~/74$
```

3. Create two more sub-directories named *AB-1* & *AB-2*.



```
fahad@ahammed: ~/74  
fahad@ahammed:~$ mkdir 74  
fahad@ahammed:~$ ls  
74 Desktop Downloads ewu2 Music Public Videos  
AB Documents ewu1 ewu3 Pictures Templates  
fahad@ahammed:~$ cd 74  
fahad@ahammed:~/74$ mkdir 74-1  
fahad@ahammed:~/74$ mkdir 74-2  
fahad@ahammed:~/74$ ls  
74-1 74-2  
fahad@ahammed:~/74$
```

- Position your session in the *AB-I* directory.



```
fahad@ahammed: ~$ mkdir 74
fahad@ahammed: ~$ ls
74 Desktop Downloads ewu2 Music Public Videos
AB Documents ewu1 ewu3 Pictures Templates
fahad@ahammed: ~$ cd 74
fahad@ahammed: ~/74$ mkdir 74-1
fahad@ahammed: ~/74$ mkdir 74-2
fahad@ahammed: ~/74$ ls
74-1 74-2
fahad@ahammed: ~/74$ cd 74-1
fahad@ahammed: ~/74/74-1$
```

- Create 2 files named *C.txt* and *D.txt* and write two lines regarding the file names in each text file.



```
fahad@ahammed: ~$ mkdir 74
fahad@ahammed: ~$ ls
74 Desktop Downloads ewu2 Music Public Videos
AB Documents ewu1 ewu3 Pictures Templates
fahad@ahammed: ~$ cd 74
fahad@ahammed: ~/74$ mkdir 74-1
fahad@ahammed: ~/74$ mkdir 74-2
fahad@ahammed: ~/74$ ls
74-1 74-2
fahad@ahammed: ~/74$ cd 74-1
fahad@ahammed: ~/74/74-1$ touch mango.txt
fahad@ahammed: ~/74/74-1$ touch banana.txt
fahad@ahammed: ~/74/74-1$ gedit mango.txt
fahad@ahammed: ~/74/74-1$ gedit banana.txt
fahad@ahammed: ~/74/74-1$ ls
banana.txt mango.txt
fahad@ahammed: ~/74/74-1$
```

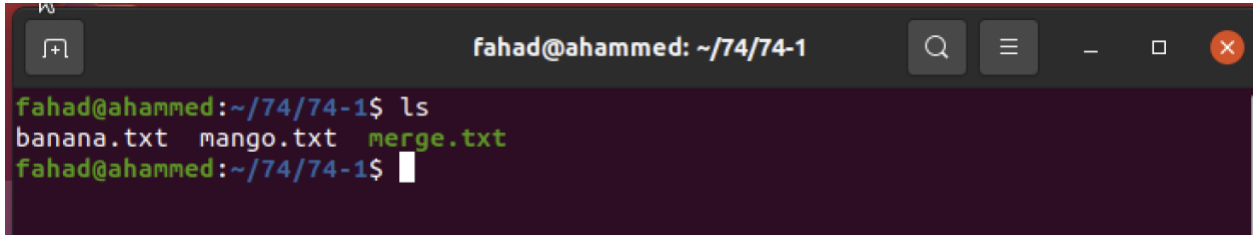
6. Merge these 2 files into one file named *merge.txt*.

```
fahad@ahammed: ~/74/74-1
fahad@ahammed:~/74$ ls
74-1  74-2
fahad@ahammed:~/74$ cd 74-1
fahad@ahammed:~/74/74-1$ touch mango.txt
fahad@ahammed:~/74/74-1$ touch banana.txt
fahad@ahammed:~/74/74-1$ gedit mango.txt
fahad@ahammed:~/74/74-1$ gedit banana.txt
fahad@ahammed:~/74/74-1$ ls
banana.txt  mango.txt
fahad@ahammed:~/74/74-1$ cat mango.txt banana.txt >> merge.txt
fahad@ahammed:~/74/74-1$ ls
banana.txt  mango.txt  merge.txt
fahad@ahammed:~/74/74-1$ cat mango.txt
It is mango file
created by Fahad
fahad@ahammed:~/74/74-1$ cat banana.txt
It is banana file
OS course is fun
fahad@ahammed:~/74/74-1$ cat merge.txt
It is mango file
created by Fahad
It is banana file
OS course is fun
fahad@ahammed:~/74/74-1$
```

7. Change permission for *merge.txt* so that user has all 3 permissions and user group has only read and write permission and others have only read permission.

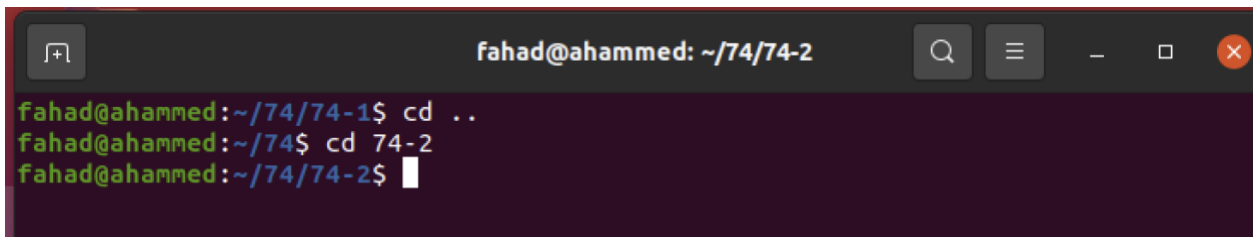
```
fahad@ahammed: ~/74/74-1
fahad@ahammed:~/74/74-1$ chmod 764 merge.txt
fahad@ahammed:~/74/74-1$ ls -l
total 12
-rw-rw-r-- 1 fahad fahad 36 Mar  2 15:23 banana.txt
-rw-rw-r-- 1 fahad fahad 35 Mar  2 15:21 mango.txt
-rwxrw-r-- 1 fahad fahad 71 Mar  2 15:25 merge.txt
fahad@ahammed:~/74/74-1$
```

8. Display the contents of *AB-1* folder.



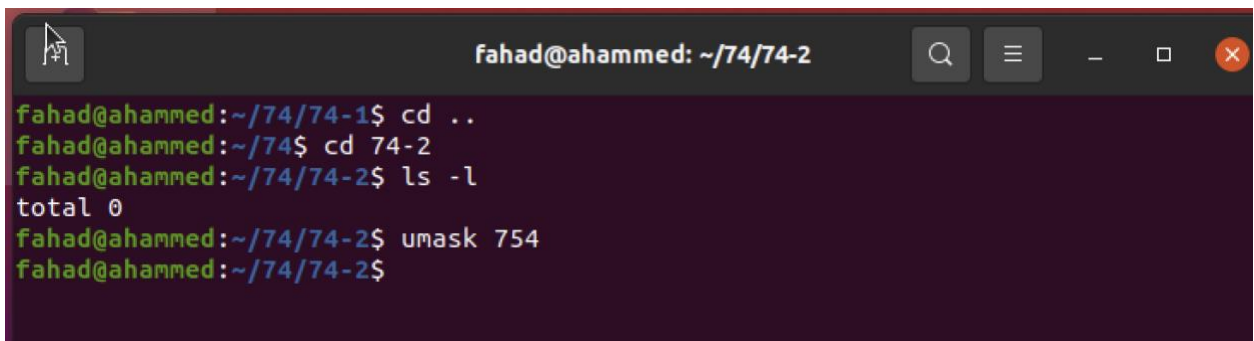
```
fahad@ahammed: ~/74/74-1
fahad@ahammed:~/74/74-1$ ls
banana.txt  mango.txt  merge.txt
fahad@ahammed:~/74/74-1$
```

9. Move to *AB-2* directory.



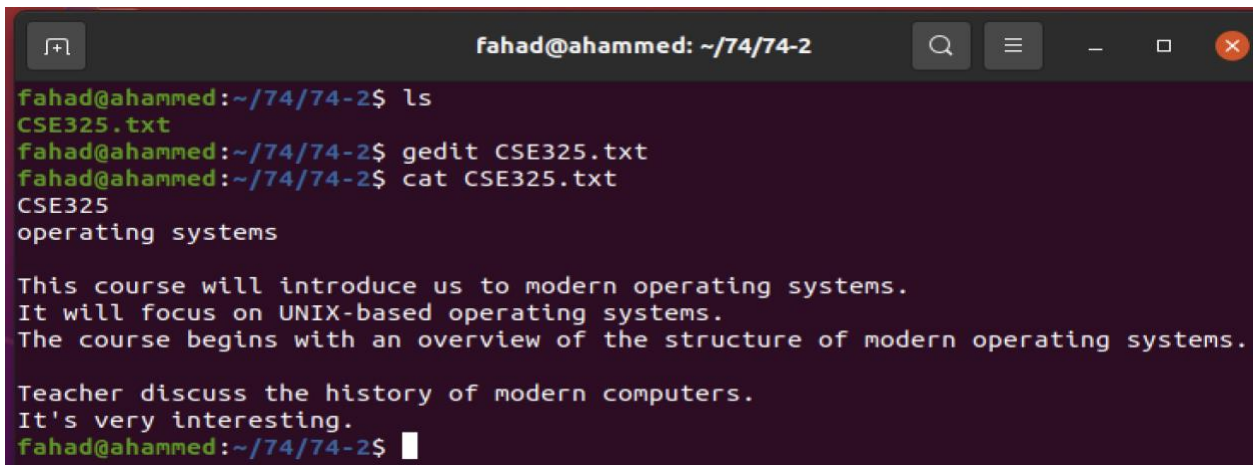
```
fahad@ahammed: ~/74/74-2
fahad@ahammed:~/74/74-1$ cd ..
fahad@ahammed:~/74$ cd 74-2
fahad@ahammed:~/74/74-2$
```

10. Change default permission such that execute permission is added to user, write permission is denied from group and others have only read permission.



```
fahad@ahammed: ~/74/74-2
fahad@ahammed:~/74/74-1$ cd ..
fahad@ahammed:~/74$ cd 74-2
fahad@ahammed:~/74/74-2$ ls -l
total 0
fahad@ahammed:~/74/74-2$ umask 754
fahad@ahammed:~/74/74-2$
```

11. Create a file named *E.txt* to *AB-2* directory and write 5 random lines about E.



```
fahad@ahammed: ~/74/74-2
fahad@ahammed:~/74/74-2$ ls
CSE325.txt
fahad@ahammed:~/74/74-2$ gedit CSE325.txt
fahad@ahammed:~/74/74-2$ cat CSE325.txt
CSE325
operating systems

This course will introduce us to modern operating systems.
It will focus on UNIX-based operating systems.
The course begins with an overview of the structure of modern operating systems.

Teacher discuss the history of modern computers.
It's very interesting.
fahad@ahammed:~/74/74-2$
```



12. Sort the file and write the sorted output in a file named *sort.txt* inside *AB-2* directory.

```
fahad@ahammed: ~/74/74-2
fahad@ahammed:~/74/74-2$ sort -r CSE325.txt > sort.txt
fahad@ahammed:~/74/74-2$ cat sort.txt
This course will introduce us to modern operating systems.
The course begins with an overview of the structure of modern operating systems.

Teacher discuss the history of modern computers.
operating systems
It will focus on UNIX-based operating systems.
It's very interesting.
CSE325

fahad@ahammed:~/74/74-2$ cat CSE325.txt
CSE325
operating systems

This course will introduce us to modern operating systems.
It will focus on UNIX-based operating systems.
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Teacher discuss the history of modern computers.
It's very interesting.
fahad@ahammed:~/74/74-2$
```

13. Rename *merge.txt* to *combine.txt*.

```
fahad@ahammed: ~/74/74-1
fahad@ahammed:~/74/74-2$ cd ..
fahad@ahammed:~/74$ cd 74-1
fahad@ahammed:~/74/74-1$ ls
banana.txt  mango.txt  merge.txt
fahad@ahammed:~/74/74-1$ mv merge.txt combine.txt
fahad@ahammed:~/74/74-1$ ls
banana.txt  combine.txt  mango.txt
fahad@ahammed:~/74/74-1$
```

14. Merge *sort.txt* and *combine.txt* in a new file named *final.txt* inside *AB-2* directory.

```
fahad@ahammed: ~/74/74-2
fahad@ahammed:~/74/74-2$ cd ..
fahad@ahammed:~/74$ cd 74-1
fahad@ahammed:~/74/74-1$ pwd
/home/fahad/74/74-1
fahad@ahammed:~/74/74-1$ cd ..
fahad@ahammed:~/74$ cd 74-2
fahad@ahammed:~/74/74-2$ pwd
/home/fahad/74/74-2
fahad@ahammed:~/74/74-2$ cat /home/fahad/74/74-2/sort.txt /home/fahad/74/74-1/combine.txt >> /home/fahad/74/74-2/final.txt
fahad@ahammed:~/74/74-2$ ls
CSE325.txt  final.txt  sort.txt
```

```
fahad@ahammed: ~/74/74-2
fahad@ahammed:~/74/74-1$ ls
banana.txt  combine.txt  mango.txt
fahad@ahammed:~/74/74-1$ cat combine.txt
It is mango file
created by Fahad
It is banana file
OS course is fun
fahad@ahammed:~/74/74-1$ cd ..
fahad@ahammed:~/74$ cd 74-2
fahad@ahammed:~/74/74-2$ ls
CSE325.txt  final.txt  sort.txt
fahad@ahammed:~/74/74-2$ cat sort.txt
This course will introduce us to modern operating systems.
The course begins with an overview of the structure of modern operating systems.
Teacher discuss the history of modern computers.
operating systems
It will focus on UNIX-based operating systems.
It's very interesting.
CSE325

fahad@ahammed:~/74/74-2$ cat final.txt
This course will introduce us to modern operating systems.
The course begins with an overview of the structure of modern operating systems.
Teacher discuss the history of modern computers.
operating systems
It will focus on UNIX-based operating systems.
It's very interesting.
CSE325

It is mango file
created by Fahad
It is banana file
OS course is fun
fahad@ahammed:~/74/74-2$
```

15. Move *final.txt* from *AB-2* to *AB* directory.

```
fahad@ahammed: ~/74
fahad@ahammed:~/74/74-2$ cd ..
fahad@ahammed:~/74$ pwd
/home/fahad/74
fahad@ahammed:~/74$ cd 74-2
fahad@ahammed:~/74/74-2$ ls
CSE325.txt  final.txt  sort.txt
fahad@ahammed:~/74/74-2$ mv final.txt /home/fahad/74
fahad@ahammed:~/74/74-2$ ls
CSE325.txt  sort.txt
fahad@ahammed:~/74/74-2$ cd ..
fahad@ahammed:~/74$ ls
74-1  74-2  final.txt
fahad@ahammed:~/74$
```

16. Recursively list the contents of *AB* directory.

```
fahad@ahammed: ~/74
fahad@ahammed:~/74$ ls -R
.:
74-1  74-2  final.txt

./74-1:
banana.txt  combine.txt  mango.txt

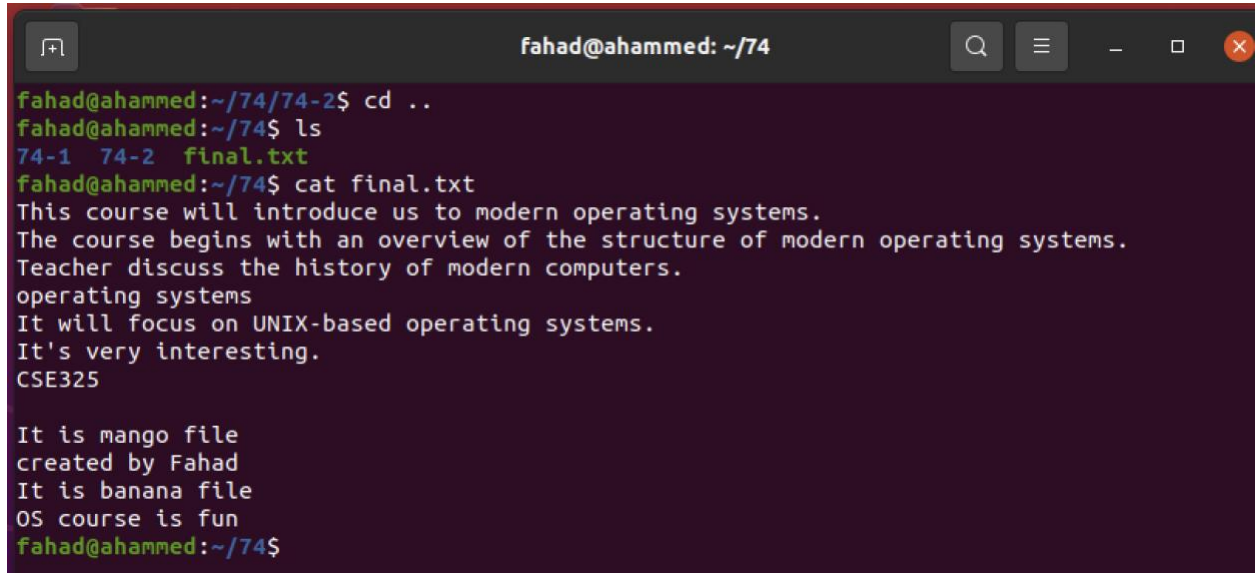
./74-2:
CSE325.txt  sort.txt
fahad@ahammed:~/74$
```

17. Change your session to *AB* directory.

```
fahad@ahammed: ~/74
fahad@ahammed:~/74/74-2$ cd ..
fahad@ahammed:~/74$
```



18. Display the contents of *final.txt*.



```
fahad@ahammed: ~/74
fahad@ahammed:~/74/74-2$ cd ..
fahad@ahammed:~/74$ ls
74-1 74-2 final.txt
fahad@ahammed:~/74$ cat final.txt
This course will introduce us to modern operating systems.
The course begins with an overview of the structure of modern operating systems.
Teacher discuss the history of modern computers.
operating systems
It will focus on UNIX-based operating systems.
It's very interesting.
CSE325

It is mango file
created by Fahad
It is banana file
OS course is fun
fahad@ahammed:~/74$
```