

# OPERATING SYSTEM LABORATORY MANUAL



## UNIVERSITY OF THE PUNJAB

FACULTY OF COMPUTING & INFORMATION TECHNOLOGY, LAHORE

DEPARTMENT OF COMPUTER SCIENCE

Course:	Operating System Lab	Date:
Course Code:	CC-217-3L	Max Marks: 40
Faculty/Instructor's Name & Email:	Dr. Ahmad Hassan Butt (ahmad.hassan@pucit.edu.pk)	

### LAB MANUAL # 3 (SPRING 2023)

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Name: \_\_\_\_\_ Enroll No: \_\_\_\_\_

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**Objective(s) :**

To study and execute the commands in Linux.

**Lab Tasks :**

**Task 1 :** Execute the Date Commands and write the output.

**Task 2:** Execute the below mentioned LINUX Commands and generate output.

**Task 3 :** Execute the below File Commands and write the output.

**Task 4 :** Execute FILTERS AND PIPES commands and write the output

**Lab Grading Sheet :**

Task	Max Marks	Obtained Marks	Comments( <i>if any</i> )
1.	10		
2.	10		
3.	10		
4.	10		
Total	40		Signature

**Note : Attempt all tasks and get them checked by your Instructor**

## Lab 03: LINUX Commands

### Objective(s):

- To study and execute the commands in Linux.

### Tool(s) used:

Ubuntu

### General Purpose utility LINUX Commands

**Task 01** Execute the Date Commands and write the output.

This command is used to display the current data and time.

**Syntax:** \$date

**Output:**

### Options:

a = Abbrevated weekday.
A = Full weekday.
b = Abbrevated month.
B = Full month.
c = Current day and time.
C = Display the century as a decimal number.
d = Day of the month.
D = Day in “mm/dd/yy” format
h = Abbrevated month day.
H = Display the hour.
m = Month of the year.
M = Minute.
P = Display AM or PM
S = Seconds
T = HH:MM:SS format
y = Display the year in 2 digit.
Y = Display the full year.
Z = Time zone.

To change the format:

**Syntax:** \$date +%H-%M-%S

**Output:**

### Calendar Command

This command is used to display the calendar of the year or the particular month of calendar year.

**Syntax**

\$cal year

\$cal month year

Here the first syntax gives the entire calendar for given year & the second Syntax gives the calendar of reserved month of that year.

**Output:**

**Task 02** Execute the below mentioned LINUX Commands and generate output.

#### Echo Command

This command is used to print the arguments on the screen.

**Syntax:** \$echo text

**Output:**

#### Banner Command

It is used to display the arguments in „#“ symbol.

**Syntax:** \$banner <arguments>

**Output:**

#### ‘who’ Command

It is used to display who are the users connected to our computer currently.

**Syntax:** \$who – option’s

#### **Options**

- H–Display the output with headers.
- b–Display the last booting date or time or when the system was lastly rebooted.

**Output:**

### ‘whoami’ Command

Display the details of the current working directory.

**Syntax:** \$whoami

**Output:**

### ‘Binary’ Calculator Command

It will change the „\$“ mode and in the new mode, arithmetic operations such as +, -, \*, /, %, n, sqrt( ), length( ), =, etc can be performed. This command is used to go to the binary calculus mode.

**Syntax:** \$bc operations ^d

- 1 base – input base
- 0 base – output base are used for base conversions.
- Base: Decimal = 1   Binary = 2   Octal = 8   Hexa = 16

**Output:**

### ‘CLEAR’ Command

It is used to clear the screen.

**Syntax:** \$clear

**Task 03** Execute the below File Commands and write the output.

#### Create a File

To create a new file in the current directory we use CAT command.

##### **Syntax:**

\$cat > filename.

The > symbol is re-directory we use cat command.

##### **Output:**

#### Display A File

To display the content of file mentioned we use CAT command without "<" operator.

##### **Syntax:**

\$cat <filename.

Options -s = to neglect the warning /error message.

##### **Output:**

#### Copying Contents

To copy the content of one file with another. If file does not exist, a new file is created and if the file exists with some data then it is appended.

##### **Syntax:**

\$ cat source filename >> destination filename it is to avoid overwriting.

**Options:** -n content of file with numbers included with blank lines.

**Syntax:** \$cat -n filename

**Output:**

**Copying Contents From One File To Another**

To copy the contents from source to destination file. so that both contents are same.

**Syntax**

\$cp source filename destination filename

**Output:**

**MOVE Command**

To completely move the contents from source file to destination file and to remove the source file.

**Syntax:** \$ mv source filename destination filename

**Output:**

**REMOVE Command**

To permanently remove the file we use this command.

**Syntax:** \$rm filename

**Output:**

### WORD Command

To list the content count of no of lines, words, characters.

**Syntax:** \$wc filename

**Options:**

- -c – to display no of characters. -l – to display only the lines.
- -w – to display the no of words.

**Output:**

### PAGE Command

This command is used to display the contents of the file page wise & next page can be viewed by pressing the enter key.

**Syntax:** \$pg filename

**Output:**

**Task 04** Execute FILTERS AND PIPES commands and write the output

### HEAD

It is used to display the top ten lines of file.

**Syntax:** \$head filename

**Output:**

### TAIL

This command is used to display the last ten lines of file.

**Syntax:** \$tail filename

**Output:**

### SORT

This command is used to sort the data's in some order.

**Syntax:** \$sort filename

**Output:**

### PIPE

It is a mechanism by which the output of one command can be channeled into the input of another command.

**Syntax:** echo 1+1|bc

**Output:**

## TR

The tr filter is used to translate one set of characters from the standard inputs to another.

**Syntax:** \$tr “[a-z]” “[A-Z]”

**Output:**