VIGNAN'S NIRULA
INSTITUTE OF TECHNOLOGY & SCIENCE FOR WOMEN
(Approved by AICTE, New Delhi & Affiliated to JNTU Kakinada)
Vignan Avenue, Peda Palakaluru, Guntur - 522009
Department of Information Technology

Innovative Practice

Course Information

Faculty Name : Dr. V. Pavani, Mrs. B. Murali Krishna
Course Name : Operating Systems
Class : II B. Tech I Semester
Academic Year : 2022-2023
Title of the Topic : Comparative Analysis of File Systems in UNIX/Linux and Windows
Activity Name : One-Minute Summary

Objective:

To engage students in actively summarizing their understanding of file systems in UNIX/Linux and Windows within a minute, focusing on structure, functionalities, and performance differences.

Activity Steps:

1. **Introduction (5-10 minutes):**
    - Briefly explained the key concepts of file systems such as ext4 in UNIX/Linux and NTFS in Windows.
    - Cover topics like file permissions, journaling, metadata, and directory structure.
2. **One-Minute Paper Activity:**
    - At the end of the session, asked students to take 1 minute test to respond to the questions

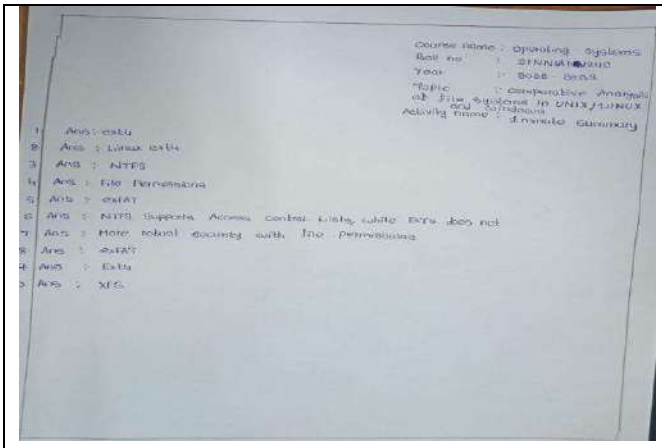
Conceptual Questions

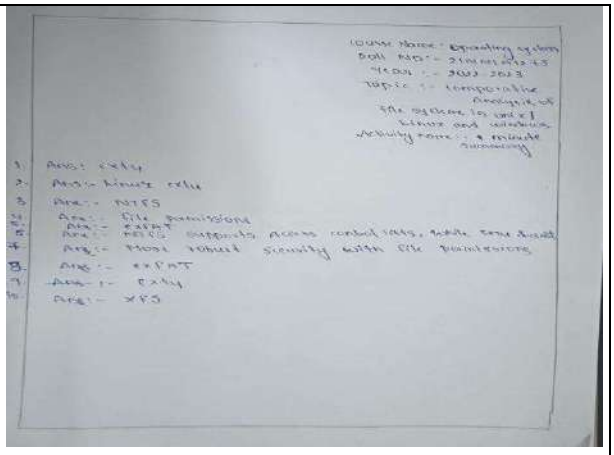
1. What is the primary purpose of a file system in an operating system?
2. Define the term "journaling" in the context of file systems.
3. How do file permissions differ between ext4 and NTFS?
4. What is metadata in a file system, and why is it important?
5. Describe the directory structure of a typical Linux file system.

Application-Based Questions

6. If a file permission in Linux is rwxr-xr--, who has write access to the file?
7. In which scenario is journaling most useful in a file system?
8. How does NTFS handle file security compared to ext4?
9. Explain one real-world advantage of ext4 over NTFS or vice versa.
10. If a power failure occurs, how does journaling help prevent data corruption?

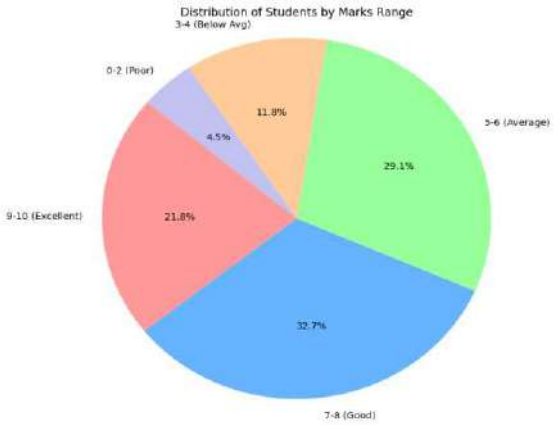
Screenshot of the practice





Assessment Analysis

Marks Range	Number of Students	Percentage
9-10 (Excellent)	24	21.82%
7-8 (Good)	36	32.73%
5-6 (Average)	32	29.09%
3-4 (Below Avg)	13	11.82%
0-2 (Poor)	5	4.55%
Total	110	100%



Conclusion

The One-Minute Summary activity conducted as part of assessing students' understanding of File Systems in UNIX/Linux and Windows proved to be an effective and insightful exercise.

Signature of the Faculty **Head of the Department**