Information System Analysis and Design

Course no: CSE 4109

Chapter 4

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📘 System Planning and Initial Investigation

- ✅ **Definition:**
- **System Planning** is the first step in the System Development Life Cycle (SDLC) where the need for a new or improved system is identified and a plan is formulated to develop it.
- **Initial Investigation** is a preliminary study conducted to understand the problem, define the scope, and determine whether the project is feasible and worth pursuing.

🎯 Objectives of System Planning and Initial Investigation

- Identify and understand the **business problem or opportunity**
- Define the **scope and boundaries** of the system to be developed
- Evaluate the **feasibility** (technical, economic, operational) of the project
- Recommend whether to **proceed, modify, or abandon** the project
- Establish preliminary plans and allocate resources

🔍 Steps in System Planning and Initial Investigation

Step	Description
1. Problem Identification	Recognize and define the existing problem or opportunity.
2. Feasibility Study	Analyze if the system can be developed given technical, economic, and operational constraints.
3. Fact-Finding	Collect data through interviews, questionnaires, observations, and document reviews.
4. Define System Scope	Clearly outline what the system will and will not do to avoid scope creep.
5. Preliminary System Proposal	Prepare a report summarizing findings and recommendations for management.
6. Obtain Management Approval	Present proposal and seek authorization to proceed with detailed analysis.

🧩 Techniques for Initial Investigation

- **Interviews:** Talk to users, managers, and stakeholders to gather insights.
- **Questionnaires:** Distribute surveys to collect data from a large user base.
- **Observation:** Study current processes and workflows in action.
- **Document Analysis:** Review existing reports, forms, and records.

📋 Deliverables from This Phase

- **Problem Statement:** Clear description of the problem or opportunity.
- **Feasibility Report:** Summary of technical, economic, and operational feasibility.
- **Project Scope Document:** Boundaries and objectives of the new system.
- **Preliminary Plan:** Resource requirements, schedule outline, and estimated budget.

📌 Importance of This Phase

- Avoids developing unnecessary or unfeasible systems.
- Aligns system development with organizational goals.
- Sets realistic expectations for stakeholders.
- Helps manage risks early in the project.

Example Scenario

A retail company experiences delays in inventory management leading to stockouts.

- **Problem Identified:** Inefficient manual inventory system.
- **Feasibility Study:** Available technology, cost constraints, and user readiness assessed.
- **Fact-Finding:** Interviews with store managers and warehouse staff conducted.
- **Scope Defined:** Automate inventory tracking but exclude supplier management initially.
- **Proposal Submitted:** Recommend development of automated inventory system.
- **Management Approval:** Project approved to proceed to detailed analysis.

Thank you!