

# **PRACTICAL LIST**

**Charotar University of Science and Technology (CHARUSAT)**

**Chandubhai S Patel Institute of Technology (CSPIT)**

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**IT343 Operating System**

**A.Y. 2022-23**

Practical No.	Program No.	Practical Aim
1.	1.1	Study Practical: A. UNIX Architecture B. Types of OS C. Flavors of LINUX
2.	2.1	Study the Unix commands with option
3.	3.1	Write a script called hello which outputs the following: <ul style="list-style-type: none"> <li>• your username</li> <li>• the time and date</li> <li>• Who is logged on?</li> <li>• Also output a line of asterisks (*****) after each section.</li> </ul>
	3.2	Write a shell program to find the largest integer among the three integers given as arguments.
	3.3	Write a shell script to simulate a simple calculator.
	3.4	Write a shell script to sort the number in ascending order and also calculate the shell script run time. (Using array)
4.	4.1	Write a shell program to count the following in a text file. <ul style="list-style-type: none"> <li>• Number of vowels in a given text file.</li> <li>• Number of blank spaces.</li> <li>• Number of characters.</li> <li>• Number of symbols.</li> <li>• Number of lines</li> </ul>
	4.2	Write a shell script which will take a file name from the user and find whether the file is there or not in a current working directory and display the appropriate message.
	4.3	Write a shell script which compares two files given by the user and if both files are the same then delete the second one, if not then merge the two files in a new file.
5.		Write a C program to list for every file in a directory, its inode number and file name.

6.		<p>Write a C program in UNIX to implement Process scheduling algorithms and compare.</p> <ul style="list-style-type: none"> <li>A. First Come First Serve (FCFS) Scheduling</li> <li>B. Shortest-Job-First (SJF) Scheduling</li> <li>C. Round Robin Scheduling</li> </ul>
7.		Write a C program in UNIX to implement inter process communication (IPC) using Semaphore
8.		Write a C program in UNIX to implement Bankers algorithm for Deadlock Avoidance.
9.		Write a C program in UNIX to solve dining philosophers' problems.
10.		<p>Write a C program in UNIX to perform Memory allocation algorithms and calculate Internal and External Fragmentation.</p> <ul style="list-style-type: none"> <li>● First Fit</li> <li>● Best Fit</li> <li>● Worst Fit</li> </ul>