Conceptual Questions

1. pthread\_create creates a thread. pthread\_join basically waits until the given thread terminated. pthread\_exit basically returns the value to the joining thread and terminates the calling thread.
2. Threads do not share the same memory. Only child threads can access memory of a parent thread.
3. The difference between multithreading and multiprocessing is that multithreading generates multiple threads whereas multiprocessing allows the systems two have more than two systems. Multiprocessing can be classified in to two different processing asymmetric multiprocessing and symmetric multiprocessing and multithreading is not classified. Some of the advantages of multithreading is that big programs run smoothly, handles multiple threads and also improves cache usage. Some of the disadvantage of multithreading is that if the kernel program stops then it blocks the entire program, it also slows down the system. Some of the advantages of multiprocessing is that it is cheap, it’s more reliable and some of the disadvantage of multiprocessing if one of the processors fail then it affects the speed.
4. Mutual Exclusion is basically doesn’t allow multiple access to shared resources, only one thread owns one mutex at a time. It is used in concurrent programming. A critical section can access shared variables. Only one process can execute critical section at a time.
5. pthread\_mutex\_lock() this function locks the mutex variable, pthread\_mutex\_unlock() this function unlocks the mutex variable and pthread\_mutex\_trylock() this function locks the mutex or returns error if the code is busy,