MIS
(Management Information System)
(21-972)

Department of Industrial Engineering
Sharif University of Technology

Session #12

Course Description

- **Instructor**
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- **Class time**
  - Saturday-Monday 10:30~12:00

- **Course evaluation**
  - Mid-term (20%)
  - Final exam (20%)
  - Quiz (10%)
  - Exercise-Projects (30%)
Course Description (Continued ...)

- **Mid-term session:**
  - Saturday, 7th, Azar 1394
- **Final session:**
  - Monday, 28th, Dey 1394
- **Reference:**

Course Description (Continued ...)

- **Reference:**
  - William S. Davis, David C. Yen, “The information system consultant’s handbook: system analysis and design”, 2010, Taylor and Francis
  - Gabriele Piccoli; “Information systems for managers: texts & cases ”, 2007, John Wiley & Sons Inc
Course Description (Continued..)

- Contents:
  - Introduction to Systems Analysis and Design
  - Analyzing the Business Case
  - Managing Systems Projects
  - Requirements Modeling
  - Data and Process Modeling
  - Object Modeling
  - Development Strategies
  - User Interface Design
  - Data Design
  - System Architecture
  - Managing Systems Implementation

Course Description (Continued..)

- Contents:
  - Data and Process Modeling
    - Data Flow Diagrams
    - Creating a Set of DFDs
    - Data Dictionary
    - Using CASE Tools for Documentation
    - Process Description Tools
    - Logical versus Physical Models
Data and Process Modeling

- Data Flow Diagrams
  - Systems analysts use many graphical techniques to describe an information system.
  - One popular method is to draw a set of data flow diagrams.
    - A data flow diagram (DFD) uses various symbols to show how the system transforms input data into useful information.
    - A data flow diagram (DFD) shows how data moves through an information system but does not show program logic or processing steps.
    - A set of DFDs provides a logical model that shows what the system does, not how it does it.

- Data and Process Modeling
  - Data Flow Diagrams
    - DFD Symbols
      - DFDs use four basic symbols that represent processes, data flows, data stores, and entities.
      - Several different versions of DFD symbols exist, but they all serve the same purpose.
        - Gane and Sarson symbol set
        - Yourdon symbol set.
Data and Process Modeling

- Data Flow Diagrams
- DFD Symbols
Data and Process Modeling

- Data Flow Diagrams
- DFD Symbols

![Diagram](image_url)
Data and Process Modeling

Incorrect

Correct

Data and Process

- Data Flow Diagrams
- DFD Symbols
Data and Process Modeling

- Data Flow Diagrams
  - DFD Symbols

Data and Process Modeling

- Data Flow Diagrams
  - Creating a Set of DFDs
    - Draw the context diagram so it fits on one page.
    - Use the name of the information system as the process name in the context diagram.
    - Use unique names within each set of symbols.
    - Do not cross lines.
    - Provide a unique name and reference number for each process.
    - Obtain as much user input and feedback as possible.
Data and Process Modeling

- Data Flow Diagrams
  - DFD
  - Context Diagram

Data and Process Modeling

- Data Flow Diagrams
  - DFD
  - DFD 0 Diagram
    (Level 1)
Data and Process Modeling

- Data Flow Diagrams
  - DFD
  - Context Diagram

Data and Process Mode

- Data Flow Diagrams
  - DFD
  - DFD 0 Diagram
    (Level 1)
Data and Process Modeling

- Data Flow Diagrams
  - DFD
    - DFD 1 Diagram
      (Level 2)
Data and Process Mode

- Data Flow Diagrams
  - DFD
  - DFD 0 Diagram (Level 1)

Data and Process Modeling

- Data Flow Diagrams
  - DFD
  - DFD 3 Diagram (Level 2)
Data and Process

- Data Flow Diagram
- DFD
- Homework