

Designing Information Systems

What: I asked you to

1. Read about approaches to designing Information Systems
2. Think about decisions associated with different activities in design cycle

Why:

1. Better understanding of info systems -- Understand not just what system is, but how it comes to be (all the decisions that it represents).
2. Decisions are useful way to “ground” discussions of design, b/c decisions are...
 - Where professionals use knowledge.
 - Commitments that may have effects.

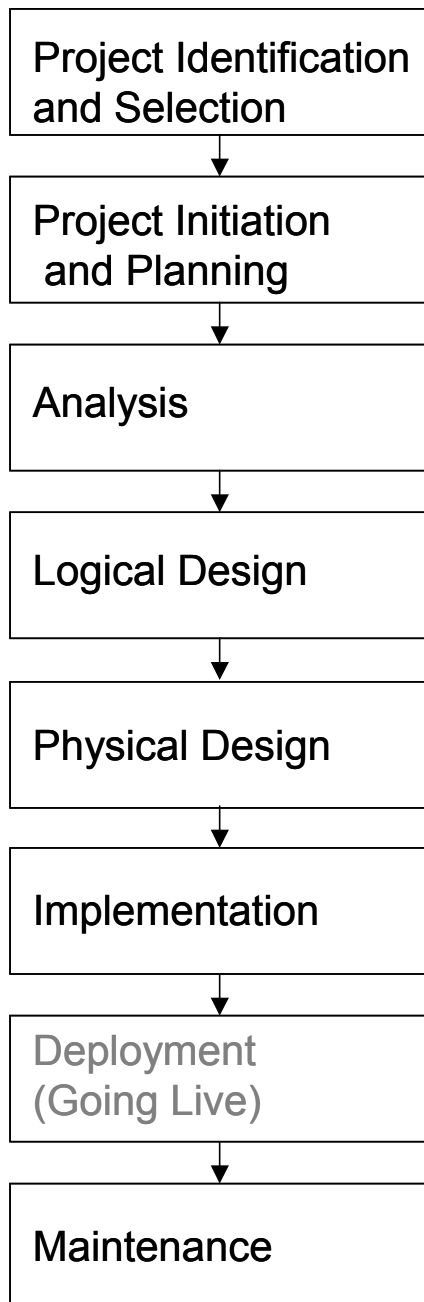
What Next:

1. Lecture: Explanation and examples
2. Small Groups: Comparison then selection of one decision for each activity
3. Class Synthesis: Group answers on board
4. Class Discussion:
 - Do examples make sense?
 - How well did we cover **wide range of** issues in Information Systems design?

Systems Development Life Cycle

BOOK: Systems Development Life Cycle is a traditional process, a sequence of steps to be followed

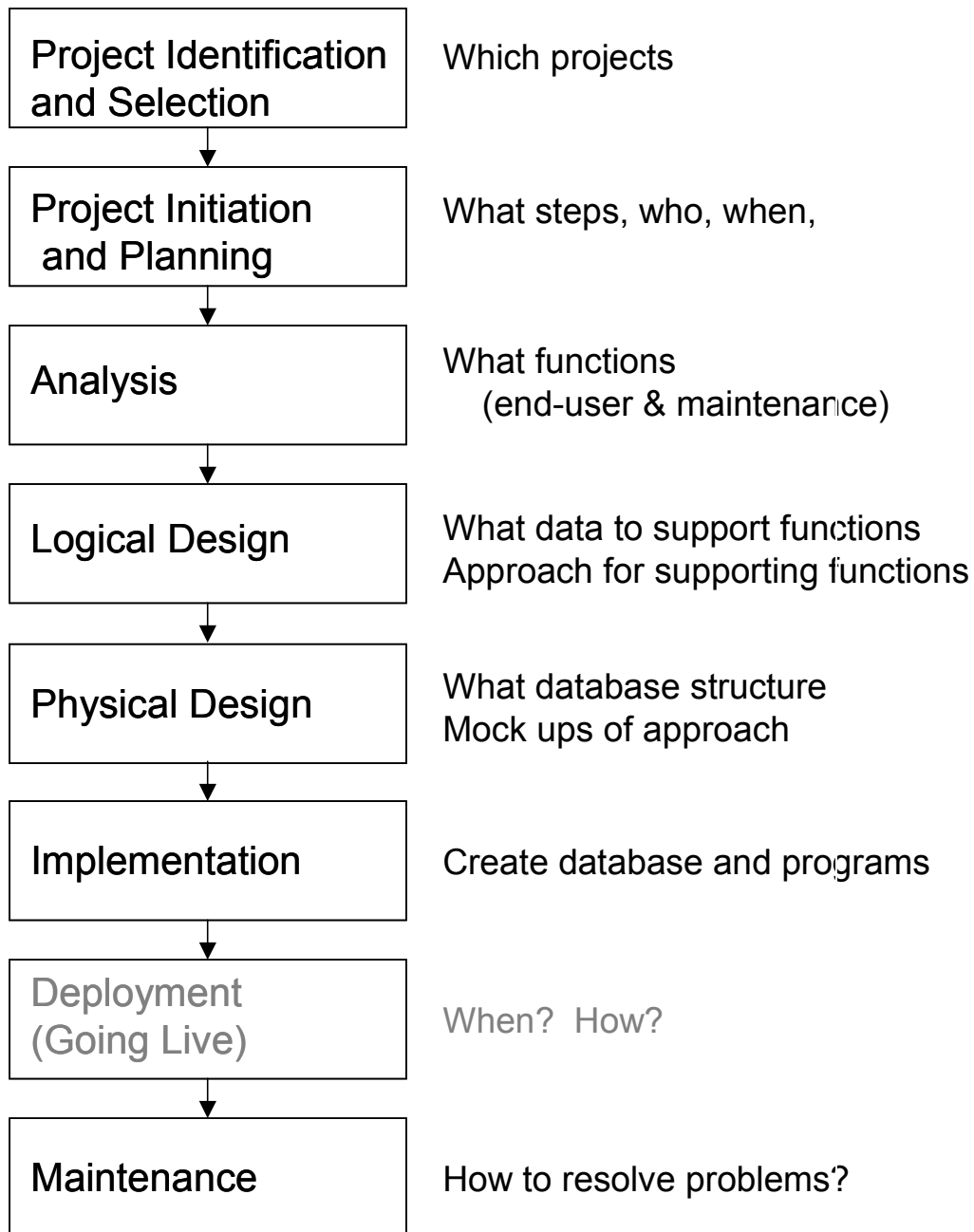
ALSO: Systems Development Life Cycle describes a set of activities (and decisions) to be done, regardless of process...



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SAMPLE Decisions Associated with Design Activities (Steps, Phases) of Systems Development Life Cycle Applied to Information Systems

Project Identification and Selection

- What is scope
- How much to spend
- Internal \$ or external \$
- Project 1 vs. Project 2
(valued customer vs. customer ratings)
- High risk vs. low risk

Physical Design

- What tables (table definition)
- What algorithms for getting data out (design SQL queries)
- How (strategy) to populate data base
- Which database tool to purchase (if not already purchased)

Project Initiation and Planning

- What activities
- Who will do what
- Does company/group have employees with needed skills, or will new ones need to be hired?
- What sequence do activities need to follow
- What deliverables
- What dates
- How to charge
- What risks and how to offset

Implementation

- Was effort to populate database successful?
- When to put actual data into system?
- Why is program not compiling?

Deployment

- When to go live
- How to schedule the procedure (how long)
- Who to have work during that period

Analysis

- What functions to support
- What strategy to determine functions to support (what to talk to)
- What heuristic to know when you are done
- How to represent information gained
- How to "say no" (decide to not include a function)
- How to resolve conflicts

Maintenance

- When to schedule regular updates
- When to schedule backups
- How to prioritize problems and decide which to address

Logical Design

- What specific data to include (described in a model, not table def)
- What rules to determine data -- where data comes from?
- What rules to determine data integrity (e.g., what are boundary values)?
- How (abstractly) to support specific functions?

An E-Commerce Information System: A set of components (C) and processes (P) for aggregating, managing, and using information to ensure the product/service ordering and filling go smoothly.

