Information System Analysis (ISA)

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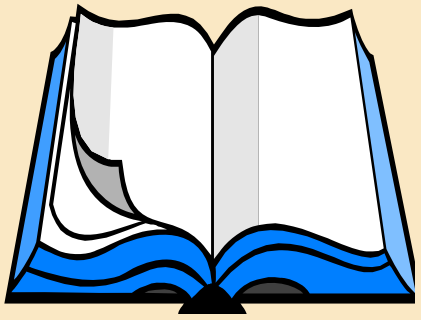
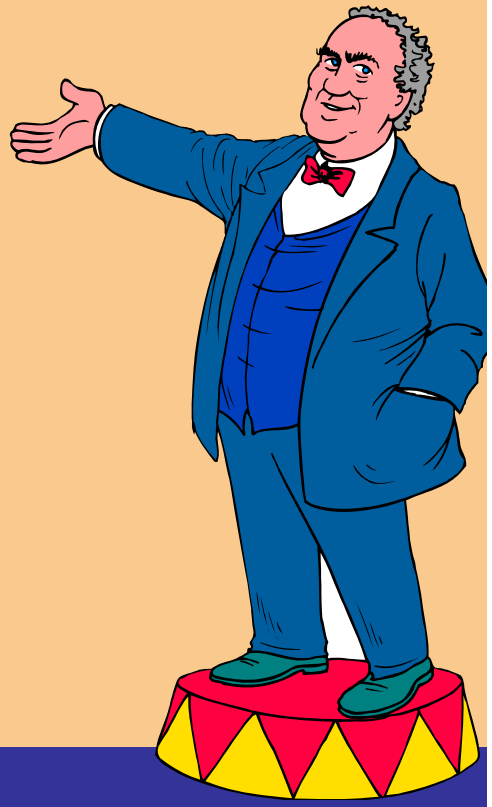




Chapter 2
System Development Life Cycle (SDLC)

Lecturer: Mr. Lim Lyheng (Mse in Computer Application Technology, China)

What is *System Development Life Cycle (SDLC)*

- System Development Life Cycle is an organizational process of developing and maintaining systems.
- System development life cycle means combination of various activities.

What is an information system (IS)?

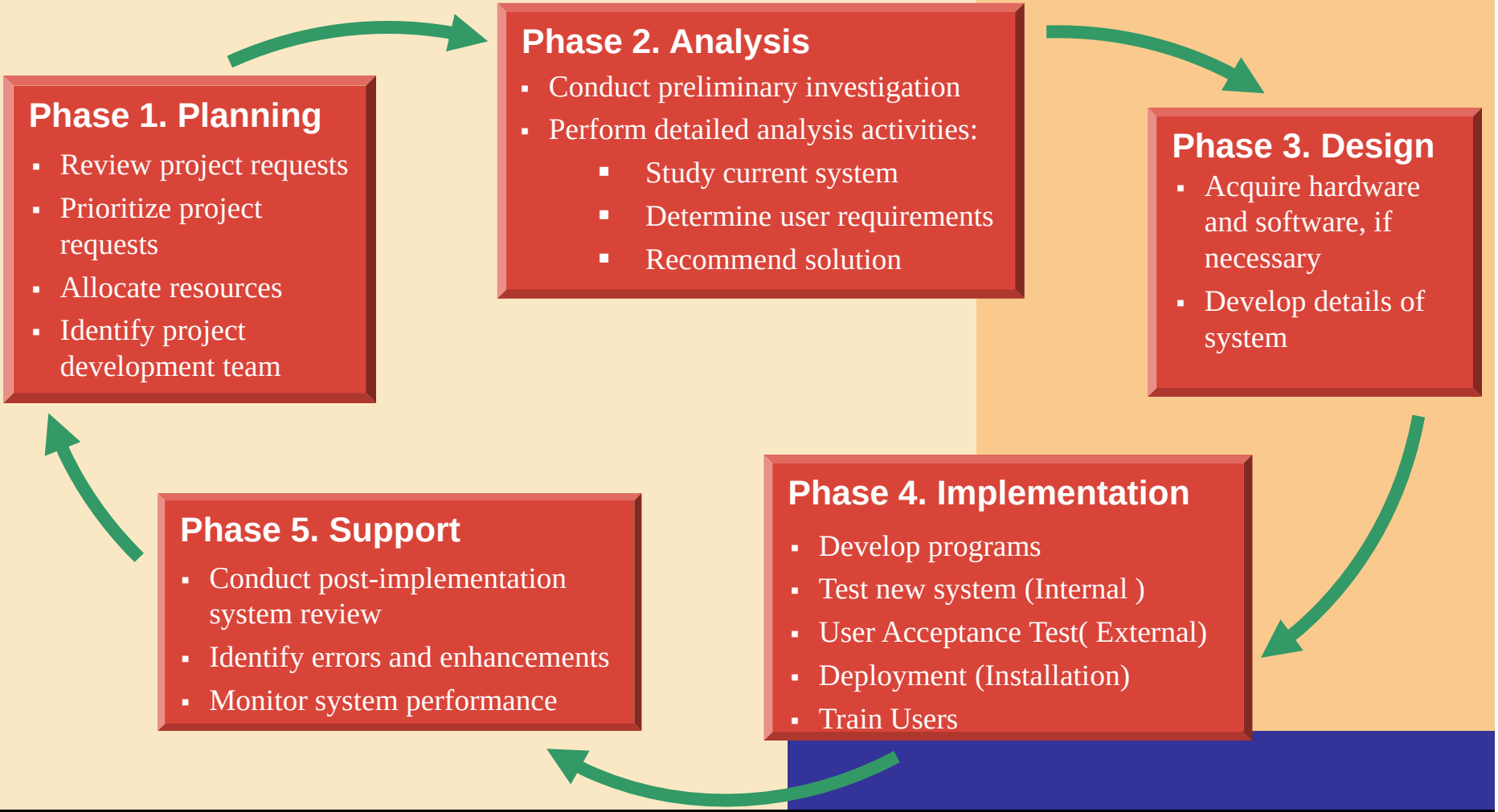
Hardware, software, data, people, and procedures that work together to produce quality information

System—Set of components that interact to achieve common goal

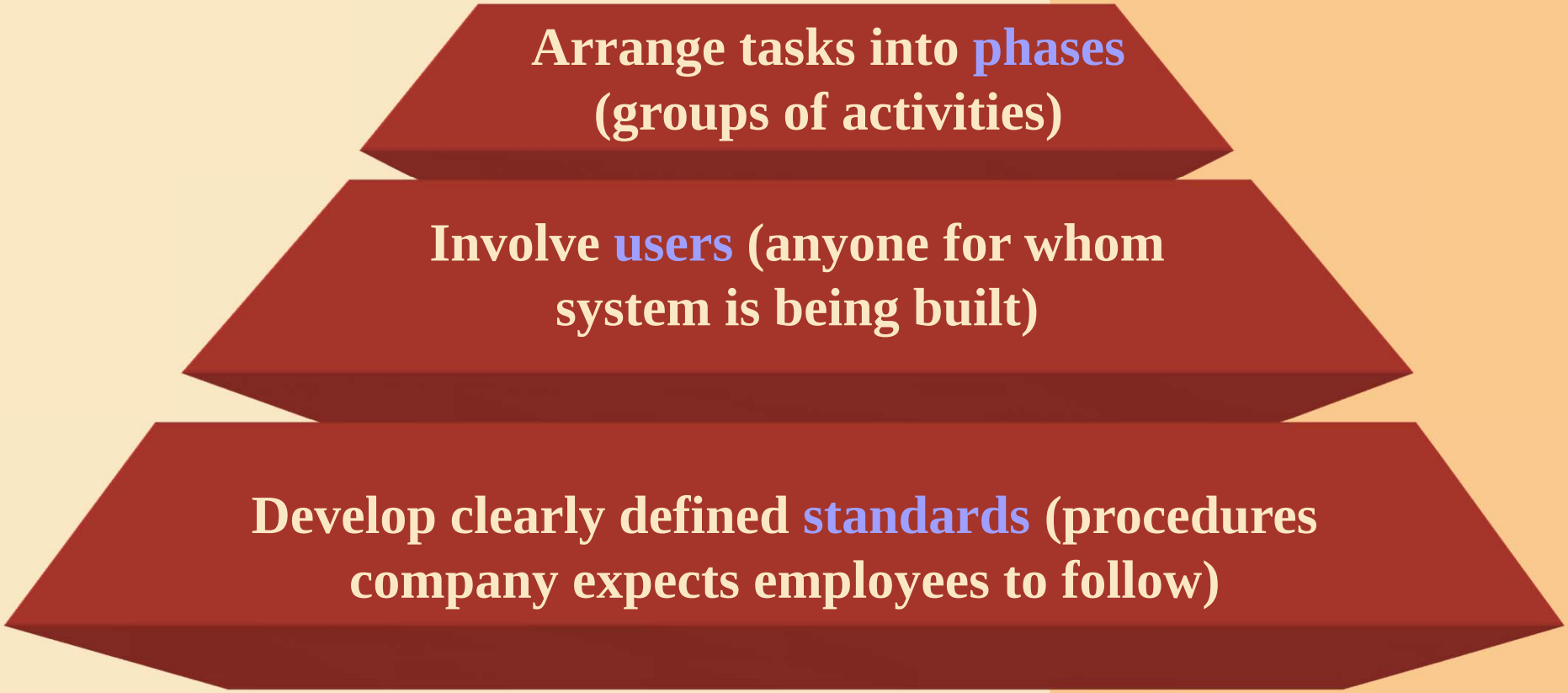
Businesses use many types of systems

The System Development Life Cycle

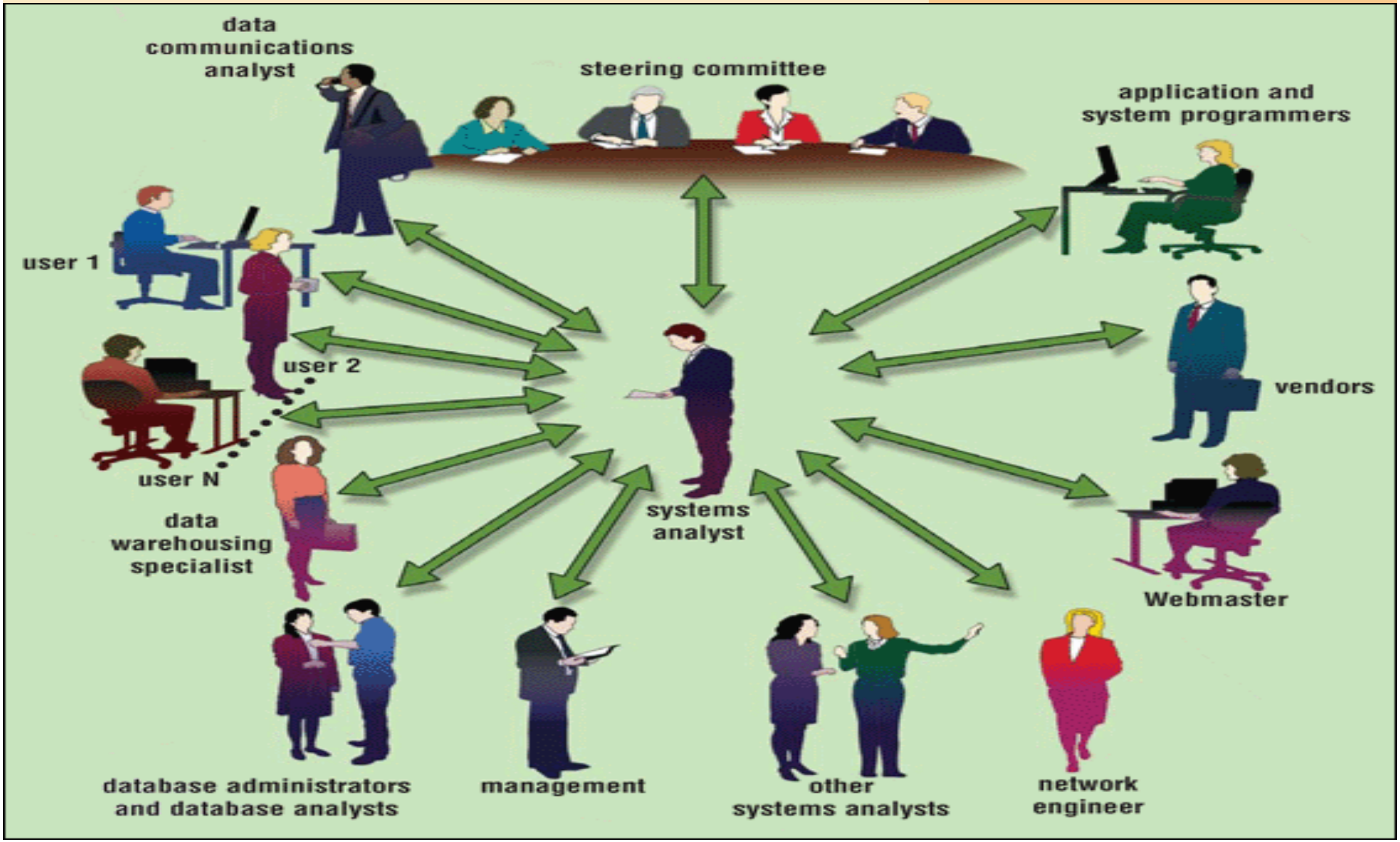
What are the phases of the system development cycle?



What are guidelines for system development?



Who participates in the system development life cycle?



What does systems analyst do?

- Responsible for designing and developing information system
- Liaison between users and IT professionals

What is the project team?

Formed to work on project from beginning to end

Consists of users, systems analyst, and other IT professionals

Project leader—one member of the team who manages and controls project budget and schedule

What is feasibility?

Measure of how suitable system development will be to the company

What is feasibility Analysis in detail?

- Formulate Goals of the system and quantify goals
- Find alternative methods of meeting the goals
- For each alternative assess resources needed
  - Human Resources
  - Time and Money
  - Equipment needed
- Assess cost of each alternative
- Find the best alternative method subject to resource
- constraints

What is documentation?

Collection and summarization of data and information

Includes reports, diagrams, programs, and other deliverables

What are six data and information gathering techniques?

1. **Review documentation**
2. **Observe**
3. **Questionnaire**
4. **Interview**
5. **Joint-application design (JAD) session**
6. **Research**

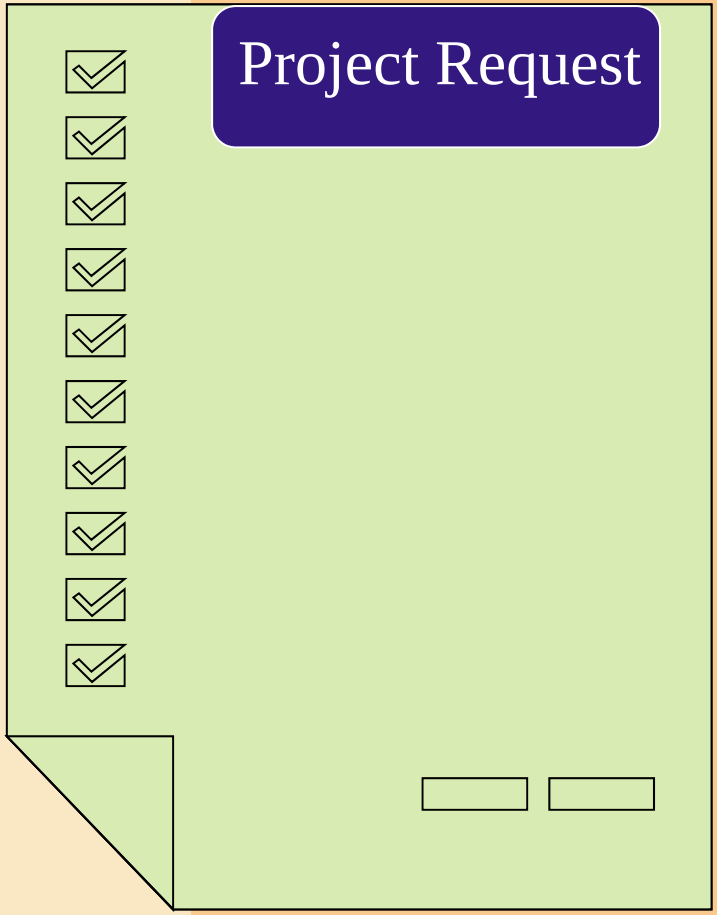
The System Development Life Cycle

What are some reasons to create or modify an information system?

The System Development Life Cycle

What is a request for system services?

- **Formal request for new or modified information system**
  - Also called **project request**



1.The Planning Phase

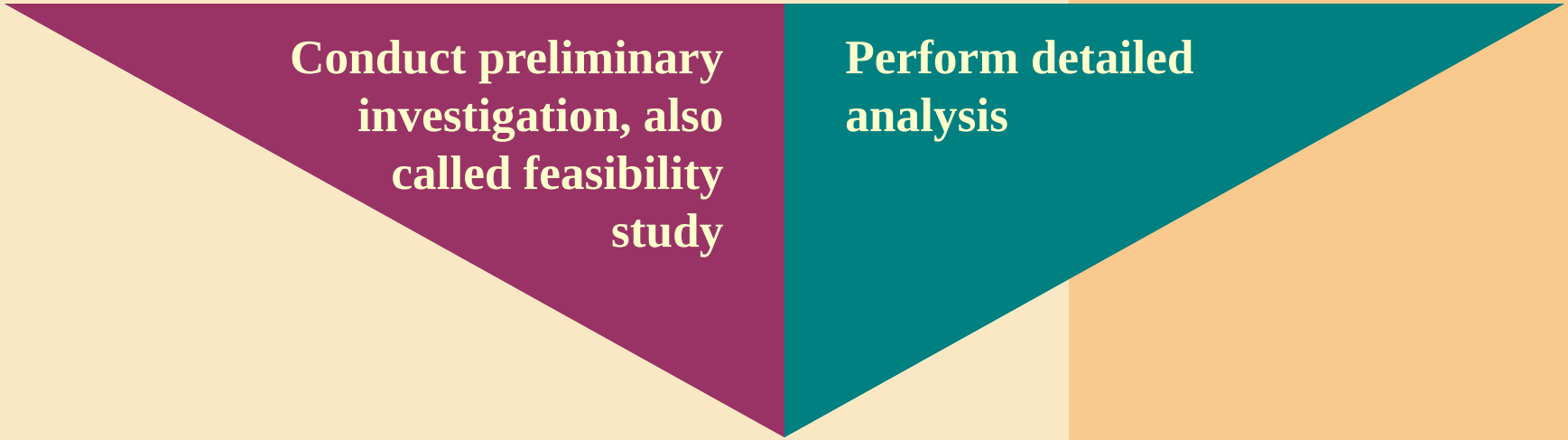
Begins when steering committee receives project request

Steering committee— decision-making body for the company

Function of committee:

- **Review and approve project requests**
- **Prioritize project requests**
- **Allocate resources**
- **Form project development team for each approved project**

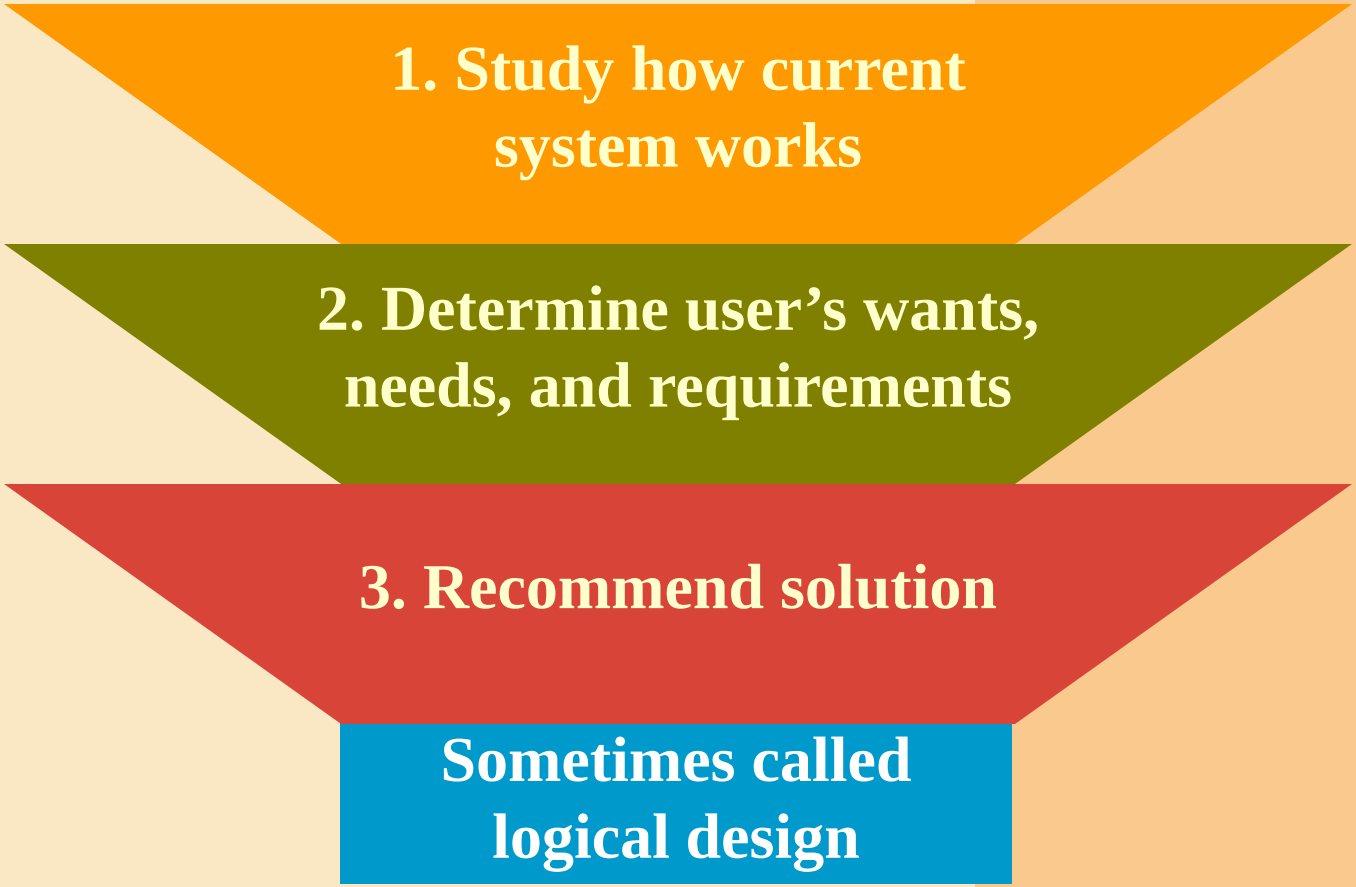
2. The Analysis Phase



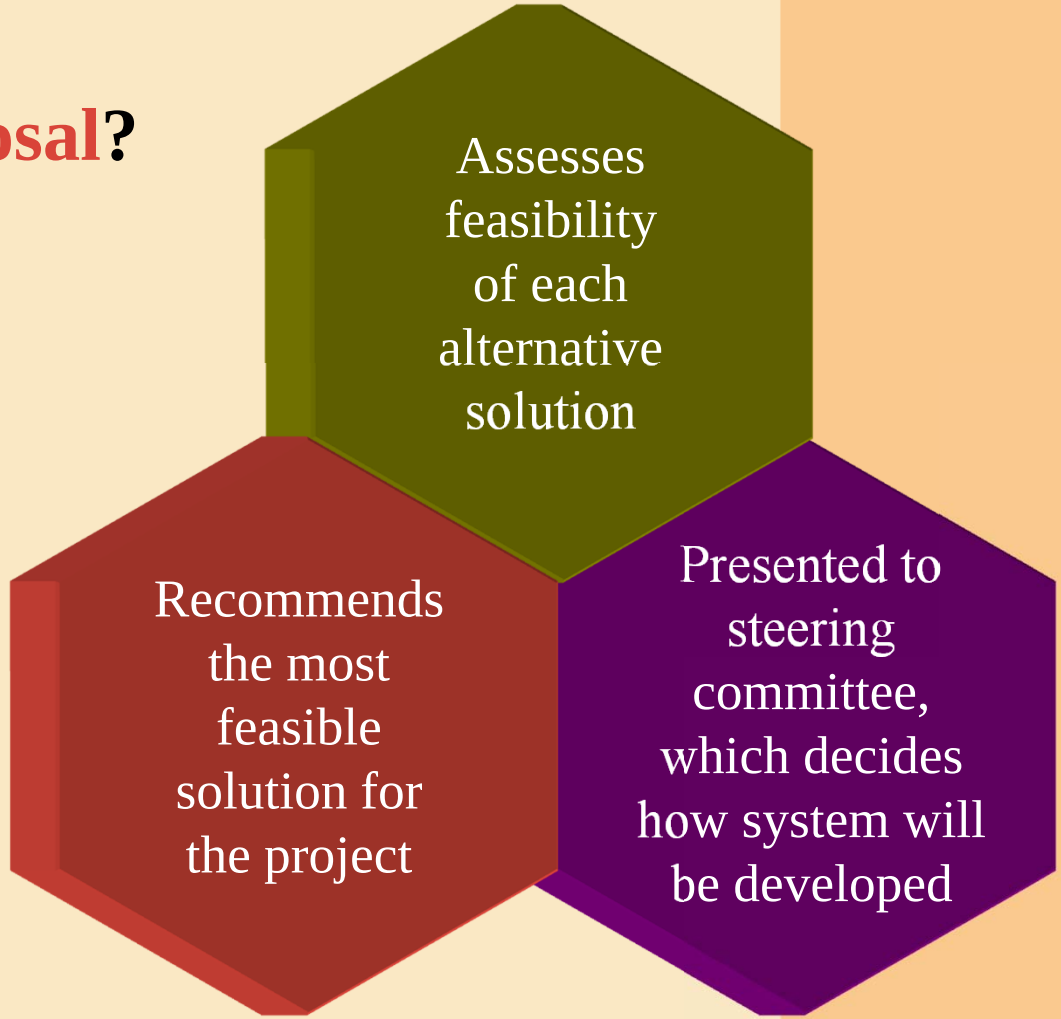
What is the preliminary investigation?

- **Determine exact nature of problem or improvement and whether it is worth pursuing**
  - Findings are presented in feasibility report, also known as a feasibility study

What is detailed analysis?



What is the system proposal?



What are possible solutions?

Buy packaged software—prewritten software available for purchase

Write own custom software—software developed at user's request

Outsource—have outside source develop software

Horizontal market software—meets needs of many companies

Vertical market software—designed for particular industry

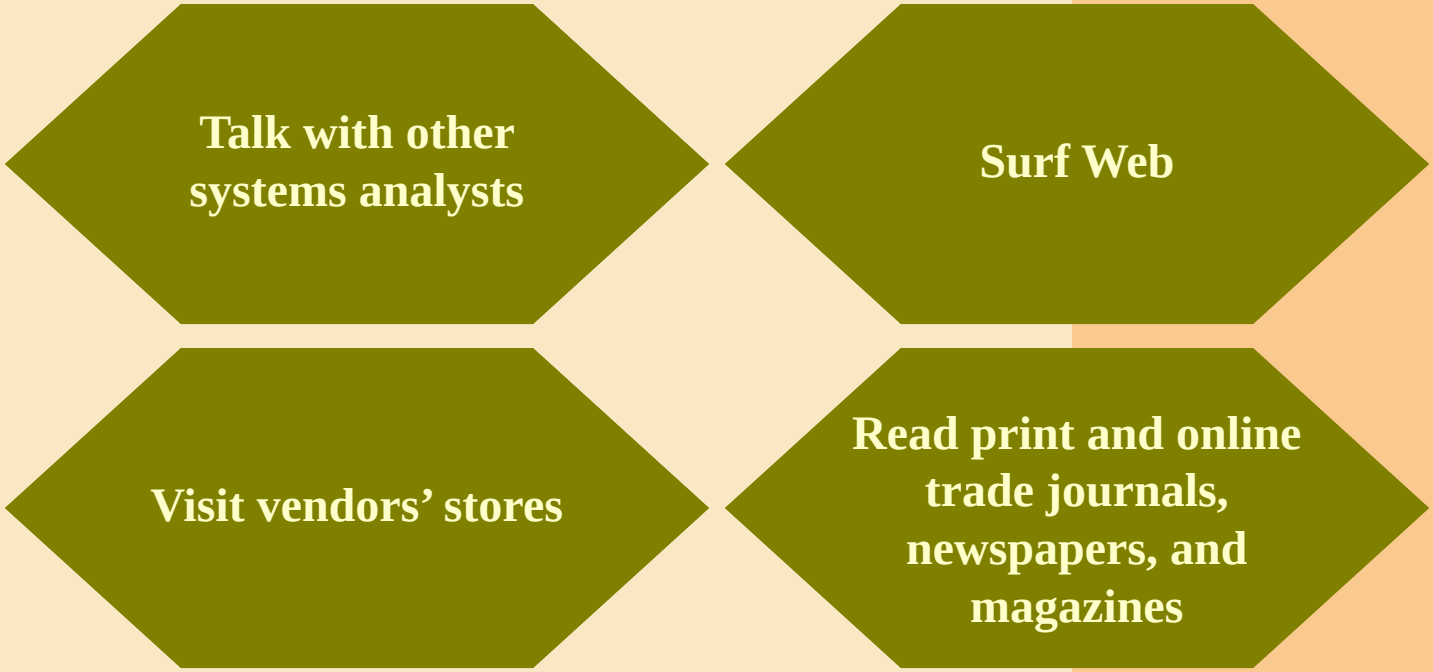
3.The Design Phase

Acquire hardware and software

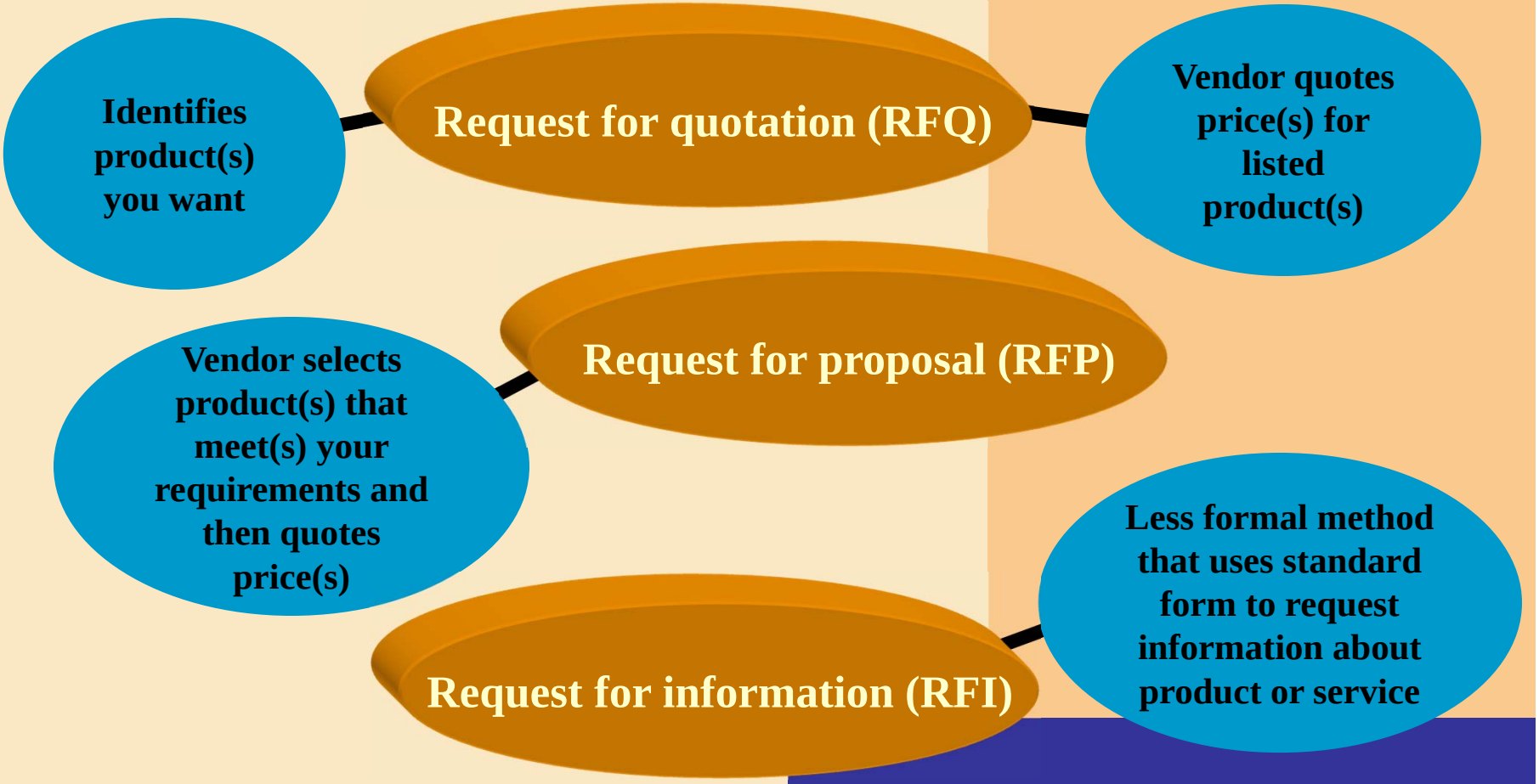
Develop all details of new or modified information system

What is needed to acquire new hardware and software?

- Identify all hardware and software requirements of new or modified system



What are three basic documents used to summarize technical specifications?



How do systems analysts test software products?

- References from vendor
- Talk to current users of product
- Product demonstrations
- Trial version of software
- Benchmark test measures performance

What is a detailed design?

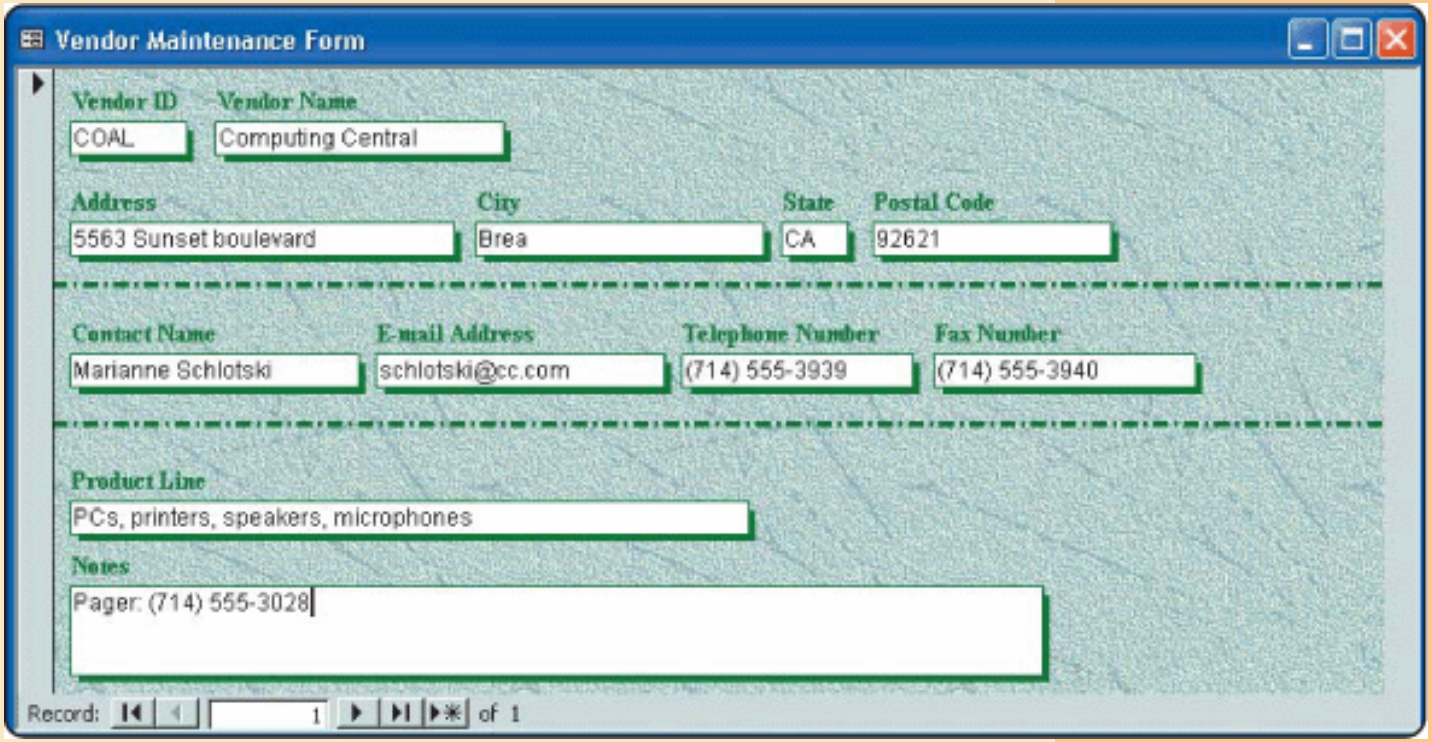
Detailed design specifications for components in proposed solution

Includes several activities

- Database design
- Input and output design
- Program design

What is a mockup?

- Sample of input or output that contains actual data



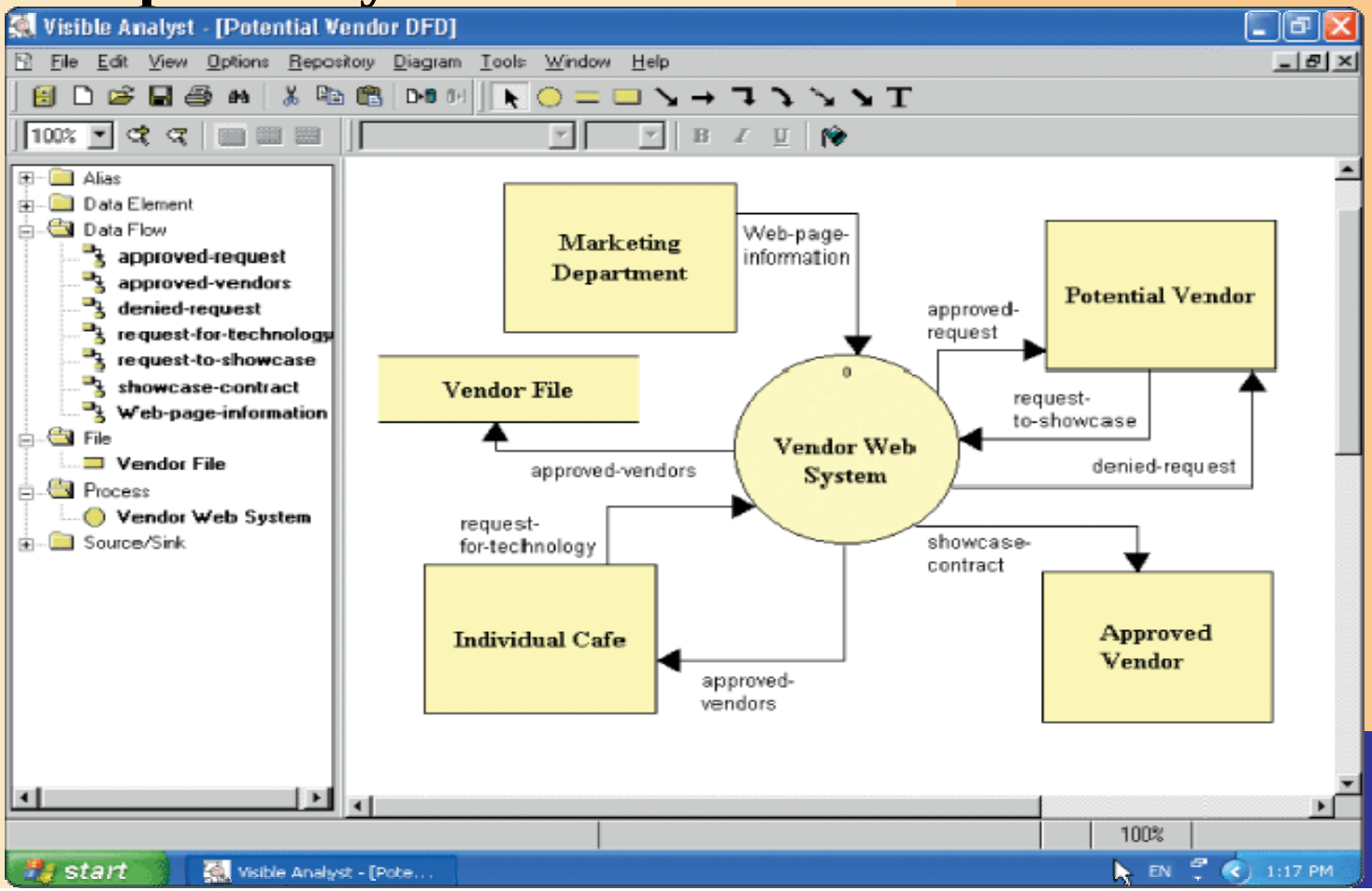
What is a prototype?

Working model of proposed system

Beginning a prototype too early may lead to problems

What is computer-aided software engineering (CASE)?

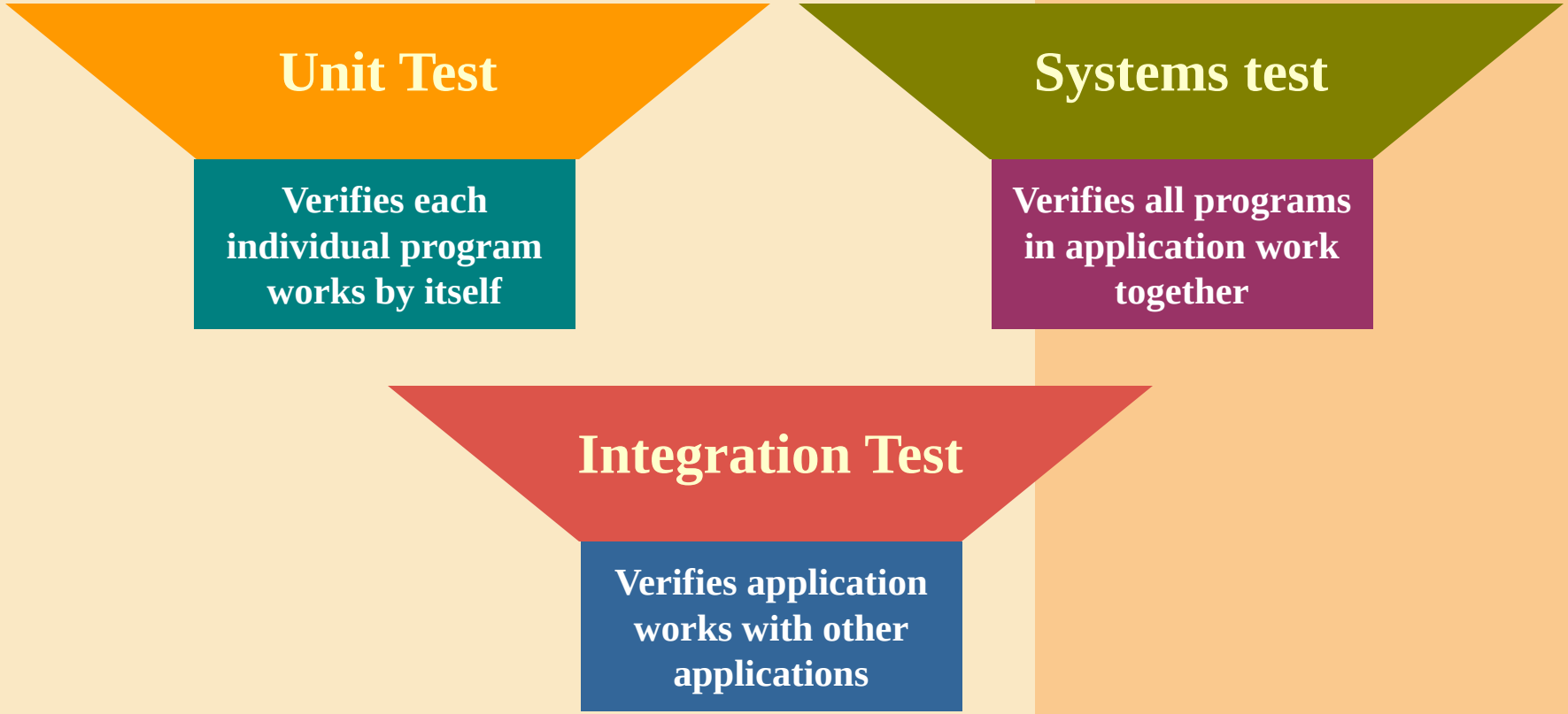
- Software tools designed to support activities of system development cycle



4.The implementation phase

- **Purpose is to construct, or build, new or modified system and then deliver it to users**

What are the three types of tests performed by system developers?

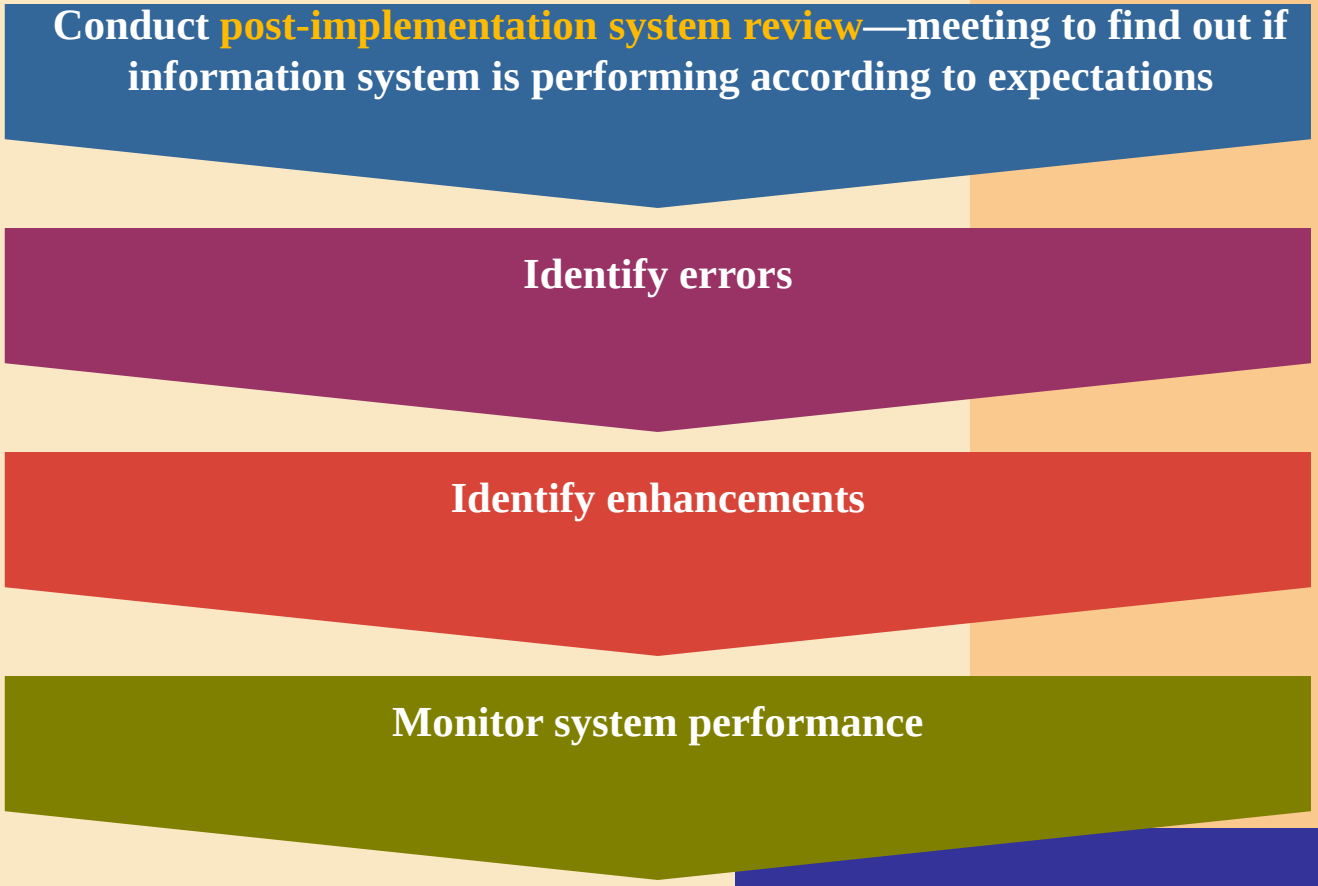


What is training?

- **Showing users exactly how they will use new hardware and software in system**

5.The support phase

- **Provides ongoing assistance after system is implemented**



Home Work

Choose one of the given projects and fulfill the following task

1. Project Planning:

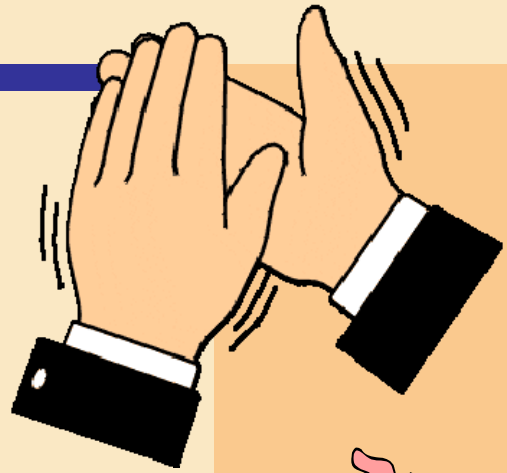
- Prioritize project requests (To do list)
- Allocate resources (Developers, Timeframe, Effort, IT related Tools)
- Identify project development team (Roles and Responsibilities)

2. Project Analysis

- Study current system (Process, Weakness and Strength)
- Determine user requirements (Requirement Definition, Mandatory and Constraints/Optional)
- Recommend solution (Propose new System, Process, Expected Result)

3. Make the Summary report and present to the class

Be well-prepared and Good Luck!!!



Q&A

End of Chapter 2

Thank You