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# Assignment 4

**Question 1:**
1. The kernel doesn't need to be used when using threads
2. Processes have their own memory which threads communicate with, so mode switching between processes would involve sending all the data from one process to another whereas hreads share the memory.

Two disadvantages of ULTs compared to KLTs:
1. Only one thread inside a process can run at any given time.
2. When one thread gets blocked, all the threads within the process are blocked.

**Question 2:**
Multi-threaded programs can execute in parallel as opposed to running sequentially. If one process gets blocked on a kernel level thread, the other threads can continue running while the blocked thread waits for whatever it needs to continue.

**Question 3:**
No, when a process exits all of the threads running within it also exit. The threads depend on the process environment to run in.

**Question 4:**
a. 1 process starts is created at pid =fork();. 1 more process starts inside the if-statement, both the previous processes and the parent create a process at the fork() after the if statement. Making 5 total processes created.

b. Since the only thread being created is in the if-statement after the fork() it'll create 2 total threads.