Study Questions - Design Experience

**Interfaces:**
- What is Lampson’s principle for interfaces?
- What does an interface provide?
- What does an interface consist of?
- What are the requirements for a good interface?

**Simplicity**
- What is Lampson’s principle for simplicity?
- What are the requirements?
- What are the implications? How do you reconcile this with the Shanley Principle?
- What are the results/effects of combining things? Example?
- What do you need to pull it off?

**Corollaries**
- Do we still need to worry about speed? Why or why not?
- What do you want to hide? Not hide?
- What is function abstraction? Why is it important?
- What is separation of concerns? What are the benefits?
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- **Continuity**
  - What is the basic problem?
  - What do you want to keep stable? Allow to change?
  - What does it mean to be upwardly compatible? Examples?
  - What is bootstrapping?

- **Implementations**
  - What is Brook’s advice? Why? Examples?
  - Why is it important to keep secrets? Examples? Benefits?
  - What are useful design techniques for divide and conquer? Examples?
  - What does it mean to use a good idea again? Examples?
  - What is the difference between normal and abnormal?
    - What is Lampson’s advice? Why? Examples?

- **Speed (not the drug 😊)**
  - Examples of techniques?
  - Advantages of these techniques?
  - Problems?
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Fault tolerance

When should it be considered? Why? Where?
What are some useful techniques? Their benefits?