

OPERATING SYSTEMS LAB

Course Code	20IT3551	Year	III	Semester	I
Course Category	PC	Branch	IT	Course Type	Lab
Credits	1.5	L-T-P	0-0-3	Prerequisites	Data structures
Continuous Internal Evaluation :	15	Semester End Evaluation:	35	Total Marks:	50
Course Outcomes					Blooms Level
Upon successful completion of the course, the student will be able to:					
CO1	Experiment with Unix system calls				L3
CO2	Identify the performance of page replacement algorithms				L3
CO3	Analyze the performance of the various process scheduling, Disk Scheduling algorithms.				L3
CO4	Develop algorithm for process synchronization, deadlock avoidance, detection and file allocation strategies				L3

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Medium, 1:Low)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1					3									
CO2		3												
CO3		3											3	
CO4			3										3	

EXPERIMENTS		
Experiment No	Description	Mapped co
EXP-1	Execute various Unix system calls for process and file management	CO1
EXP-2	Write a program to simulate the following non pre-emptive CPU scheduling algorithms to find turnaround time and waiting time. a) FCFS b) SJF c) Round Robin (pre-emptive) d) Priority	CO3
EXP-3	Write a program to simulate Bankers algorithm for the purpose of deadlock avoidance.	CO4
EXP-4	Write a program to simulate page replacement algorithms a) FIFO b) LRU	CO2
EXP-5	Write a program to simulate page replacement algorithms a) Optimal b) LFU	CO2
EXP-6	Write a program to simulate disk scheduling algorithms a) FCFS b) SCAN	CO3
EXP-7	Write a program to simulate the concept of Dining-Philosophers problem	CO4

Learning Resources

Text book:

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| 1 | Operating System Concepts, Abraham Silberchatz, Peter Baer Galvin, Greg Gagne, Ninth Edition, 2016, Wiley India. |
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References:

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| 1 | Operating Systems - Internal and Design Principles, William Stallings, Ninth Edition, 2018, Pearson. |
| 2 | Operating Systems - Harvey M.Deitel, Paul J Deitel and David R.Choffnes, Third Edition, 2019, Pearson. |
| 3 | Operating Systems - A Concept based Approach- D.M. Dhamdhere, Second Edition, 2010, McGraw Hill. |

e-Resources and other Digital Material:

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| 1 | https://www.youtube.com/watch?v=z3Nw5o9dS7Q&list=PLsyIUObW5M3CAGT6OdubyH6FztKfJCcFB |
| 2 | http://www.youtube.com/watch?v=MaA0vFKtew&list=PL88oxI15Wi4Kw1aEY2bC5L_4pouojtd4 |