1 Process API

Vocabulary

1. **Process Identifier (PID)**
    - Is an unique identifier for an active process
2. **CPU Scheduler**
    - Is a policy which determines which process to run at a given point in time
3. **Concurrency**
4. **Deterministic**
5. **Non-deterministic**
6. **Multi-threaded Programs**
7. **Signal**
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1.1 fork() System Call

- Creates a new process
- Is an almost exact copy of the calling process
- **Parent** is the creator
    - Runs from `main()` (beginning of program)
- **Child** is the newly created process
    - Runs from `fork()` (where `fork()` occurs)

1.2 wait() System Call

- Forces parent to wait for a child process to finish its process

1.3 exec() System Call

- Does not create a new process
- Transforms currently running program into a different running program
- Current running program is overwritten

- Code segment, heap, and stack are re-initialized

  Example

  `(pid: 123) p3.c — exec() —> (pid: 123) ls -al`