

Operating Systems COM301T

Faculty - B Sivaselvan

Schedule

- Monday 2.00 - 2.50 pm
- Tuesday 12.00 - 12.50 pm
- Thursday 11.00 - 11.50 pm

TAs

- Santosh Kumar - coe18d005
- Mercy Faustina - coe19d006

| Lecture | Topic | PDF | Video |
|----------------------------|---|------------------------|----------------------------|
| Session-1 (03/08/2020) | Intro session | Slides | Lecture 1 |
| Session-2 (04/08/2020) | Operating system overview-1 | Slides | Lecture 2 |
| Session-3 (06/08/2020) | Operating system overview-2 | Slides | Lecture 3 |
| Session-4 (10/08/2020) | Operating system overview-3 | Slides | Lecture 4 |
| Session-5 (11/08/2020) | OS features , Process concept 1 | Slides | Lecture 5 |
| Session-6 (13/08/2020) | Process concept 2 | Slides | Lecture 6 |
| Session-7 (17/08/2020) | Process concept 3 | Slides | Lecture 7 |
| Session-8 (18/08/2020) | Linux system calls , Fork intro | Slides | Lecture 8 |
| Session-9 (20/08/2020) | Process state transition | Slides | Lecture 9 |
| Session-10 (24/08/2020) | Process state transition contd , Fork 1 | Slides | Lecture 10 |
| Session-11 (25/08/2020) | Fork 2 | Slides | Lecture 11 |

| Lecture | Topic | PDF | Video |
|----------------------------|---|------------------------|----------------------------|
| Session-12 (27/08/2020) | Fork 3 | Slides | Lecture 12 |
| Session-13 (31/08/2020) | Fork 4 , Exec 1 , Wait | Slides | Lecture 13 |
| Session-14 (01/09/2020) | Wait | Slides | Lecture 14 |
| Session-15 (03/09/2020) | Exec variants | Slides | Lecture 15 |
| Session-16 (07/09/2020) | Exec variants , Fork output questions | Slides | Lecture 16 |
| Session-17 (08/09/2020) | CPU scheduling algo | Slides | Lecture 17 |
| Session-18 (10/09/2020) | CPU scheduling algo , FCFS trace | Slides | Lecture 18 |
| Session-19 (14/09/2020) | FCFS , SJF | Slides | Lecture 19 |
| Session-20 (15/09/2020) | SRT (SJF PE) , Priority NPE | Slides | Lecture 20 |
| Session-21 (17/09/2020) | Priority PE , Round Robin | Slides | Lecture 21 |
| Session-22 (21/09/2020) | HRRN , Numericals on RR , IO | Slides | Lecture 22 |
| Session-23 (22/09/2020) | IO , Multiprocessor example , IPC 1 | Slides | Lecture 23 |
| Session-24 (24/09/2020) | IPC 2 | Slides | Lecture 24 |
| Session-25 (28/09/2020) | IPC 3 ,Pipes 1 | Slides | Lecture 25 |
| Session-26 (29/09/2020) | Pipes 2 , Pipes exercises | Slides | Lecture 26 |
| Session-27 (01/10/2020) | dup and Pipes example LS | Slides | Lecture 27 |
| Session-28 (12/10/2020) | Multithreading intro | Slides | Lecture 28 |
| Session-29 (13/10/2020) | Multithreading benefits challenges models | Slides | Lecture 29 |

| Lecture | Topic | PDF | Video |
|----------------------------|--|------------------------|----------------------------|
| Session-30 (14/10/2020) | Pthreads example | Slides | Lecture 30 |
| Session-31 (19/10/2020) | Matrix mult | Slides | Lecture 31 |
| Session-32 (20/10/2020) | Matrix mult and Amdahl's law | Slides | Lecture 32 |
| Session-33 (22/10/2020) | Amdahl's law, Thread pool | Slides | Lecture 33 |
| Session-34 (26/10/2020) | Thread level scheduling,Signal handling | Slides | Lecture 34 |
| Session-35 (27/10/2020) | Signal handling | Slides | Lecture 35 |
| Session-36 (29/10/2020) | Sending signals and addnl features | Slides | Lecture 36 |
| Session-37 (02/11/2020) | Synchronization | Slides | Lecture 37 |
| Session-38 (03/11/2020) | Critical Section problem, Peterson's solution | Slides | Lecture 38 |
| Session-39 (05/11/2020) | Lock instruction, Bounded-waiting mutual exclusion | Slides | Lecture 39 |
| Session-40 (09/11/2020) | Mutex locks for CSP,Semaphore limitations,Deadlock & Starvation problems | Slides | Lecture 40 |
| Session-41 (10/11/2020) | Dining philosopher problem | Slides | Lecture 41 |
| Session-42 (12/11/2020) | Dining philosopher,Reader Writer problem | Slides | Lecture 42 |
| Session-43 (16/11/2020) | Reader writer,prod cons,Deadlocks | Slides | Lecture 43 |
| Session-44 (17/11/2020) | handling deadlocks,prevention,avoidance-Bankers algo | Slides | Lecture 44 |
| Session-45 (18/11/2020) | Deadlock detection,Recovery from deadlock | Slides | Lecture 45 |

Resources

- Add links to materials you found useful while preparing
- [Refer](#) for full notes

- [Nice intro to Semaphores](#)
- [For semaphore based problems](#) Ch-4 and 5
- For banker's algorithm - [vid_1](#) [vid_2](#)