

Q1 - 1

- Which of many-to-one, one-to-one, many-to-many is the communication mode between user thread and kernel thread in nachos?
- Ans: One-to-one

Q1 - 2

- Where is the implementation of SWITCH() used in Scheduler::Run() ?
- Ans: In threads/Switch.S. It will store the state of the old thread to the thread control block, and load the state of the new thread to the register.

Q2

- Please explain how the default round-robin scheduler in NachOS implements the context switch every 100 ticks time quantum?

Tips: alarm.cc, interrupt.cc, there are 3 steps.

- **Ans:**
 - Alarm registers an interrupt to pending queue every 100 ticks.
 - Alarm::Callback() sets yieldOnReturn to be true.
 - Interrupt::OneTick() checks yieldOnReturn, and executes subsequent context switch through kernel->currentthread->Yield().