Operating Systems and Systems Programming

CS162 Teaching Staff

Who am I?

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Office Hours: 11-12pm Tu W at 411 Soda Hall

Research:

Data Security

Tech for Sustainability

More administrivia…

- Register on Piazza!
- User accounts
- Project teams to be formed by 1/23 11:59 PM
- Finalize preference of discussion sections (give at least 2 choices)
- **All project members MUST attend same discussion section!!**
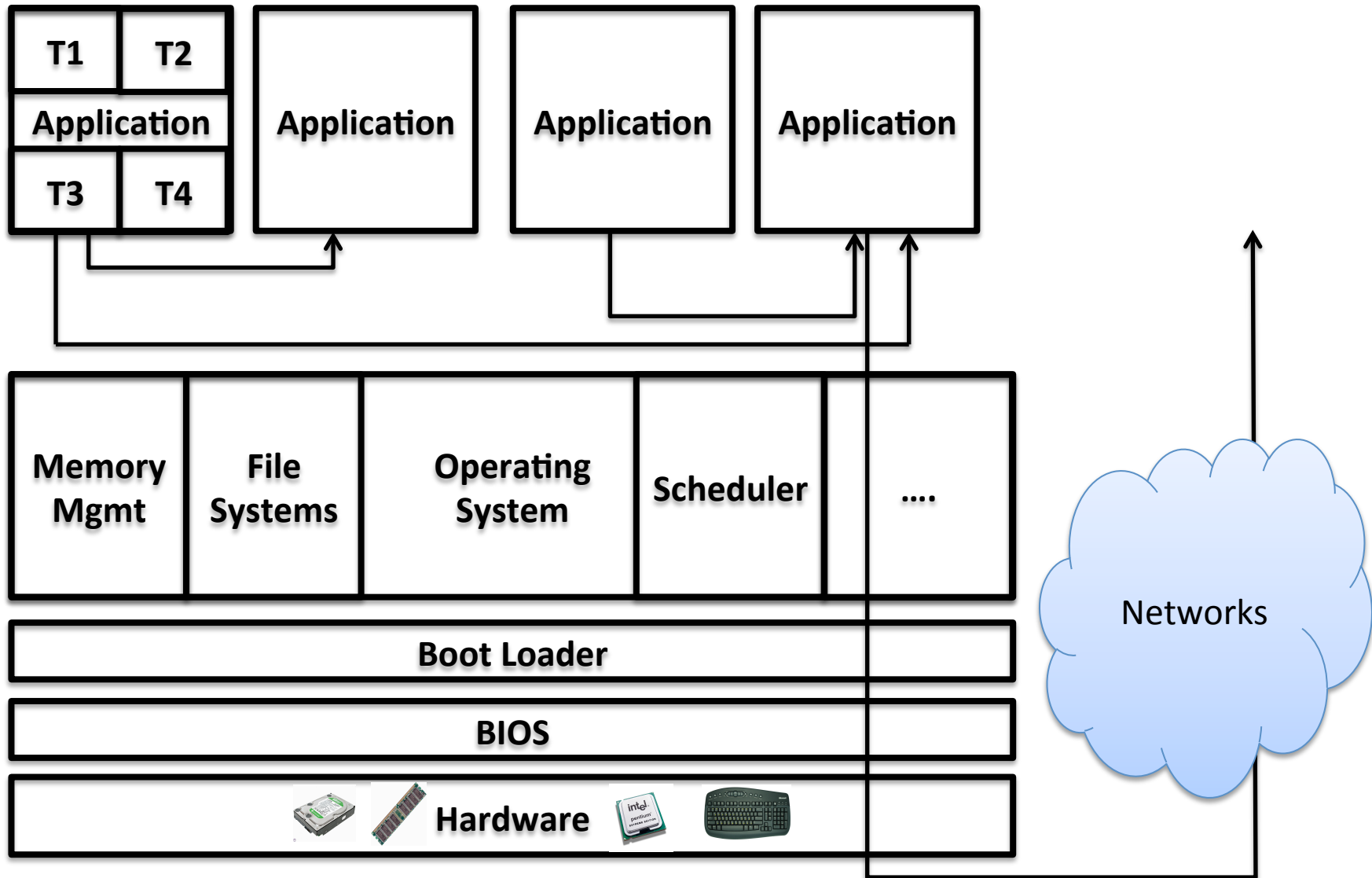
Project Goals

- Learn to work in teams
- Use good engineering practices
  - Version control, collaboration
  - Requirements specification
  - Design Document
  - Implementation
  - Testing
  - [Performance, reliability, …] analysis
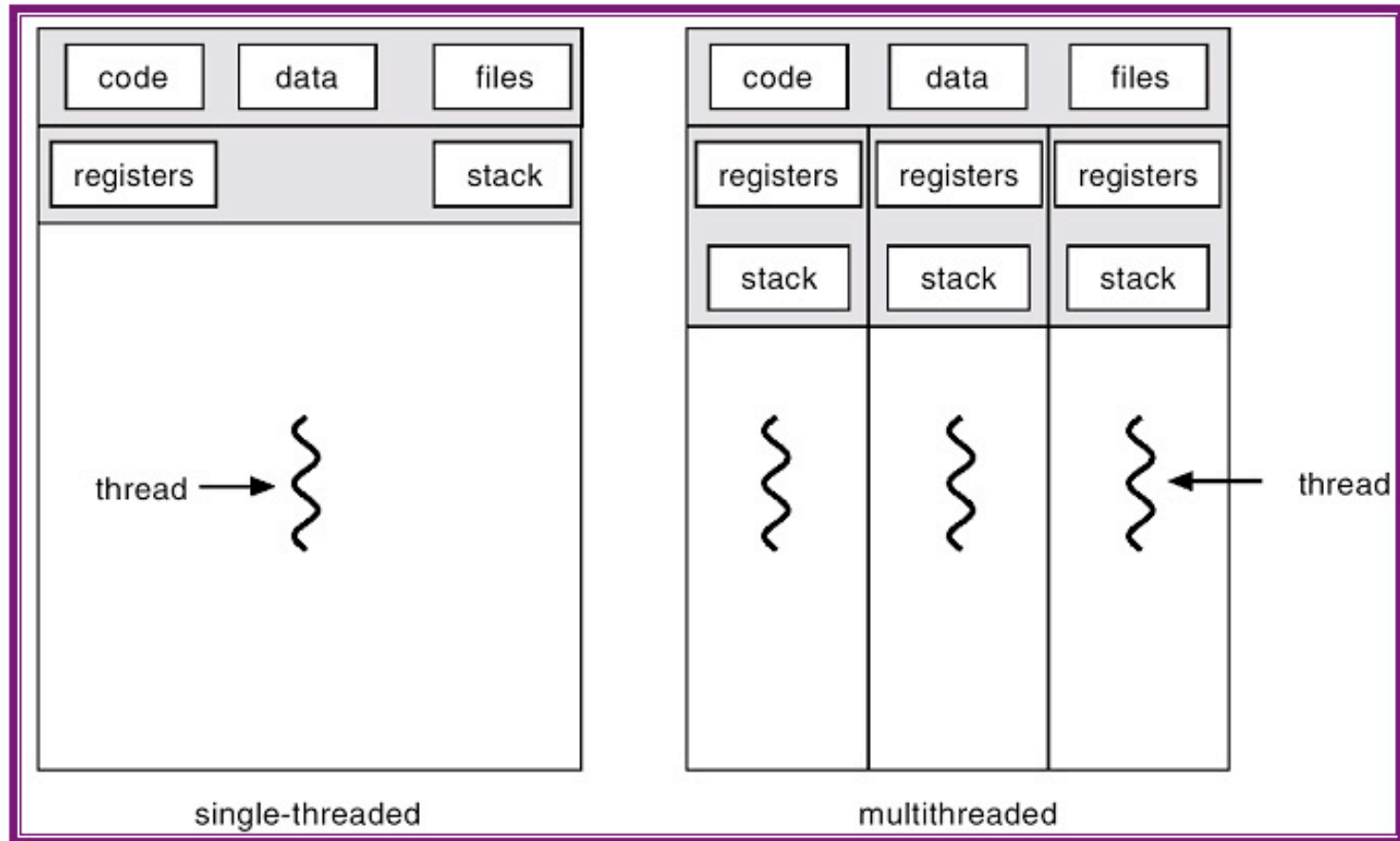- Understand lecture concepts at the implementation level

Good Project Lifetime

- Day 0: Project released on course webpage
- Day 1 - 13: Team meets, discusses and breaks up work on design and necessary prototyping
- Day 14: Final design document due
  – Team reviews the document with TA
- Day 15: Implementation begins
- Day 20: Implementation is finished. Team switches to writing test cases. Design doc has been updated to reflect the implementation.
- Day 21: Iteration and performance analysis.
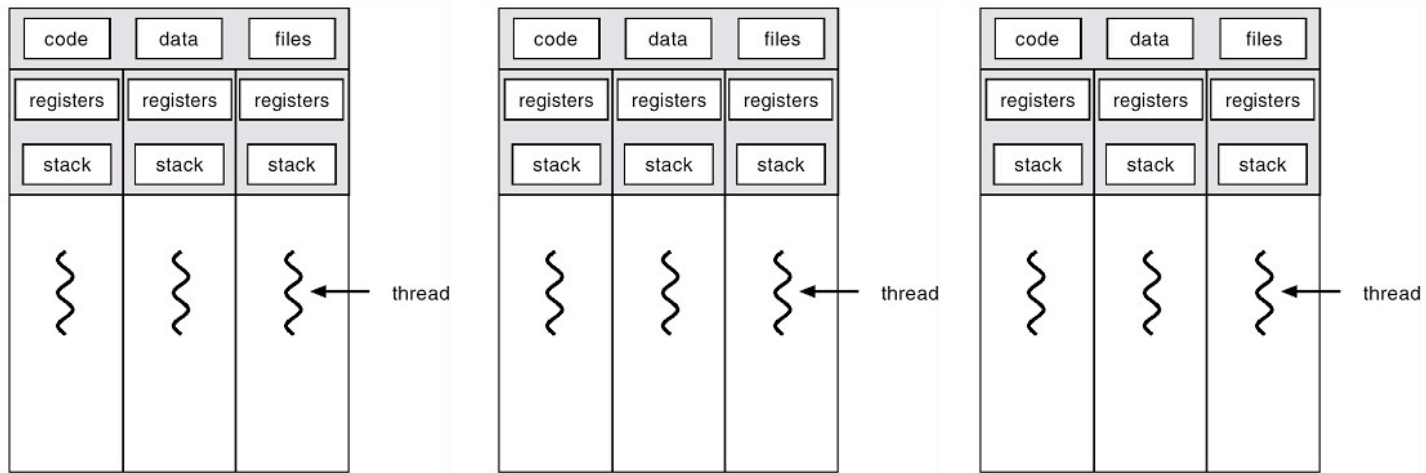- Day 23: Team puts finishing touches on write up and gets to bed early.
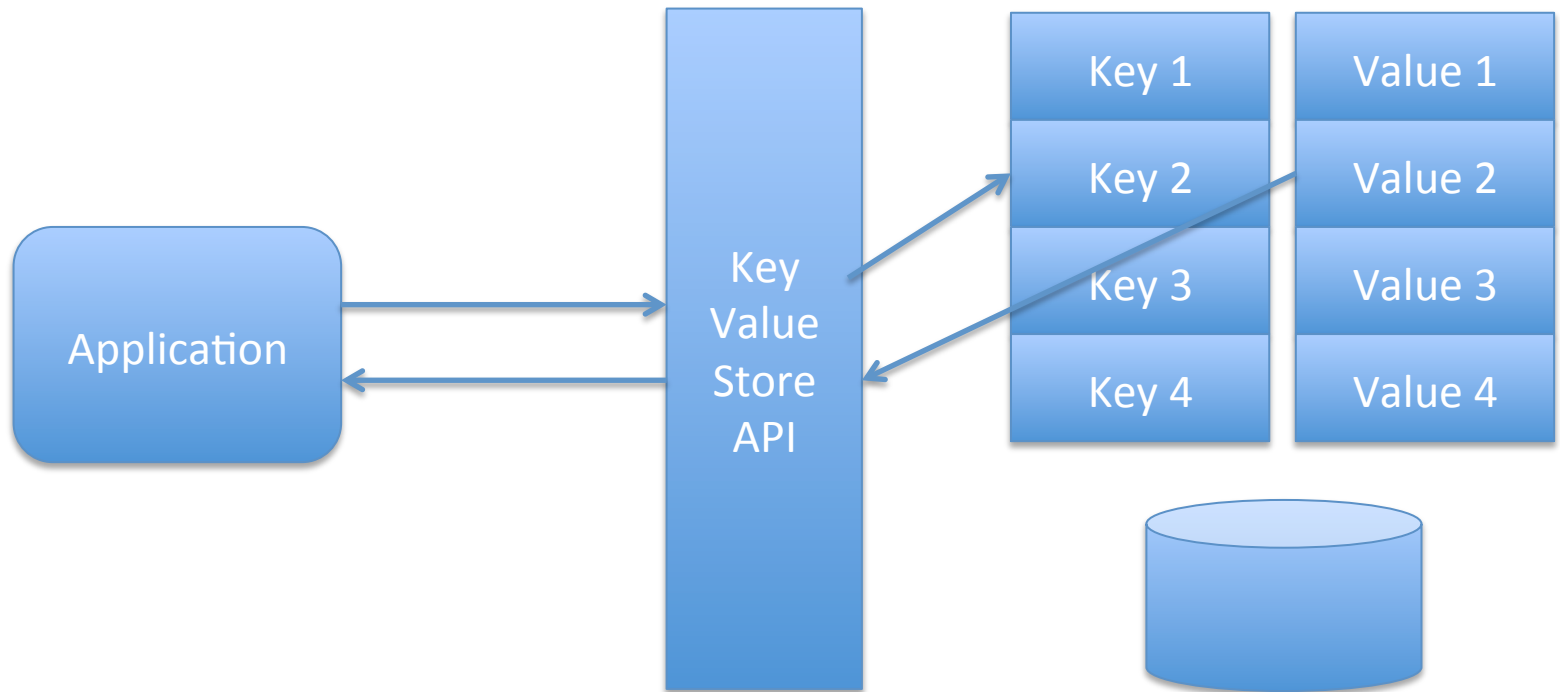
A computer boot sequence
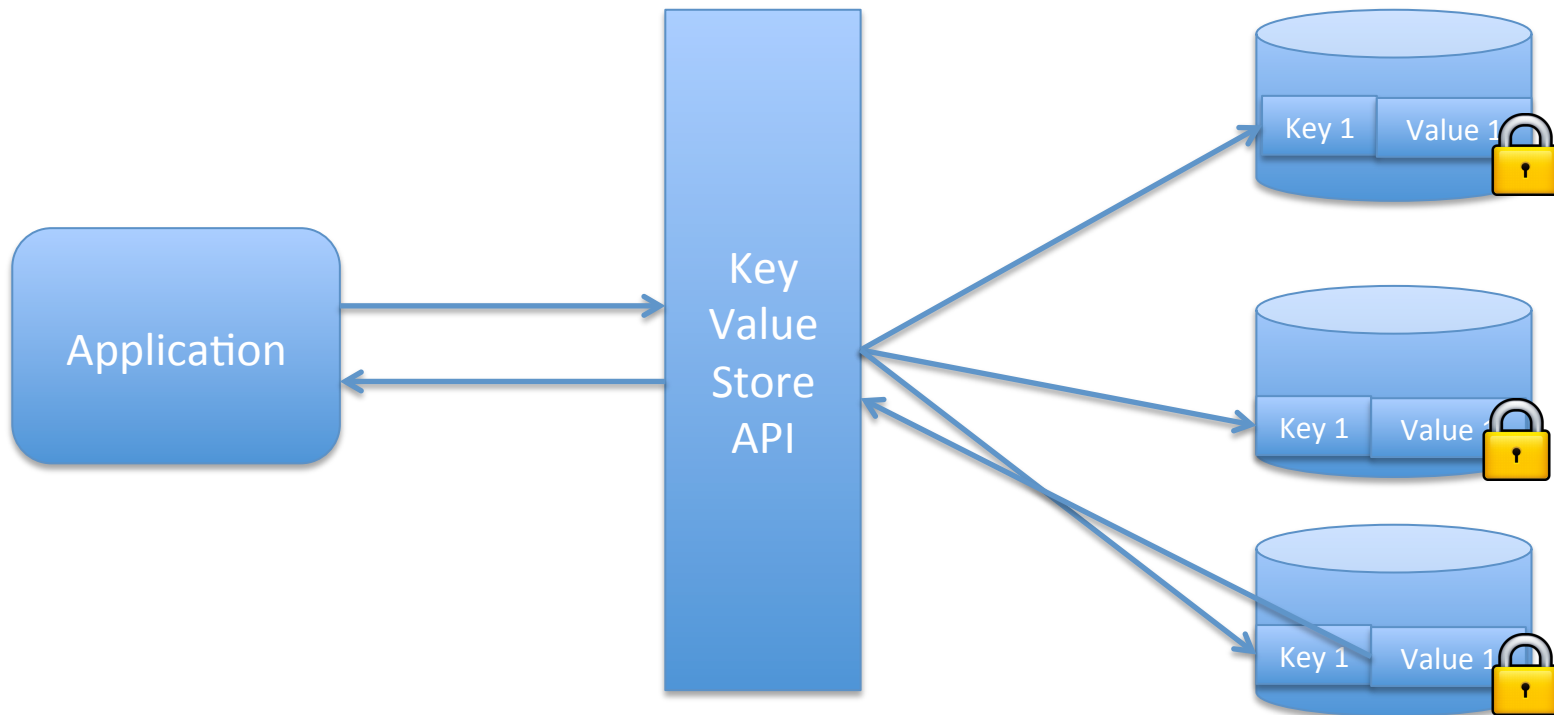
Project 1: Thread Programming

code	data	files
registers		stack

thread →

single-threaded

code	data	files
registers	registers	registers
stack	stack	stack

← thread

multithreaded

Project 2: Multiprogramming

Project 3: Key Value Store

Project 4: Distributed KV Store

Questions about the course…

What is a System?

A set of "things" **working together** as parts of a "mechanism" or an interconnecting network.