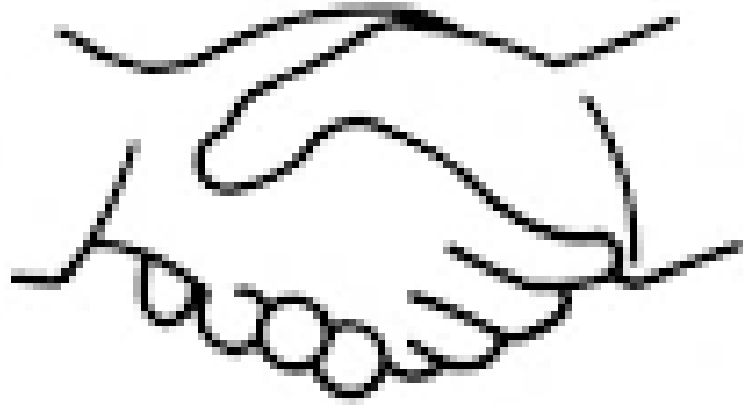# The Contract

- The Developer respects the rules
  - Atomic operations
  - Partial ordering of operations
  - Visible effects of operations

- The System wants to optimize
  - Compiler
  - Processor
  - Memory system

Highly optimized program
Tailored for the architecture

The Contract

strong

Single Thread
- One control flow

Multi Threads
- Tasks
- Threads
- Condition variables

Atomics
- Sequential consistency
- Acquire-release semantics
- Relaxed semantics

weak

- More optimization potential for the system

- The number of potential interleaving grows exponentially

- More and more the domain of experts

- Break of the intuition

- Area of micro-optimization