

3. Explain the meaning of the term “Context.” What does the term “Context Switch” mean.

4. What does the term “System Call” mean? What must a program do to make a System Call happen? Give two reasons that a program might want to perform a System Call.

5. Suppose the following jobs arrive in the following order at time zero. Give the GANTT chart and the average wait time for the following algorithms: First Come First Served, Shortest Job First. Assume that a process switch requires zero time. Calculate the average wait time for both algorithms.

Job Number	Burst Time
1	3
2	2
3	13
4	4
5	9

6. Suppose the following jobs enter the ready queue at the times given. Give two GANTT charts for these jobs, one for the non-preemptive Shortest Job First algorithm, and one for the preemptive Shortest Job First (aka Shortest Remaining Time First).

Job Number	Burst Time	Arrival Time
1	4	1
2	2	2
3	2	3
4	4	4
5	5	5

7. Contest winner: **A tie**, answer either *a* or *b*.
- a. Describe the differences between the many-to-many, many-to-one, and one-to-one relationships between kernel threads and user threads.
 - b. How do processes get created? Explain what creates a process and how it is done. You may use the UNIX model in your explanation.