1-3. Running→Waiting (Hint: When a thread has a console output(I/O), it needs to yield

CPU resource and go to waiting state.)

● userprog/exception.cc ExceptionHandler(ExceptionType) case SC\_PrintInt

● userprog/synchconsole.cc SynchConsoleOutput::PutInt()

● machine/console.cc ConsoleOutput::PutChar(char)

● threads/synch.cc Semaphore::P()

● threads/synchlist.cc SynchList<T>::Append(T)

● threads/thread.cc Thread::Sleep(bool)

● threads/scheduler.cc Scheduler::FindNextToRun()

● threads/scheduler.cc Scheduler::Run(Thread\*, bool)

1-4. Waiting→Ready (Hint: After finishing console output(I/O), this thread can return to

ready queue.)

● threads/synch.cc Semaphore::V()

● threads/scheduler.cc Scheduler::ReadyToRun(Thread\*)