Optiver
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What are the differences between process and thread?
Each process has its own heap, while all threads in the same process share the same heap, so inter-thread communication is done by sharing objects in heap, while inter-process communication is done by socket, pipe and shared memory.

Tell me something about concurrency.
Race condition, mutex, semaphore, deadlock, livelock, spinlock, lockfree, atomic, fence, CAS.

What is cache?
Name techniques to write cache friendly code.
-   understand implicit structure of data
-   use appropriate c++ containers
-   use appropriate c++ algorithms
-   avoid unpredictable branches
-   avoid virtual functions

What happens underneath when TCP connection is made?

How to implement a vector (memory allocation)?
How to implement a hashmap?

How to debug memory leak?
How to debug performance issue (no timestamp can be added)?

List some C++ profiling tools.
-   BoundsChecker
-   Valgrind and Memcheck
-   gperftools
-   mtrace