U.V.PATEL COLLEGE OF ENGINEERING

GANPAT UNIVERSITY

Computer Engineering /Information Technology

LAB MANUAL

SUBJECT NAME : - "OPERATING SYSTEM"

SUBJECT CODE : - CE/IT- 402

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PRACTICAL LIST

PART –I (Linux hand free command and Shell Script)

1. Practical -1
2. Practical -2
3. Practical -3
4. Practical -4
5. Practical -5
6. Practical -6

PART –II (Operating System Concept Implementation)

7. Write a C program to fork a seperate process using fork() or exec() systel calls
8. Write a prgram that demostrats shared memory
9. Write a program illustrating how to create a simple thread This program implements the summation function where the summation operation is run as a separate thread
10. Write a program illustrating deadlock.
11. Write a program for producer-consumer paradigm, both processes are running concurrently.

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PRACTICAL - 1

1. Execute following Linux commands and describe the output

TOUCH	CAT	LS	MKDIR
RMDIR	CD	CLEAR	CP
CAL	HISTORY	CHMOD	UMASK
HEAD	TAIL	DATE	EXPR
WHO	UNAME	FINGER	CMP
COMM	SORT	SPELL	WC
TYPE	TTY	ECHO	MAN
MORE	PASSWD	PWD	GREP
PS	RM	SET	CUT
READ	JOBS	AWK	LN
ENV	KILL	ALIAS	DIFF
LOCATE	FIND	INFO	

2. Explain basic command of Vi Editor
3. Explain I/O redirection, Piping and Command Substitution
4. What is Shell Script? Explain with Example.

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PRACTICAL – 2

1. Write a shell script to scan your name and display it like My college Name is :UVPCE
2. Write a shell script to scan two variables and to display their sum, mul, div, sub and modulo division.
3. Write a shell script to scan two variables and to display their sum, mul, div, sub and modulo division as per the user choice. (no need to continue, only once is OK)
4. Write a shell script to find greatest of two. Script must consider the case where two numbers are equal.
5. Write a shell script to find greatest of three. Script must consider the case where two numbers are equal.

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PRACTICAL – 3

1. Write a shell script to calculate the loss percentage of an article. Scan the cost price and selling price
2. Write a shell script to accept numbers below 50 and to display the square of each. This should continue as long as the user wishes.
3. Write a shell script to display $50
4. Write a shell script to check whether the scanned string is found in a file or not. Display appropriate message.
5. Write a shell script, which scans the name of the command and executes it.
6. Write a shell script which displays January if we enter Jan, Janu, Janua or January.
7. Write a shell script to generate Fibonacci series.

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PRACTICAL – 4

1. Write a shell script to check whether the entered number is prime or not.
2. Write a shell script to calculate HRA of employees depending upon their basic.
3. Write a shell script that greets the user by saying Good Morning, Good Afternoon, and Good Evening according to the system time.
4. Write a shell script, which takes a filename as command line argument, asks the user if he wants to revoke the read, write permissions for the group and others for that particular file. If the answer is "y" then it should do so or else it should abort the operation.
5. Write a shell script that asks the capital of Gujarat and repeats the question until the user gives correct answer.
6. Write a shell script to display desired line from a file.
7. Write a shell script to count number of newline characters in a file.
8. Write a shell script to count number of spaces in a file.
9. Write a Shell script, which counts the number of words in a file, without taking into consideration the blank space, tab spaces and the newline characters using WC.
10. Write a Shell script, which counts the number of words in a file, without taking into consideration the blank space, tab spaces and the newline characters without using WC.
11. Write a Shell script, which counts the number of characters in a file, without taking into consideration the blank space, tab spaces and the newline characters using WC.
12. Write a Shell script, which counts the number of characters in a file, without taking into consideration the blank space, tab spaces and the newline characters without using WC.

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PRACTICAL – 5

1. Write a Shell script to accept a string as command line argument and reverse the same.
2. Write a shell script to calculate the loss percentage of an article, given the cost price and the selling price as command line arguments.
3. Write a shell script to accept the name of the user and check out if the same has logged in or not.
4. Write a shell script to check whether the file whose name is scanned exists and readable.
5. Write a shell script to check if the input string is a palindrome.
6. Write a shell script to accept a number and a word as command line arguments and print the word the given number of times on each line.
7. Write a shell script to find the file or directory with the maximum size in the current directory.
8. Write a shell script to accept two filenames and check if both exist. If the second filename exists, then the contents of the first filename should be appended to it. If the second filename does not exist then create a newfile with the contents of the first file.
9. Write a shell script to accept a number in the command line and displays the sum up to that number. By default, the sum up to 50 should be displayed.
10. Write a shell script to find the number of ordinary files and directory files in the current directory.
11. Write a shell script to accept an alphabet from the user and list all the files/directory starting with that alphabet in the current directory.

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PRACTICAL – 6

1. Write a shell script which accepts a number and displays the list of odd numbers below that number. It should also display the sum of all this odd numbers.
2. Write a shell script to arrange numbers in ascending or descending order as per the user choice.
3. Write a shell script to check whether the entered number is Armstrong or not.
4. Size of array A is 10 while size of B is 30. Scan 10 integers in both the array and concat array A to B. Then apply sorting algorithm according to the user choice.
5. Write a shell script to remove duplicates values from an array.
6. Write a shell script to add two arrays.
7. Write a shell script to reverse an array.
8. Write a shell script to check whether the entered string is in title case or not.
9. Write a shell script to check whether the scanned word is a uppercase word or not.
10. Write a shell script to count number of uppercase words in a string.

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PRACTICAL – 7 TO 11

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