Process Priorities

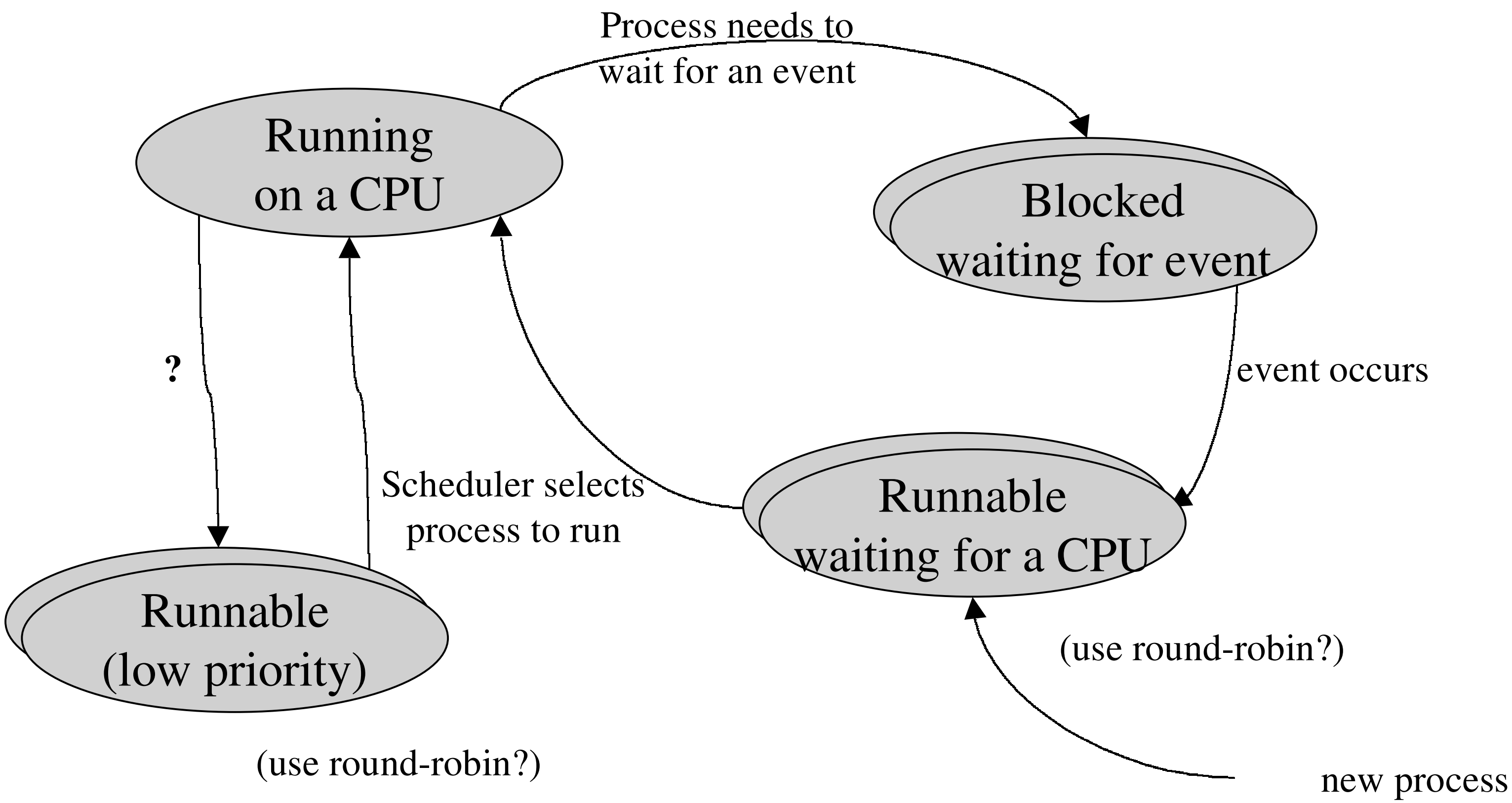
Which runnable process should
the scheduler choose?

Fixed Priorities

- Fixed, statically determined
  - e.g. Process Control

- Not suitable for general interactive use
- Want short, or I/O bound programs to have high priority (these have maximum scheduling overhead)
- These have low probability of pre-emption

Simple Dynamic Priority



(e.g.) Unix Dynamic Priority

- Every second:
  - Every process:
    - New Priority = (Old Priority)/2 + %CPU

- High numbers => low priority
- CPU bound processes low
- I/O bound processes high

Types of Scheduling

a) Idle system (no runnable process)
b) Interrupt
c) wakes up one process

$\Rightarrow$ schedule it!

- Known as: Unary Scheduling (simple!)
  Lab?

Types of Scheduling

One process (A) running

A is, by definition, highest priority

A wakes up another (B)

$\Rightarrow$ schedule B if higher priority than A

- Binary Schedule

  Lab?

General Schedule

- Consider all processes

  When?

  Lab?

Process Data Structures