

12. What is the *most important* limitation of using user-space threads. How is it remedied by modern operating systems.

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Score

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13. Give an example from the programs you've coded where a race condition can lead to data inconsistency. (The example must *not* be of cash withdrawal and deposit.) Explain fully, the sequence of operations, which can lead to the data inconsistency.

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14. In the example given above, suggest changes to ensure that the race condition is avoided.

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15. If you initialize a semaphore with the value 5 and issue the down call on it from 7 different threads (t_1, \dots, t_7), list the state of each thread after the calls. (States can be 'ready', 'running', 'blocked', 'zombie').

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Score

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