Course Title : System Analysis and Design
Course Code : CSE 317 and 318
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Textbook : System Analysis and Design
Eight Edition
Kendall and Kendall

Syllabus of Mid-Term :
Chapter 1 : Systems, Roles, Development Methodologies
Chapter 2 : Understanding and Modeling Orgnazational Systems
Chapter 3 : Project Management

#PRELUDE

Q Why most software projects fail ?
1. Unclear requirements
2. Poor communication
3. Unrealistic expectations
4. Inadequate project management
5. Lack of user involvement
6. Insufficient testing and quality
7. Resource issues
8. Wrong technology / skills
9. Overconfidence

ⓘ First step of Software Engineering
Analysis and Planning

#CHAPTER ONE

Systems, Roles, Development Methodologies

Definitions:

Information: Raw data that has been processed, organized, and given context, making it meaningful and useful for tasks like decision-making or communication.

"Information essentially turns facts into understanding."

Data: Raw, unorganized facts, figures, symbols, or images (e.g.: a series of digital pixels)

System: A group of interrelated components that functions together to achieve a goal.

Information System: An arrangement of people, data, processes, and information technology that interact to collect, process, store, and provide as output the information needed to support an organization.

"The integral part of information system is: People."

System Analysis: The collection of notations, methodologies, and tools to analyze a problem situation so that we can deliver a system that meets user requirements.

Type of Information Systems:

1. TPS: Transaction Processing Systems (Banking, ATM)
2. OAS: Office Automation Systems (Google Sheets, Excel)
3. KWS: Knowledge Work Systems (CAD, VR, LMS)
4. MIS: Management Information System (Annex)
5. DSS: Decision Support Systems (GPS, CRM)
6. ES: Expert Systems (AI)
7. GDSS: Group Decision Support Systems
8. ESS: Executive Support Systems

CAD = Computer-Aided Design
LMS = Learning Management Systems
CRM = Customer Relationship Management

" GDSS and ESS are used in top-level management "

" ES is used to mimic human expertise, diagnose diseases, and detect faulty software "

System Analyst: A person who uses analysis and design techniques to solve business problems using information technology.

System Analyst's Roles:

1. Consultant
2. Agent of Change
3. Supporting Expert

System Analyst's Quality:

1. Communicator
2. Problem Solver
3. Strong personal and professional ethics
4. Self-disciplined and motivated