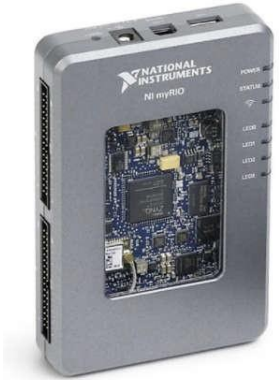
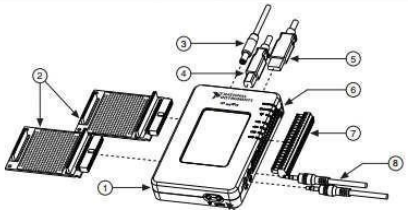
SFWR ENG 4AA4 Lab 6



NI myRIO-1900

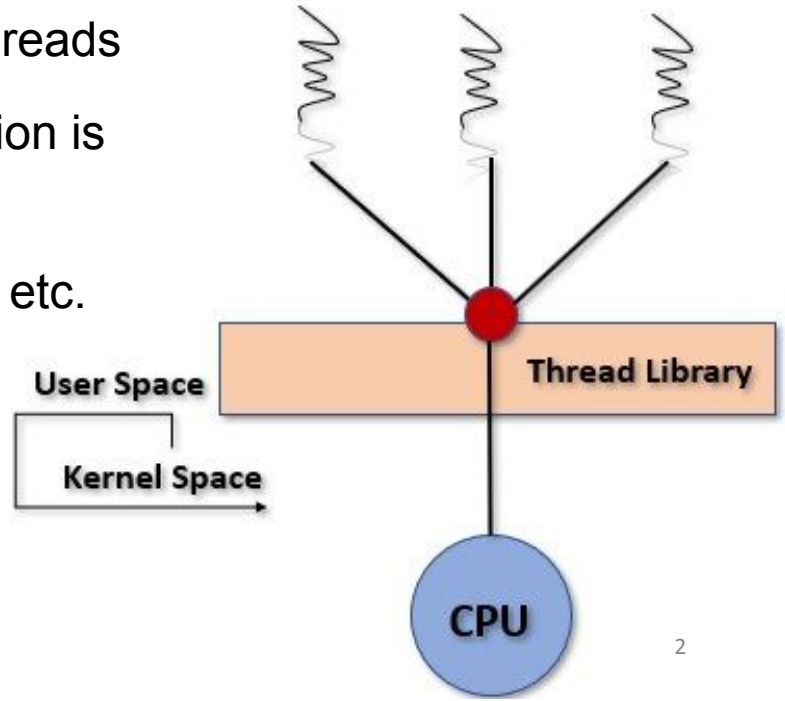
The National Instruments myRIO-1900 is a portable reconfigurable I/O (RIO) device that students can use to design control, robotics, and mechatronics systems. This document contains pinouts, connectivity information, dimensions, mounting instructions, and specifications for the NI myRIO-1900.

Figure 1. NI myRIO-1900



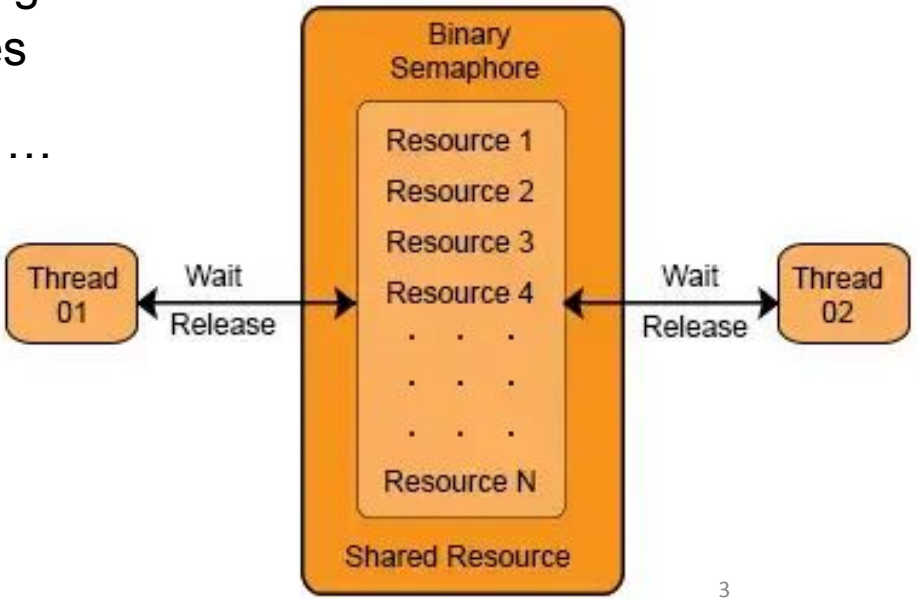
Lab 6 Introduction

- Create aperiodic task as threads
- Observe why synchronization is needed
- Race condition, starvation, etc.



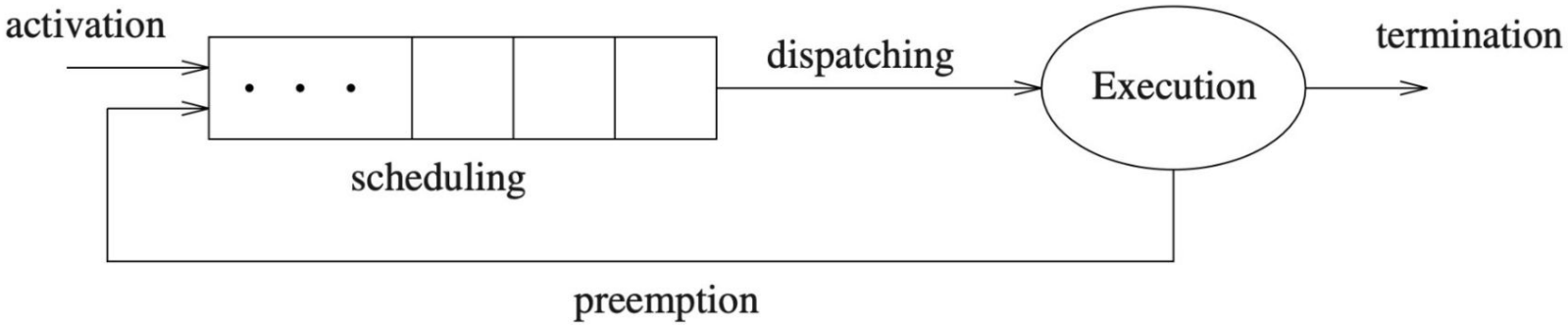
Lab 6 Introduction

- Synchronize threads using semaphores and mutexes
- POSIX pthreads, sem_t, …



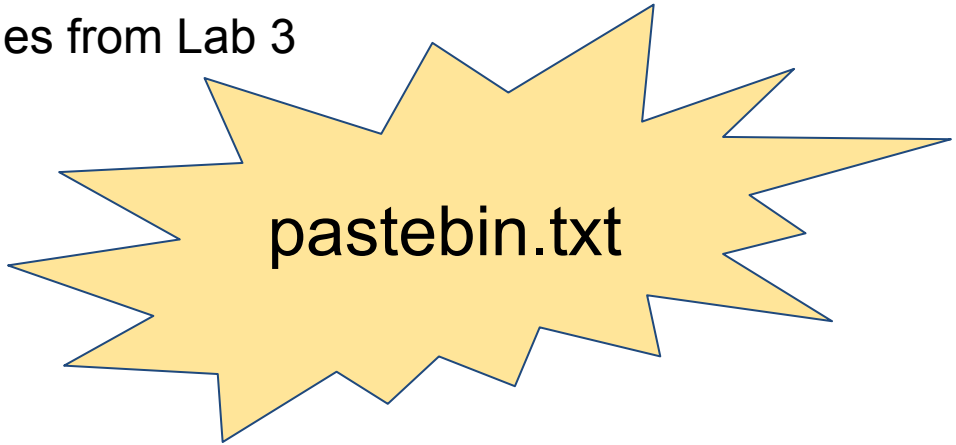
Lab 6 Introduction

- Experiment with different scheduling policies

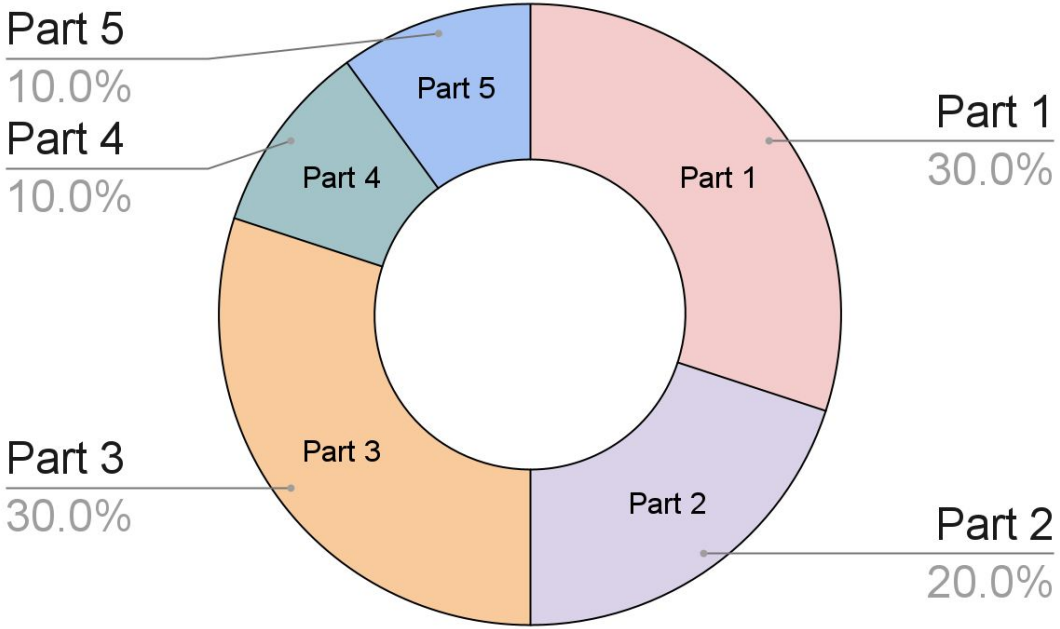


Reminders

- Part 1 in Lab 3, “Hello world” C project
- No need for myRIO templates
- Compiler, linker flags, includes from Lab 3



Marking Scheme



One more thing…

- Part 5: Google Doc
- Experiments in Linux VM: execute in sudo

GL HF :)