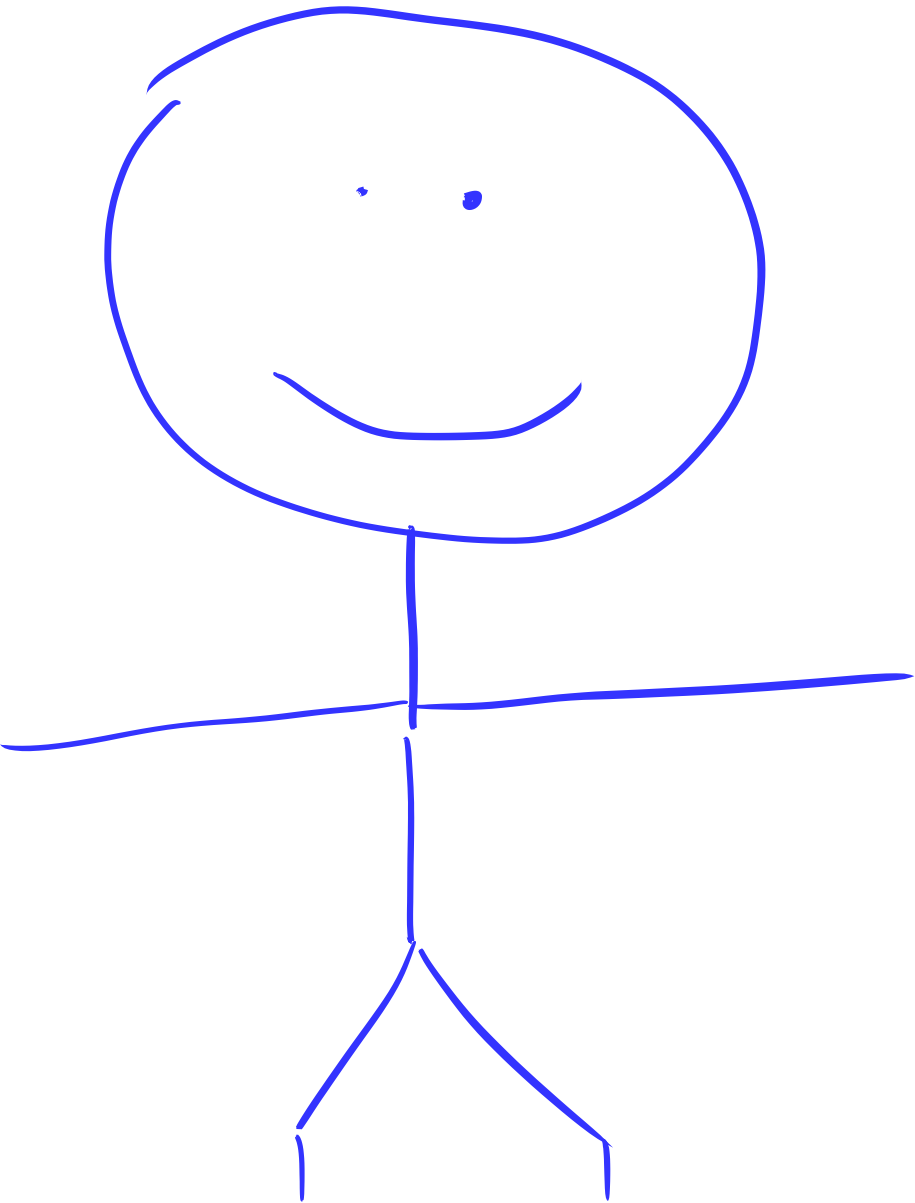


Concurrency - $\exists t$. both start before t
and both end after t

Parallel - $\exists t$. both are making progress

Parallel \subset Concurrent

Parallel \rightarrow Concurrent



this is a picture of a
person (sort of)

		Share			Communicate
		disk	memory	CPU	
almost always parallel	devices	X	X	X	Socket
	processes	✓	X	X	+ Pipe
might be parallel	Threads (synchronize)	✓	✓	X	Synchronized + variables
not parallel	Fiber / coroutines	✓	✓	✓	+ normal variables

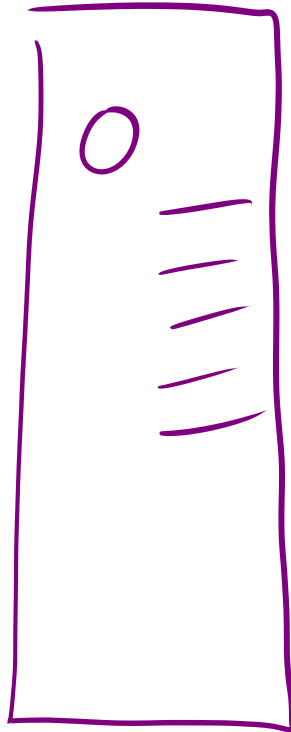
Internet → sockets

→ 1. accept new connections on 1 thread

1 thread
Per conn [2. track multiple connections
3. use several conn at once (concurrently)

I want data

←
here



I want data

→
here