Introduction to System Analysis & Design

LECTURE 02

MR. ALFRED EDWIN WORTHINGTON

Learning Outcomes

End of this lecture you will be able to learn ,

- **LO1: Demonstrate an understanding of the principles of systems analysis and design and their importance for system development.**
- **LO2: Describe the role of the system analyst in the process of systems analysis and design.**

Content

- What is System Analysis and Design?
- Purpose of System Analysis and Design
- Role of System Analyst
- Skills required for a System Analyst
- Who are Stakeholders?
- Information System Stakeholders

Let's play a game!

Rules to Play

- Divide into teams of three.
- One student from a team comes to the front and chooses a word from the basket.
- Acts out the word or draw a picture on the board to explain the word.
- The team guessed out the correct word first, earns a point.
- The team which has the highest points at the end, is the “WINNER”

System Analysis

Process of

- **collecting and interpreting facts**
- **identifying the problems**
- **decomposing system into its components.**

To identify system's objectives.

Improves the system

Ensures that all the components of the system work efficiently to accomplish their purpose.

Analysis specifies what the system should do.

System Design

Process of

- planning a new business system or
- replacing an existing system by defining its components or modules to satisfy the specific requirements.

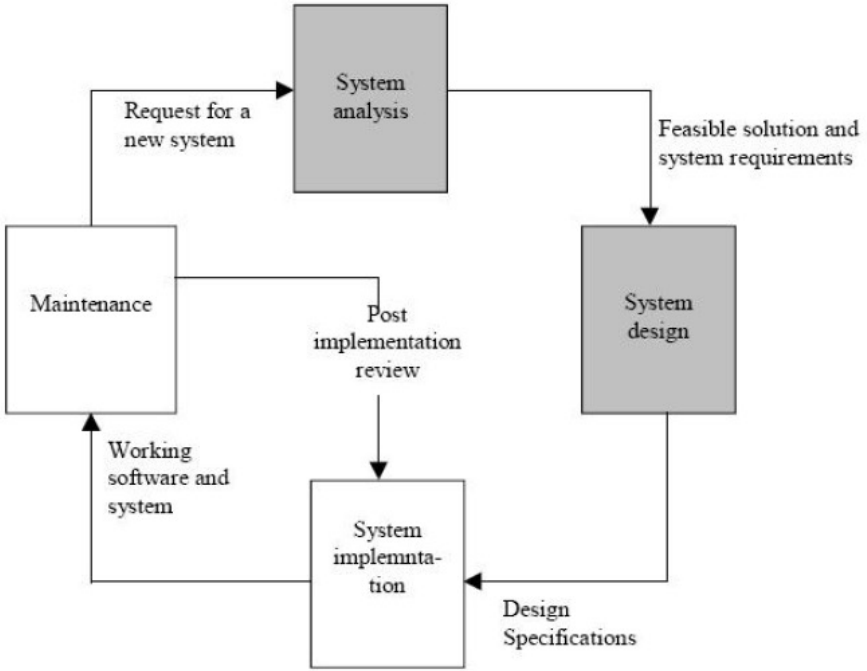
Design focuses on how to accomplish the objective of the system.

System Analysis & Design

System Analysis and Design (SAD) mainly focuses on:

- Systems
- Processes
- Technology

Stages in Building an Improved System



- ✓ **Systems analysis and design** is a step-by-step process for developing high-quality information systems.
- ✓ These information systems can be :
  - Used internally within the organization
  - Sold commercially via mail/web order or retail store
  - embedded in products

What makes Systems Analysis & Design a difficult activity?

- Problem domains are dynamic.
- Requires interdisciplinary knowledge and skills.
- Systems Analyst's knowledge base is continually expanding.
- Technology evolves.
- Working with people.

Who is System Analyst?

- The person who studies the problems and needs of a system and looks for improvement opportunities.

Who is a Business Analyst?

A business analyst is a systems analyst who specializes in business problem analysis and focuses on business context system development.

What does a Systems Analyst do?

- Studies the problems and needs of an organization looking for improvement opportunities for:
  - **increasing revenue/profit**
  - **decreasing costs**
  - **improving quality of service**

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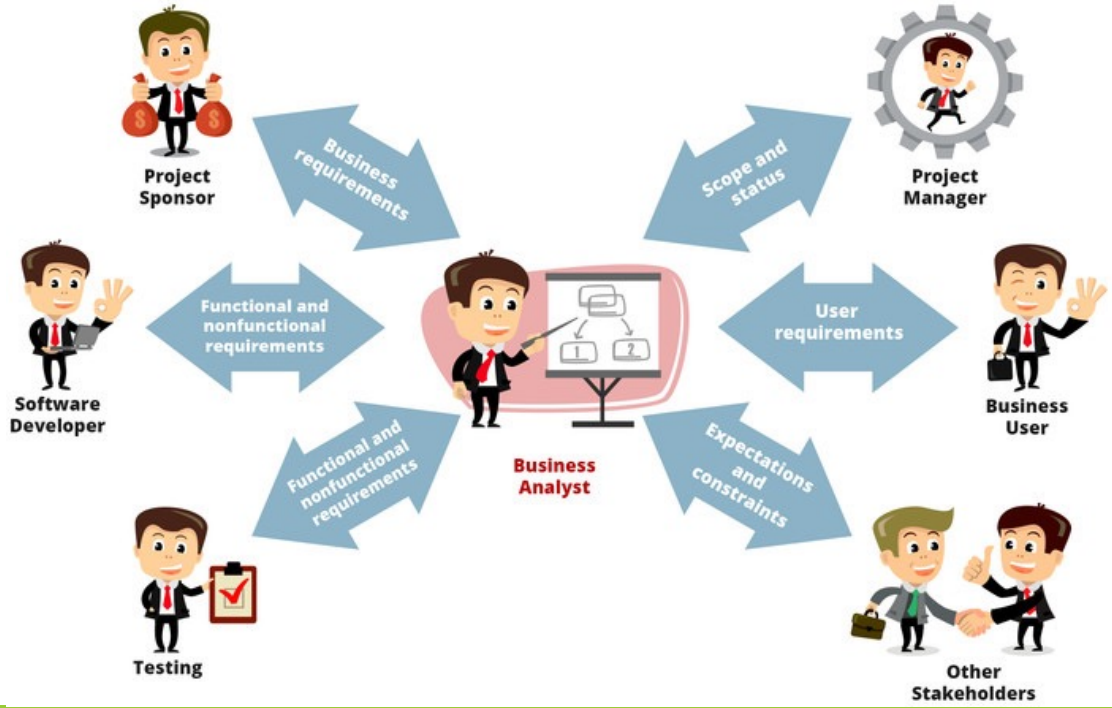
Role of System Analyst

Key role in developing information systems

1. Analyzing the business situation
2. Identifying opportunities for improvements
3. Designing an information system to implement the improvements
4. Interacting with Technical specialists (DBAs, network admins, programmers), Business people (users, managers, steering committee), vendors and consultants.

Role of System Analyst



Skills required for a System Analyst

- Working knowledge of information technology
- Computer programming experience & expertise
- General business knowledge
- Problem-solving skills
- Interpersonal communication skills
- Flexibility and adaptability
- Character and ethics

when your lecturer asks if you have any questions

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Who are Stakeholders?

A person, group or organization that has interest or concern in the Information System.

Information System Stakeholders

System Sponsors

- Pay for the system to be built and maintained.
- Provide that justification for the system and determine policies for its use.
- May also be system users.
- Generally come from the ranks of executives or managers.

Information System Stakeholders

System Users

- Actually use the system on a regular basis to support the operation and management of the organization.
- Systems users come from all levels of the organization.

Information System Stakeholders

System Analysts

- Determine the requirements that must be met by the system to meets the needs of the customers, sponsors, and users.

Systems Designers

- Technical specialists who select appropriate technologies and may the essential requirements into practical requirements.

System Builders

- Technical specialists who build, test, and deliver the system.

Thank you!

Summary

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- Purpose of System Analysis and Design
- Role of System Analyst
- Skills required for a System Analyst
- Who are Stakeholders?
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