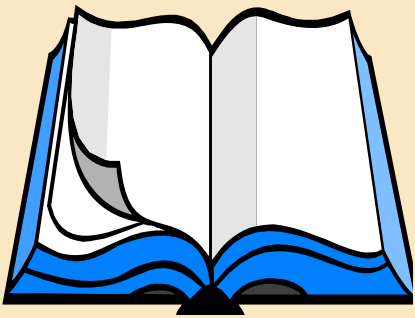


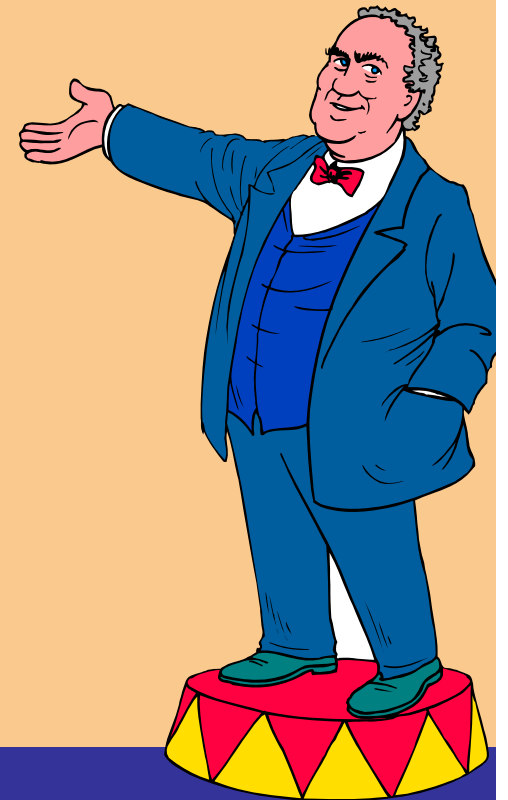
Information System Analysis (ISA)

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Chapter 2

System Development Life Cycle (SDLC)

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)**?

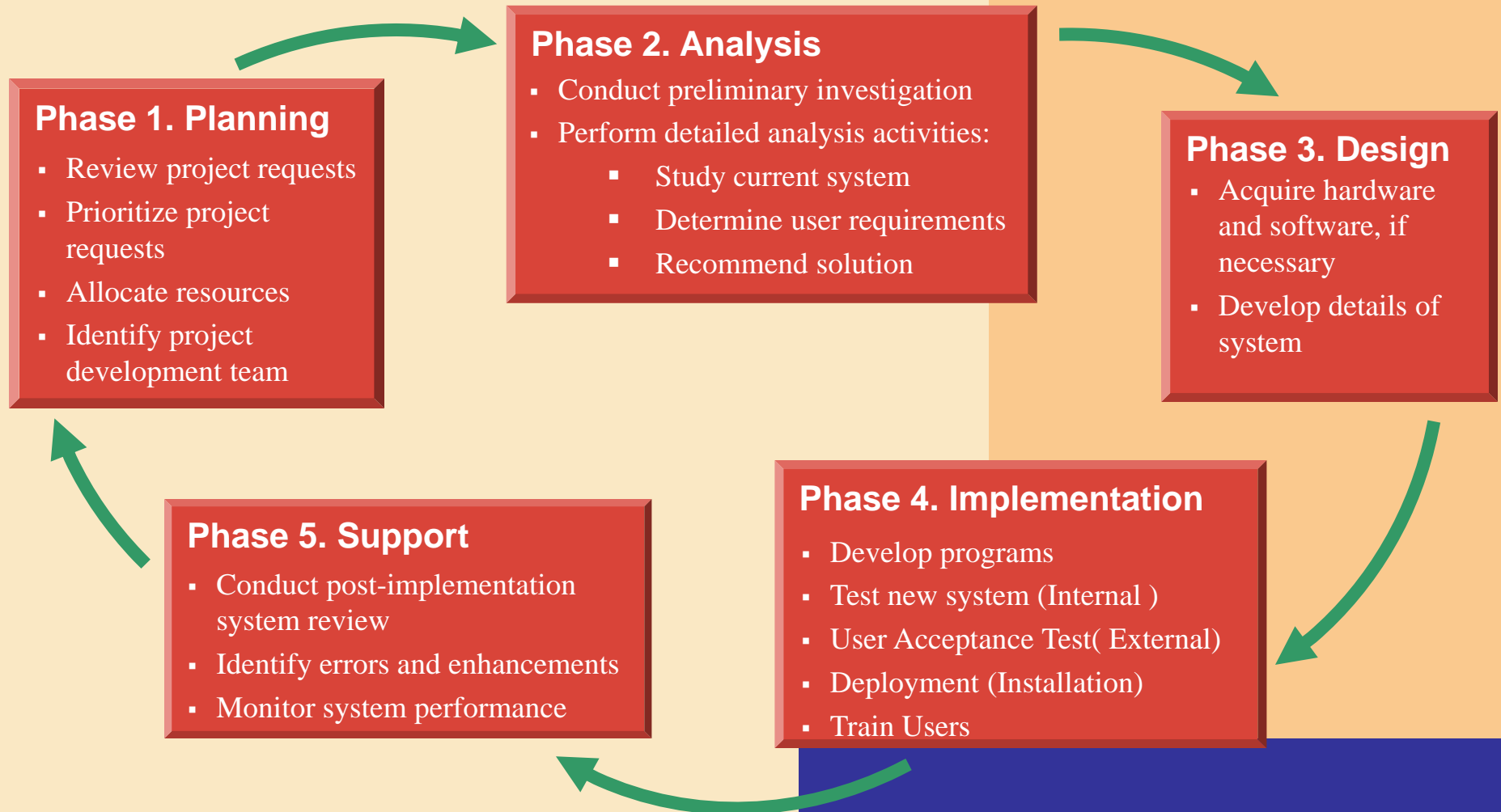
Hardware, software, data, people, and procedures that work together to produce quality information

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?

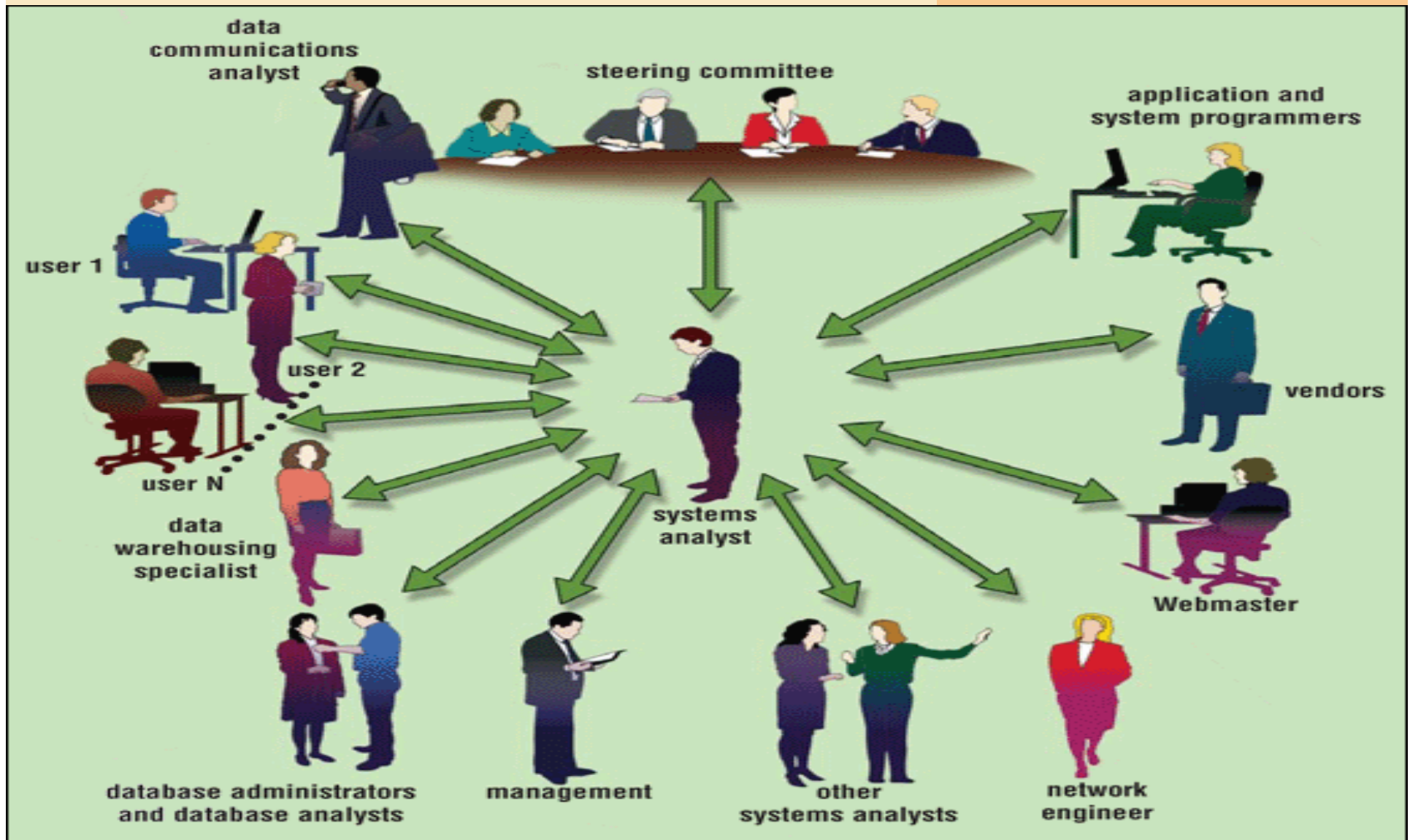


Arrange tasks into **phases**
(groups of activities)

Involve **users** (anyone for whom
system is being built)

Develop clearly defined **standards** (procedures
company expects employees to follow)

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

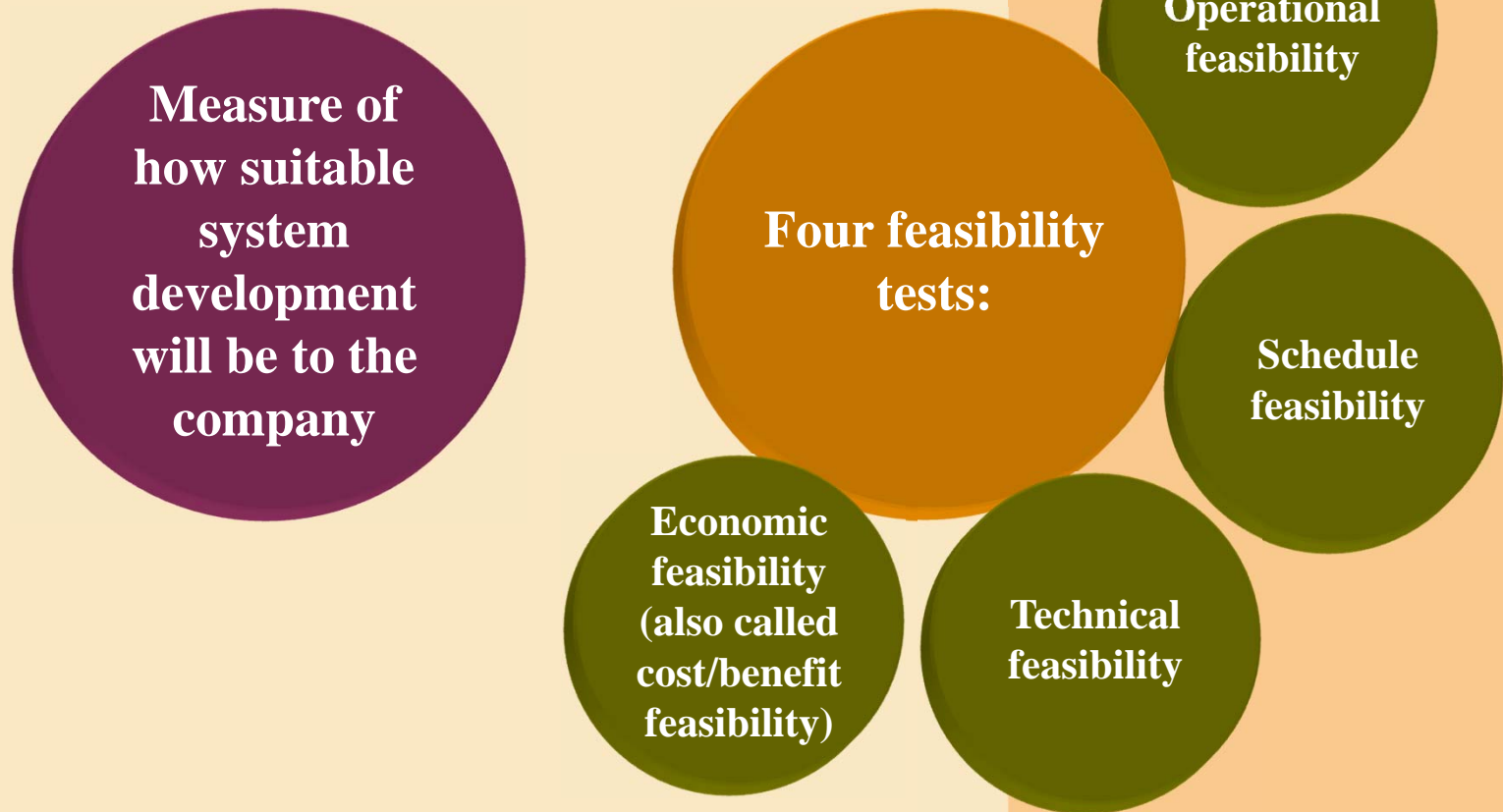
What is the **project team**?

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**?



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**

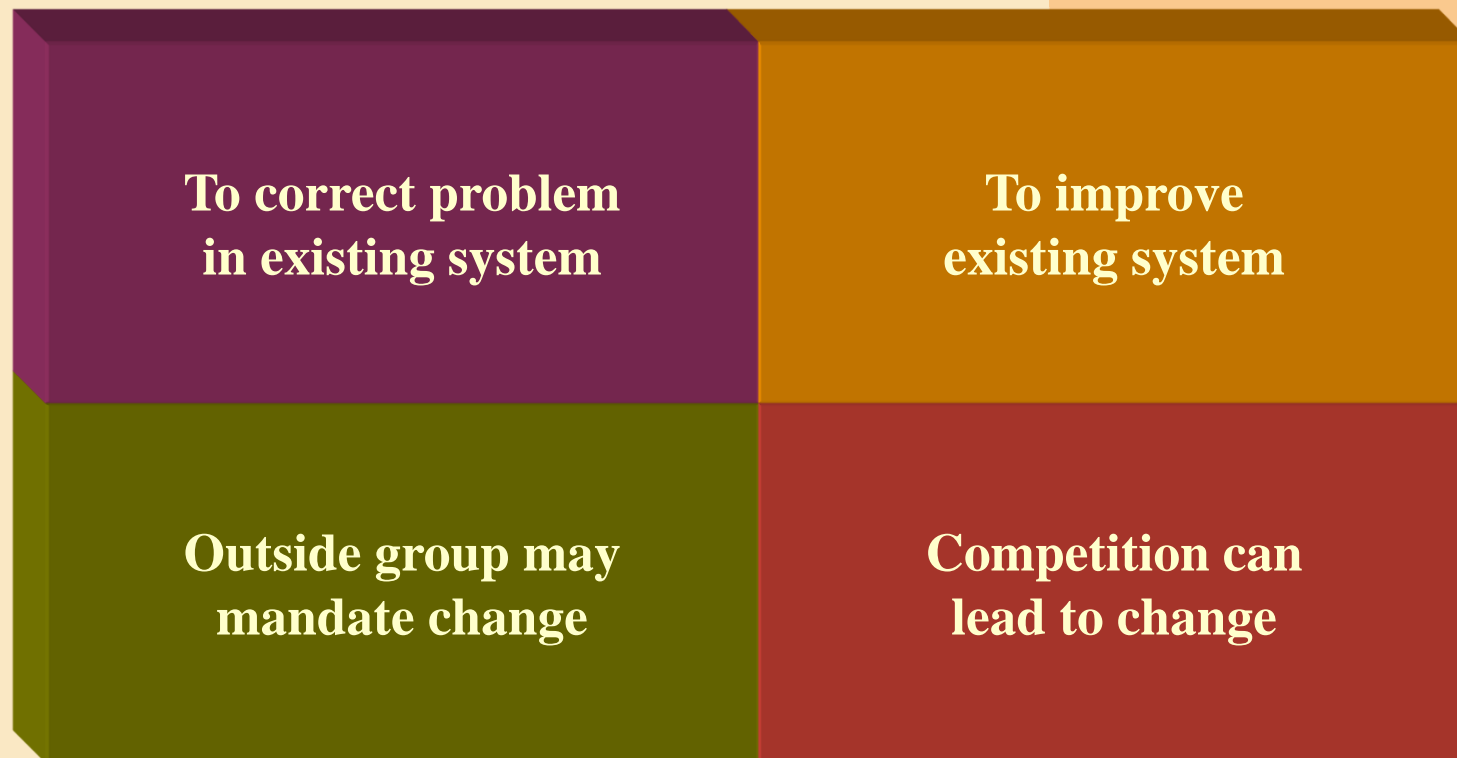
What are six data and information gathering techniques?

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



The System Development Life Cycle

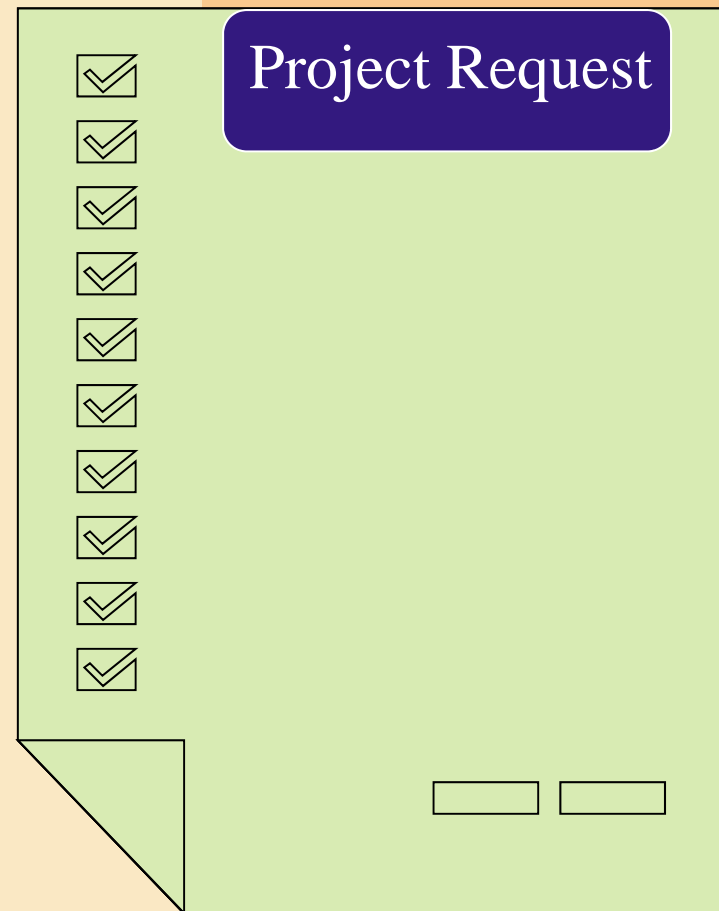
What are some reasons to create or modify an information system?



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



The diagram illustrates the Analysis Phase as a large downward-pointing triangle. The triangle is divided into two colored sections: a purple section on the left and a teal section on the right. The purple section contains the text 'Conduct preliminary investigation, also called feasibility study'. The teal section contains the text 'Perform detailed analysis'. The background of the slide is a light orange color, with a dark blue horizontal bar at the top and bottom.

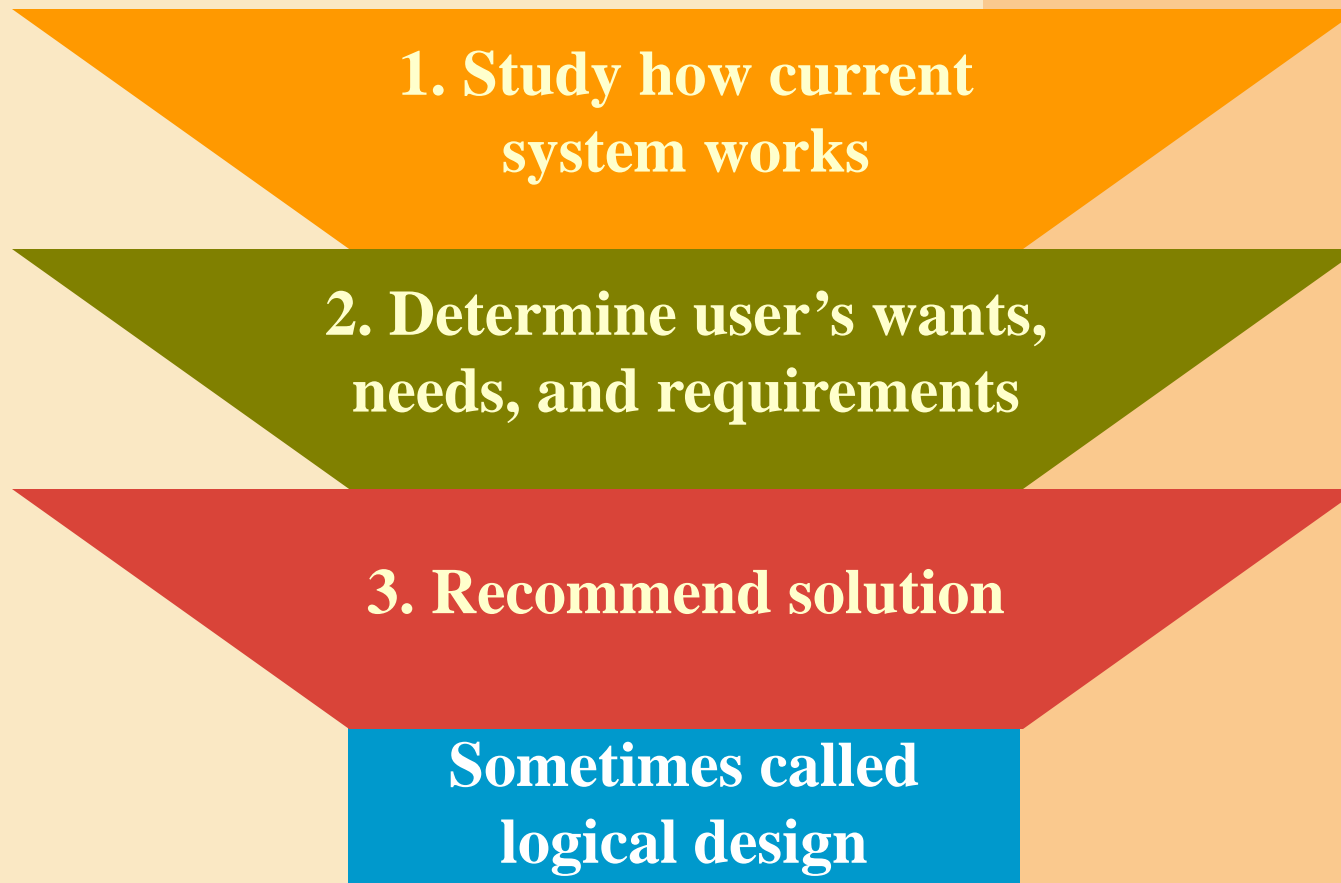
Conduct preliminary investigation, also called feasibility study

Perform detailed analysis

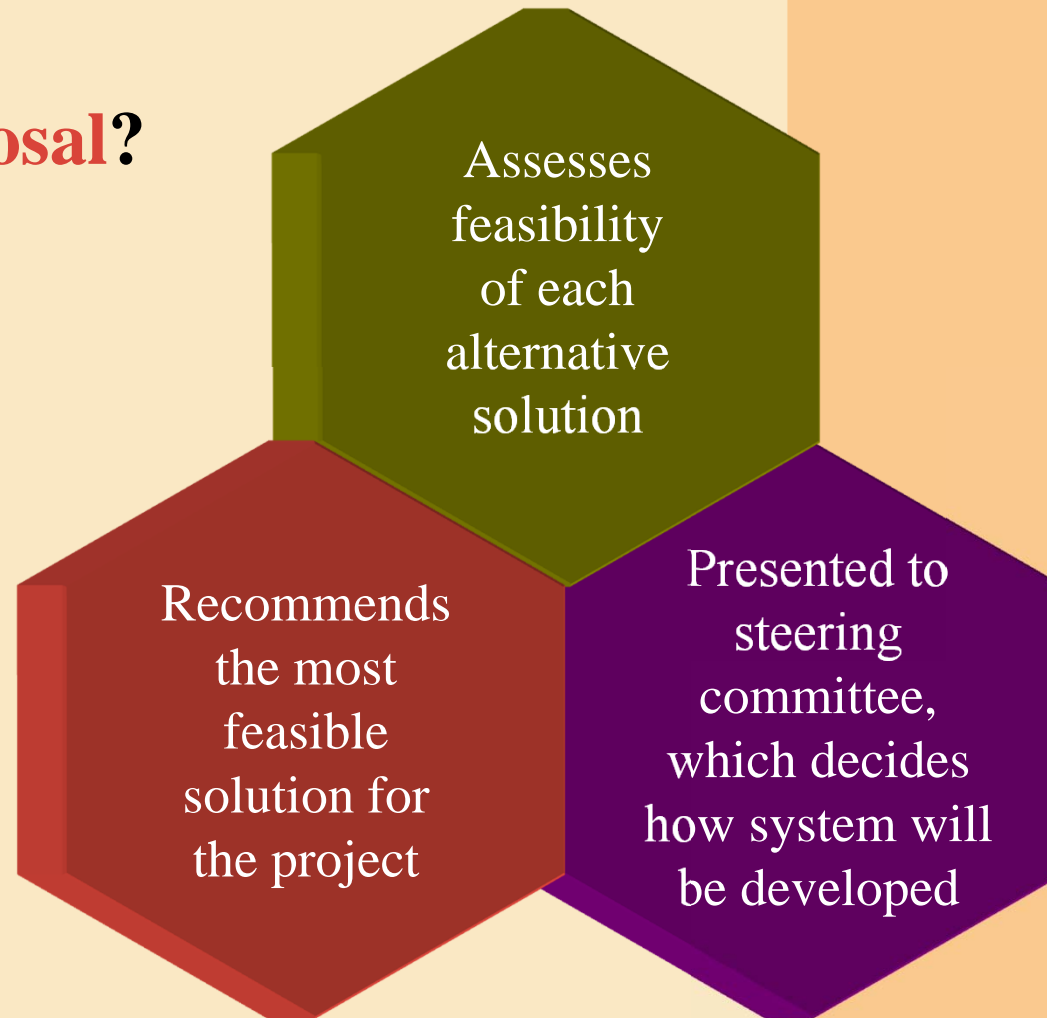
What is the **preliminary investigation**?

- **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

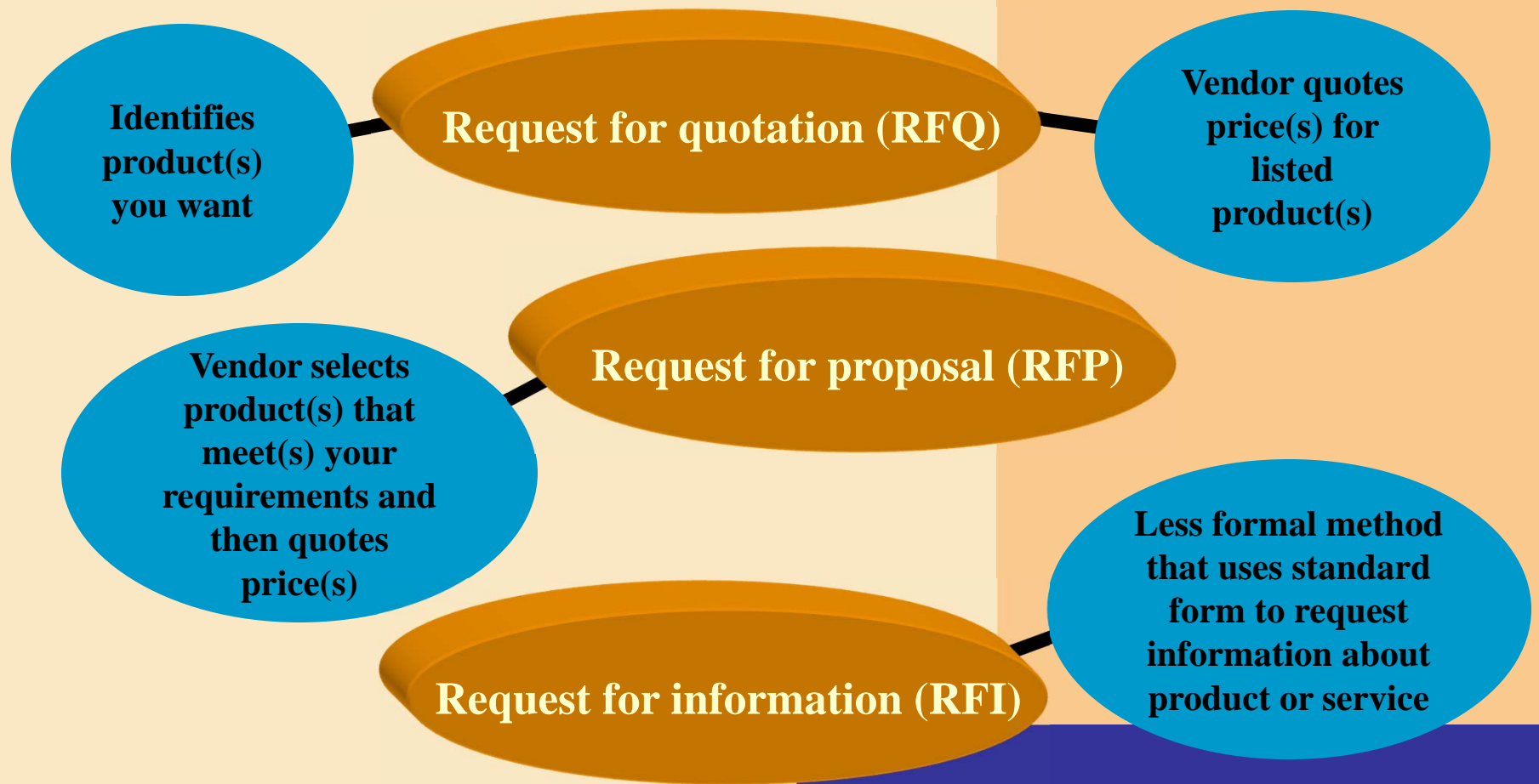
Talk with other
systems analysts

Surf Web

Visit vendors' stores

Read print and online
trade journals,
newspapers, and
magazines

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

Vendor Maintenance Form

Vendor ID	Vendor Name			
COAL	Computing Central			
Address		City	State	Postal Code
5563 Sunset boulevard		Brea	CA	92621
Contact Name		E-mail Address	Telephone Number	Fax Number
Marianne Schlotski		schlotski@cc.com	(714) 555-3939	(714) 555-3940
Product Line				
PCs, printers, speakers, microphones				
Notes				
Pager: (714) 555-3028				

Record: 1 of 1

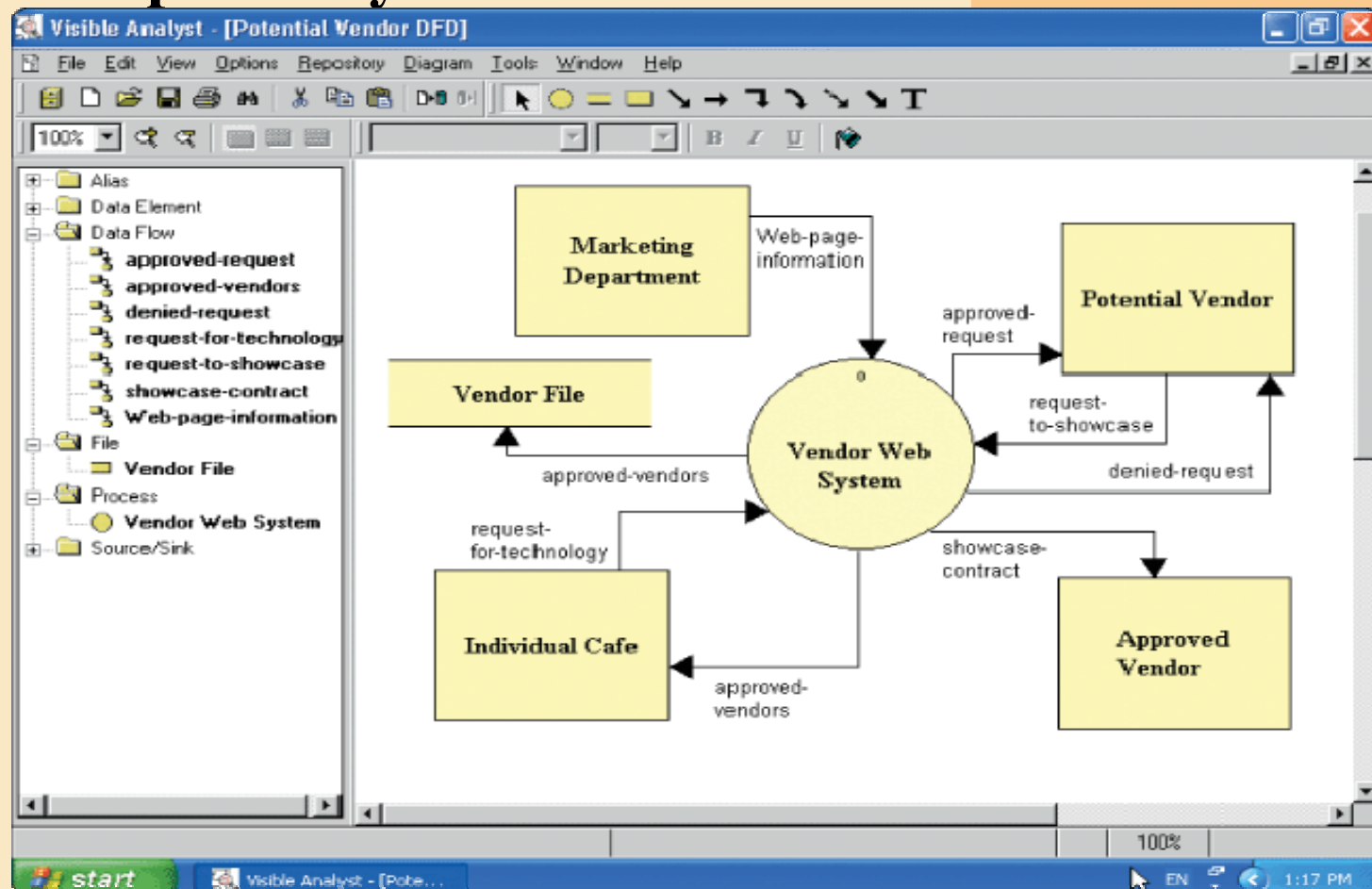
What is a **prototype**?

**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?

Unit Test

Verifies each individual program works by itself

Systems test

Verifies all programs in application work together

Integration Test

Verifies application works with other applications

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

Conduct **post-implementation system review**—meeting to find out if information system is performing according to expectations

Identify errors

Identify enhancements

Monitor system performance

Home Work

Choose one of the given projects and fulfill the following task

1. Project Planning:

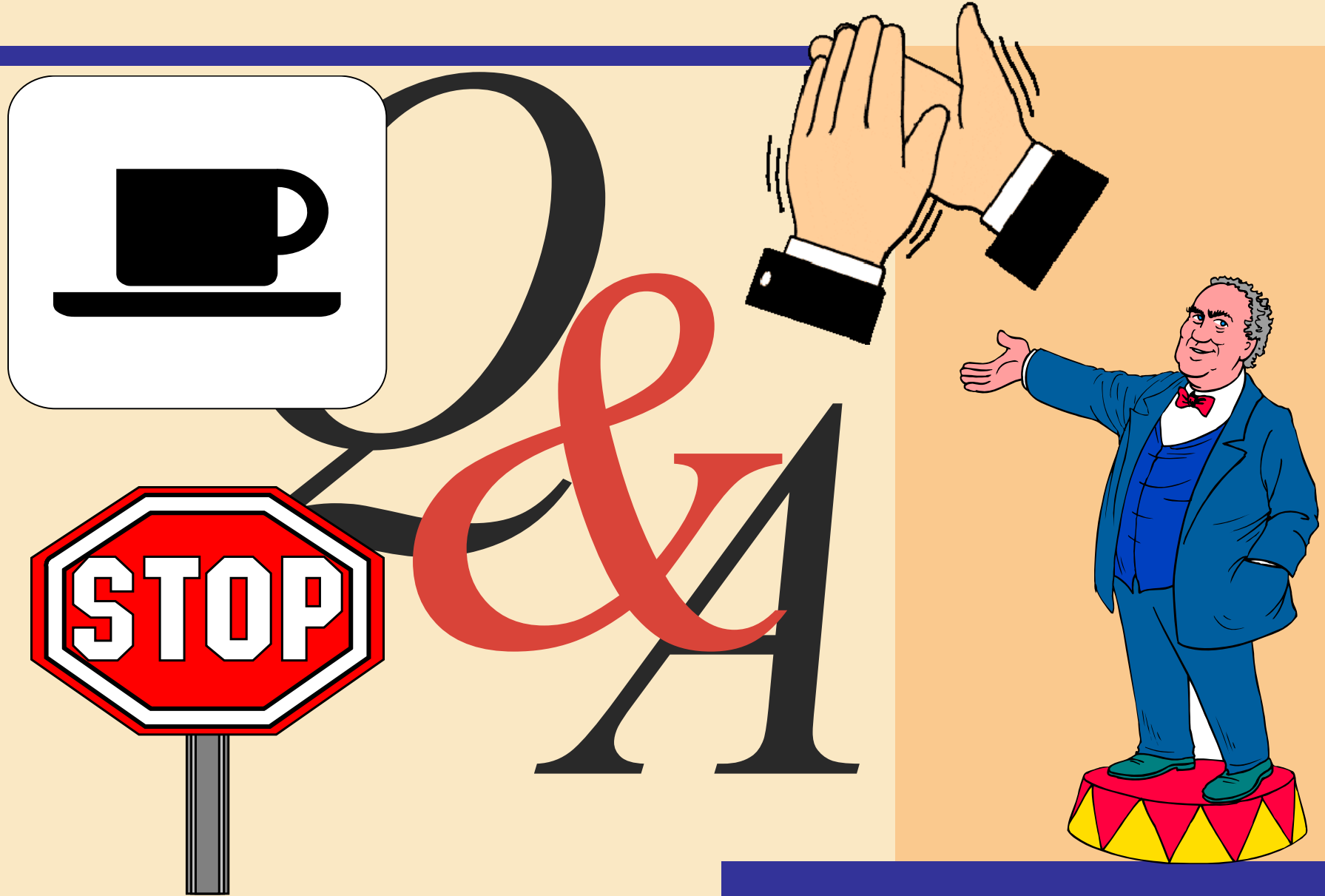
- Prioritize project requests (To do list)
- Allocate resources (Developers, Timeframe, Effort, IT related Tools)
- Identify project development team (Roles and Responsibilities)

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!!!



End of Chapter 2

Thank You

