KIIT POLYTECHNIC, BHUBANESWAR

LESSON PLAN

Session (2023 -2024)

Discipline: Computer Science and Engineering	Semester: 4th, Summer- 2024	Name of the faculty: Abhaya Kumar Panda **Email Id:** abhayafcs@kp.kiit.ac.in
Subject: Operating System Lab (Pr-1)	**No. of Days/week:** 01 (3 periods / Day)	**Start Date:** 16/01/2024 **End Date:** 26/04/2024

Week	Class Day	Practical Topics
1st	1st	**Introduction to Shell Scripting**: Understanding the Shell, Basic Shell Commands, Writing and Executing Shell Scripts, Variables and Data Types, Control Structures (if, else, while, for), Functions in Shell Scripting
2nd	1st	Write a Shell script to print the command line arguments in reverse order. Write a Shell script to check whether the given number is palindrome or not. Write a Shell script to sort the given array elements in ascending order using bubble sort.
3rd	1st	Write a Shell script to perform sequential search on a given array elements. Write a Shell script to perform binary search on a given array elements.
4th	1st	Revision /Assessment
5th	1st	**File Handling in Shell Scripting:** File Permissions and Ownership, Reading and Writing to Files, File Manipulation Commands, Case Statements in Shell Scripting, Terminal Locking and User, Authentication
6th	1st	Write a Shell script to accept any two file names and check their file permissions Write a Shell script to read a path name, create each element in that path (e.g., a/b/c). Write a Shell script to illustrate the case-statement.
7th	1st	Write a Shell script to accept the file name as arguments and create another shell script, which recreates these files with its original contents. Write a Shell script to demonstrate Terminal locking.
8th	1st	Write a Shell script to accept the valid login name, if the login name is valid then print its home directory else an appropriate message. Write a Shell script to read a file name and change the existing file permissions.
9th	1st	Revision /Assessment
10th	1st	**Advanced Shell Scripting and System Commands:** Advanced Command-Line Features, Process Management, System Administration Commands, Calendar Manipulation

11th	1st	Write a Shell script to print the current month calendar and to replace the current day number by '*' or '' respectively. Write a Shell Script to display a menu consisting of options to display disk space, the current users logged in, total memory usage, etc. (using functions).
12th	1st	**Introduction to C Programming for System Programming:** Basics of C Programming, File I/O in C, Process Control in C, System Calls in C
13th	1st	Write a C-program to fork a child process and execute the given Linux commands. Write a C-program to fork a child process, print owner process ID and its parent process ID.
14th	1st	Write a C-program to prompt the user for the name of the environment variable, check its validity and print an appropriate message. Write a C-program to read details of N students such as student name, reg number, semester, and age. Find the eldest of them and display his details.
15th	1st	Revision /Assessment