17CS21P2 - OPERATING SYSTEMS LABORATORY

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| **Course Category:** |  Core | **Credits:** | 2 |
| **Course Type:** | Practical  | **Lecture – Tutorial – Practical:** | 0-0-3 |
| **Prerequisite:** | Knowledge on basic operating system concepts and programming fundamentals | **Sessional Evaluation:****Univ.Exam Evaluation:****Total Marks:** | 4060100 |
| **Objectives** | * Use various OS concepts to implement some of the real world issues practically and to give better exposure regarding its functionality.
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| **Course Outcomes** | Upon successful completion of the course, the students will be able to acquire knowledge on Scheduling strategies, Memory and File Allocation Techniques and Deadlock concepts |
| **Course Content** | 1. Simulate CPU scheduling algorithms like FCFS,SJF , Priority and Round Robin.[3 lab sessions]
2. Simulate file allocation strategies like Sequential, Indexed and Linked.[2 lab sessions]
3. Simulate Multiprogramming with variable number of tasks (MVT) and Multiprogramming with fixed tasks (MFT).
4. Simulate the implementation of Dead Lock Avoidance.
5. Simulate the implementation of Dead Lock Prevention.
6. Simulate page replacement algorithms like FIFO, LRU, Optimal and LFU.[2 lab sessions]
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| **Text Books and References:** | **Reference Books:**1. Silberschatz A, Galvin P B , Gagne G, Operating System Principles, 7th Edition.
2. Tanenbaum AS, Modern Operating Systems, 3rd Edition, Pearson Education 2008.
3. Stallings W, Operating Systems – Internals and Design Principles, 5th Edition, Prentice Hall of India 2005.
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| **E-Resources** | 1. [**https://nptel.ac.in/courses**](https://nptel.ac.in/courses)
2. [**https://freevideolectures.com/university/iitm**](https://freevideolectures.com/university/iitm)
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