

MIS

(Management Information System)

(21-972)

Department of Industrial Engineering
Sharif University of Technology

Session #12

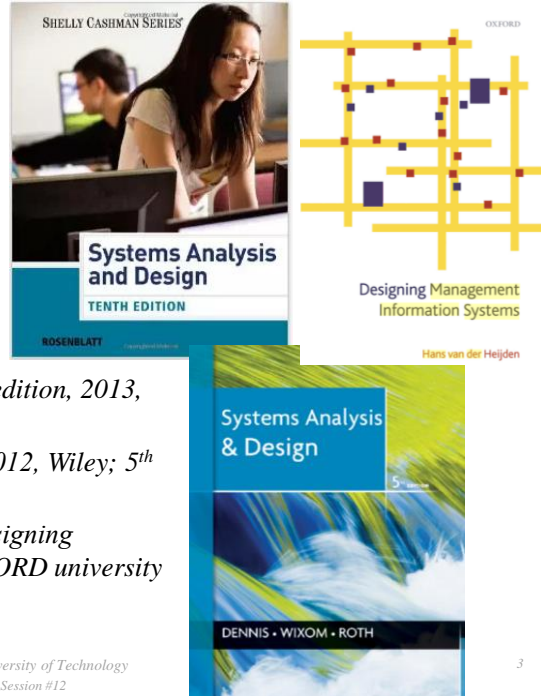


Course Description

- *Instructor*
 - *Omid Fatahi Valilai, Ph.D. Industrial Engineering Department, Sharif University of Technology*
 - *Email: Fvalilai@sharif.edu, Tel: 021-6616-5706*
 - *Website: <http://sharif.edu/~fvalilai>*
- *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:**
 - Rosenbalt, “System Analysis and Design”, 10th edition, 2013, Course Technology
 - Dennis, Lan; “Systems Analysis and Design”, 2012, Wiley; 5th edition
 - Johannes Govardus Maria van der Heijde; “Designing Management Information Systems”, 2009, OXFORD university press

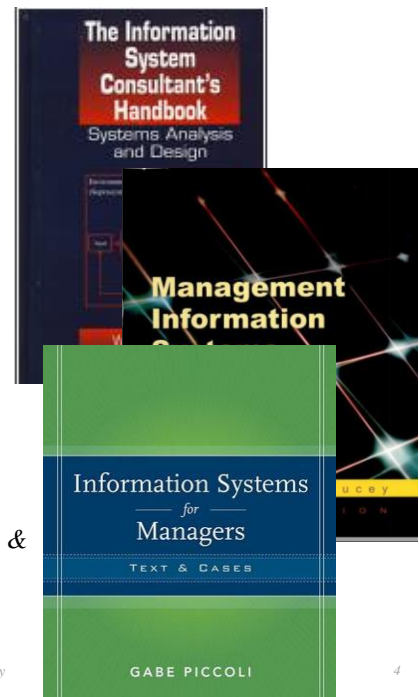


Department of Industrial Engineering, Sharif University of Technology
MIS (Management Information System), Session #12

3

Course Description (Continued ...)

- **Reference:**
 - William S. Davis, David C. Yen, “The information system consultant’s handbook: system analysis and design”, 2010, Taylor and Francis
 - Terence Lucey; “Management Information Systems”, 2004, Cengage Learning EMEA
 - Gabriele Piccoli; “Information systems for managers: texts & cases”, 2007, John Wiley & Sons Inc



Department of Industrial Engineering, Sharif University of Technology
MIS (Management Information System), Session #12

4

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*

*Department of Industrial Engineering, Sharif University of Technology
MIS (Management Information System), Session #12*

6

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*

*Department of Industrial Engineering, Sharif University of Technology
MIS (Management Information System), Session #12*

7

Data and Process Modeling

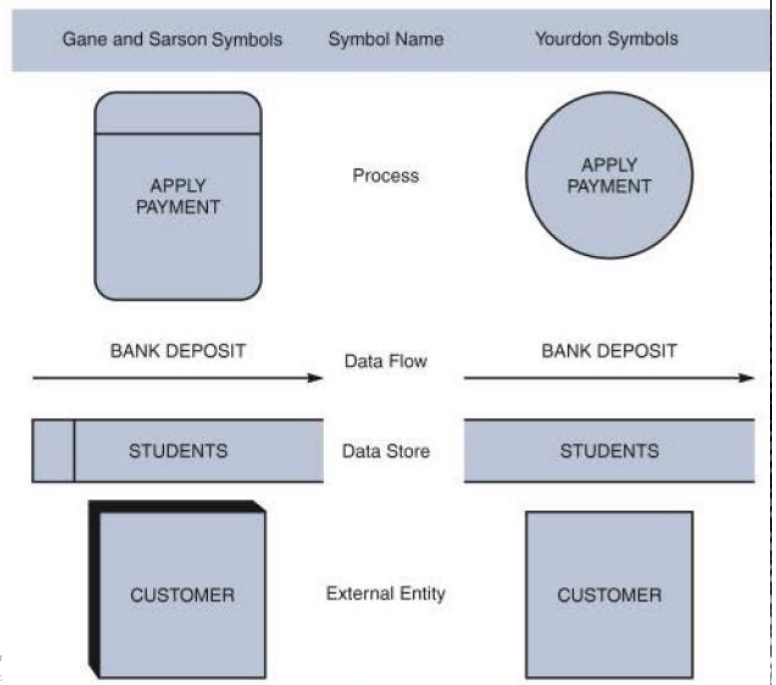
- *Data Flow Diagrams*
 - *Systems analysts use many graphical techniques to describe an information system.*
 - *One popular method is to draw a set of data flow diagrams.*
 - *A data flow diagram (DFD) uses various symbols to show how the system transforms input data into useful information.*
 - *A 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

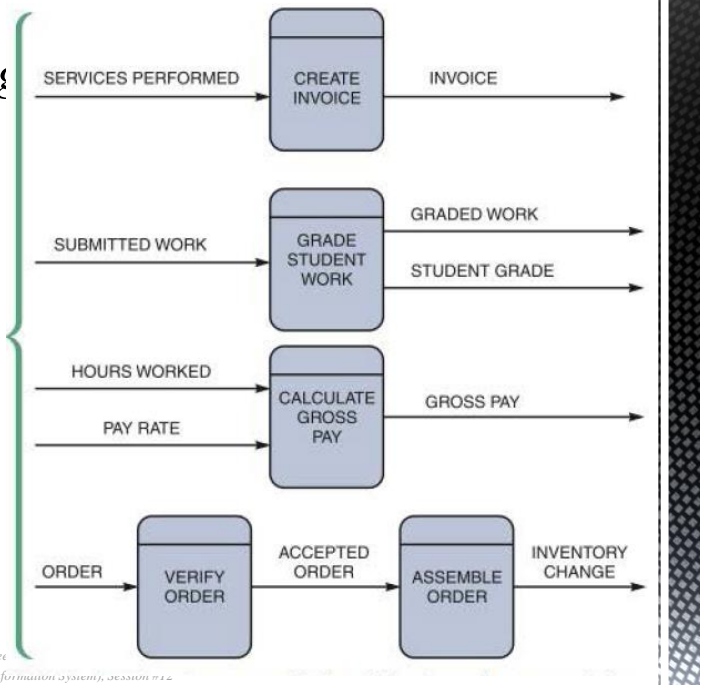
- Data Flow Diagrams
 - DFD Symbols



Department of Indu
MIS (Mc

Data and Process Modeling

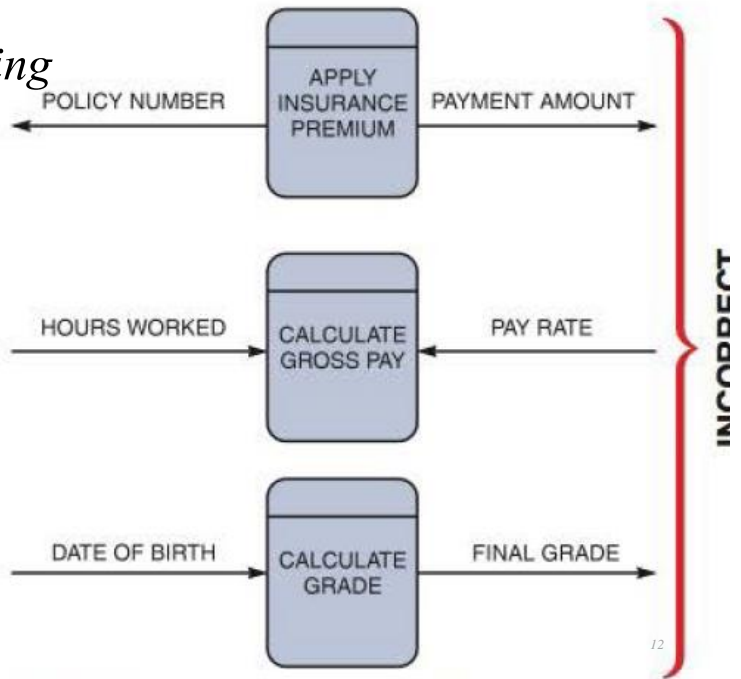
- Data Flow Diagrams
 - DFD Symbols



Department of Industrial Engine
MIS (Management Information Systems), DESSAION #12

Data and Process Modeling

- Data Flow Diagrams
- DFD Symbols

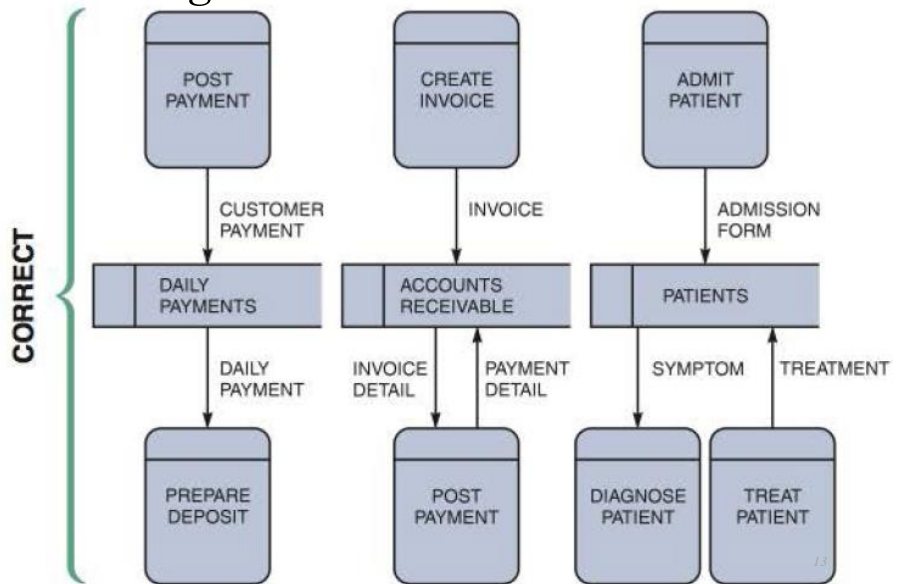


Department of Industria
MIS (Manag)

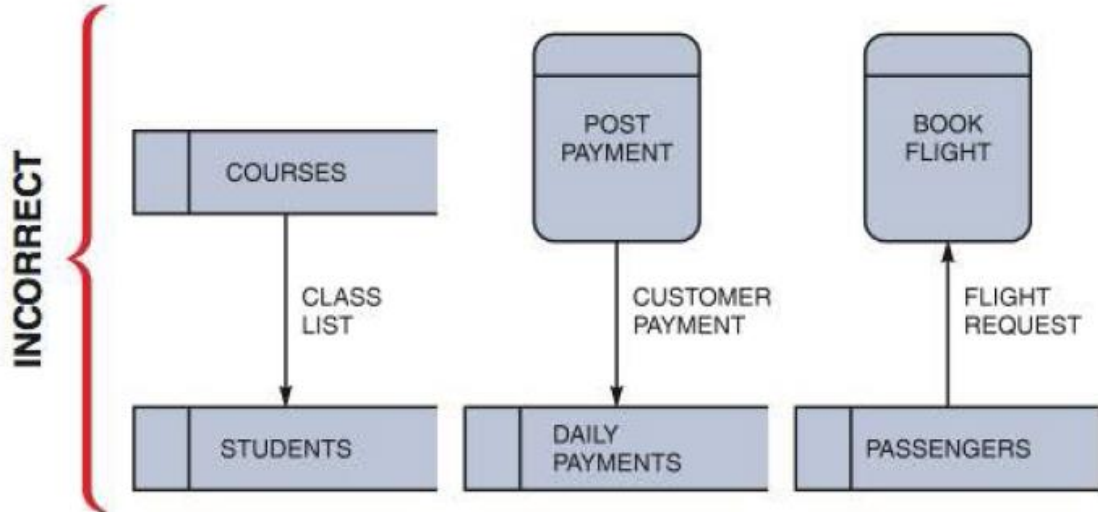
12

Data and Process Modeling

- Data Flow Diagrams
- DFD Symbols



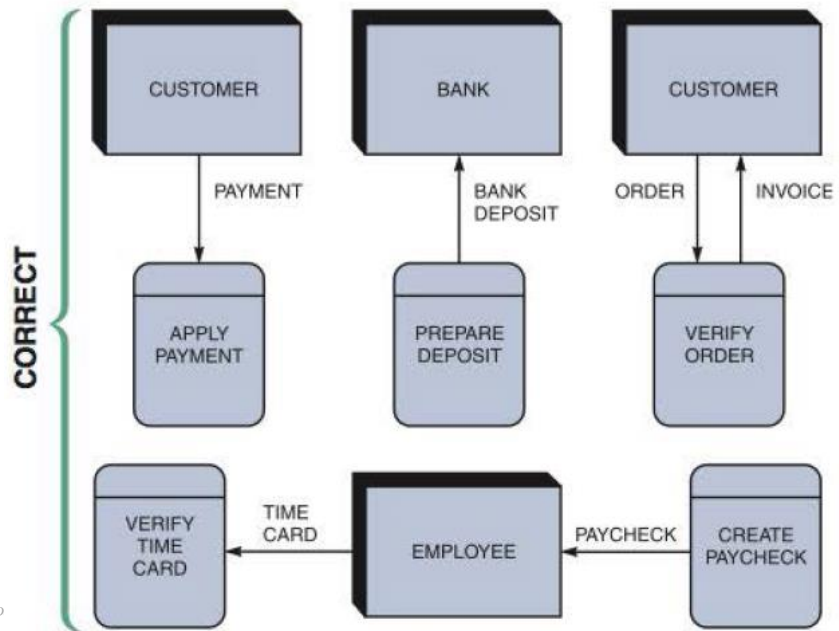
Data and Process Modeling



MIS (Management Information System), Session #12

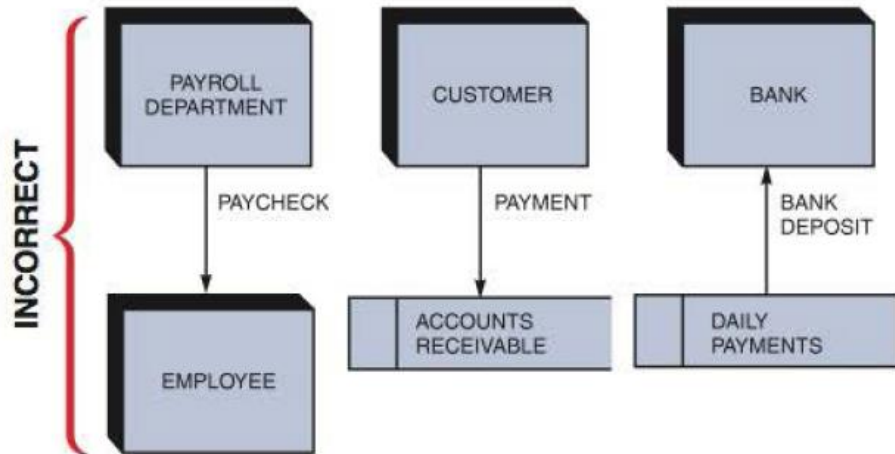
Data and Process

- Data Flow Diagrams
- DFD Symbols



Data and Process Modeling

- Data Flow Diagrams
 - DFD Symbols

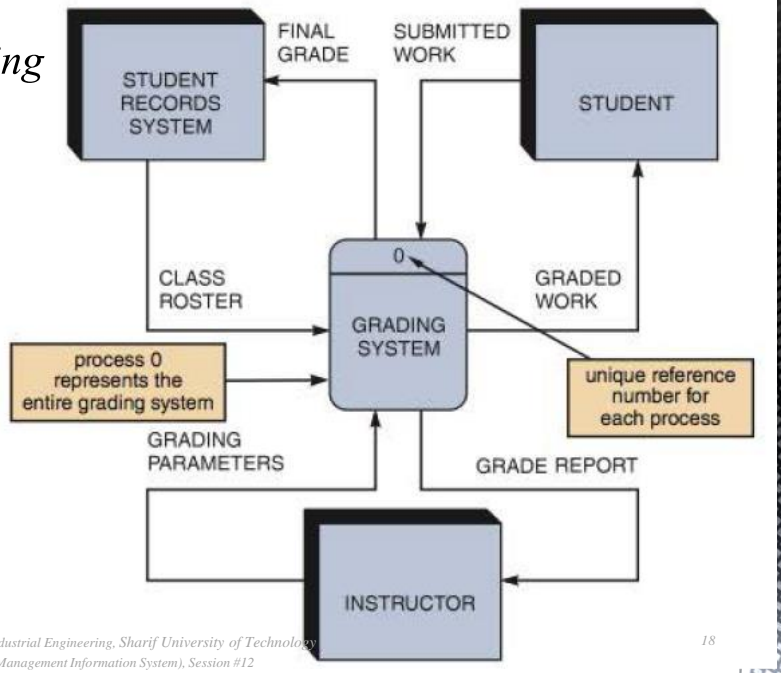


Data and Process Modeling

- 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

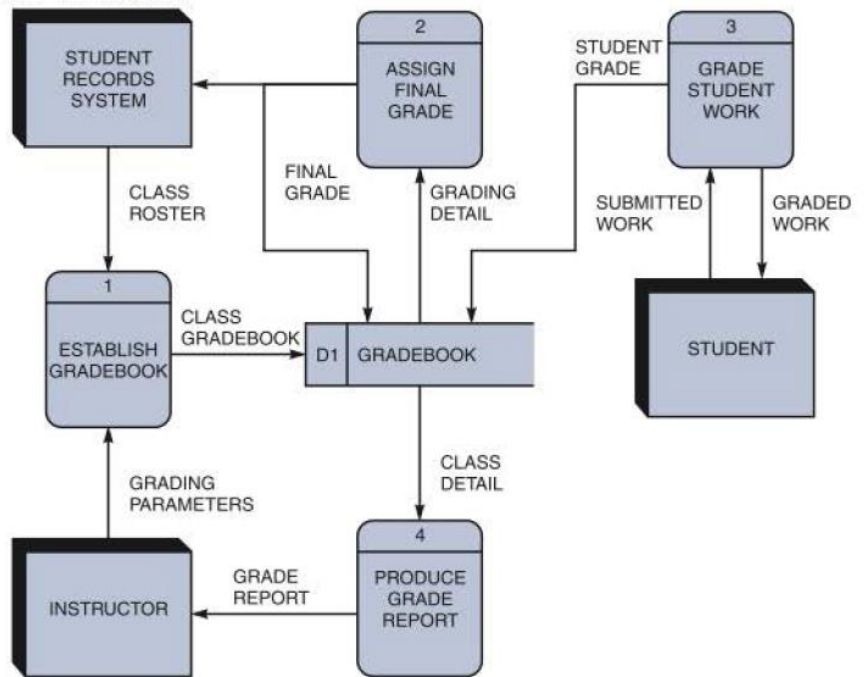


Department of Industrial Engineering, Sharif University of Technology
MIS (Management Information System), Session #12

18

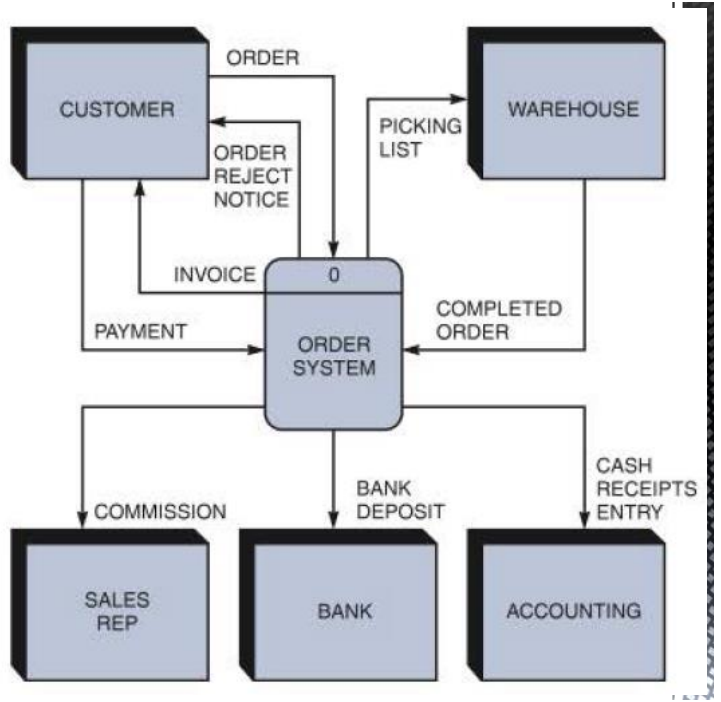
Data and Process Modeling

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



Data and Process Modeling

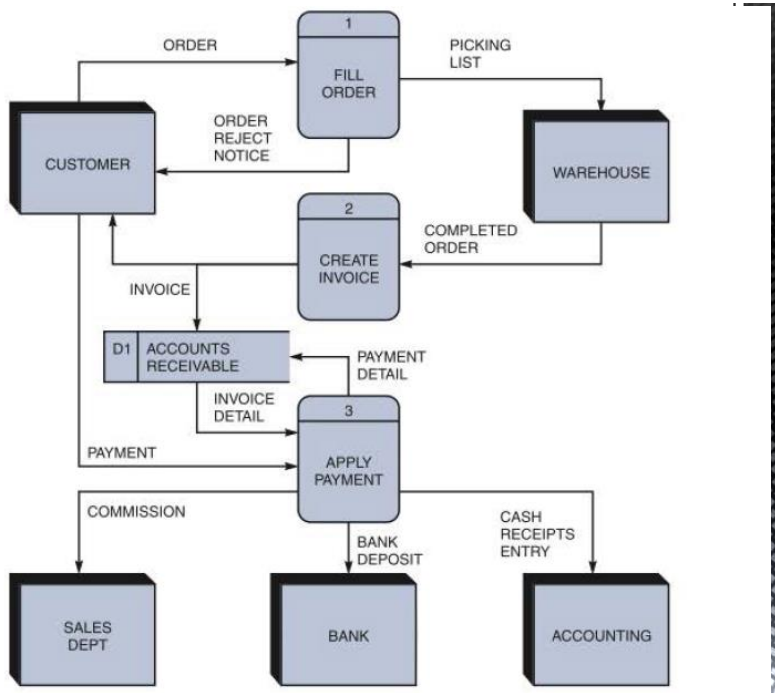
- Data Flow Diagrams
 - DFD
 - Context Diagram



Department of Industrial En.
MIS (Management)

Data and Process Mode

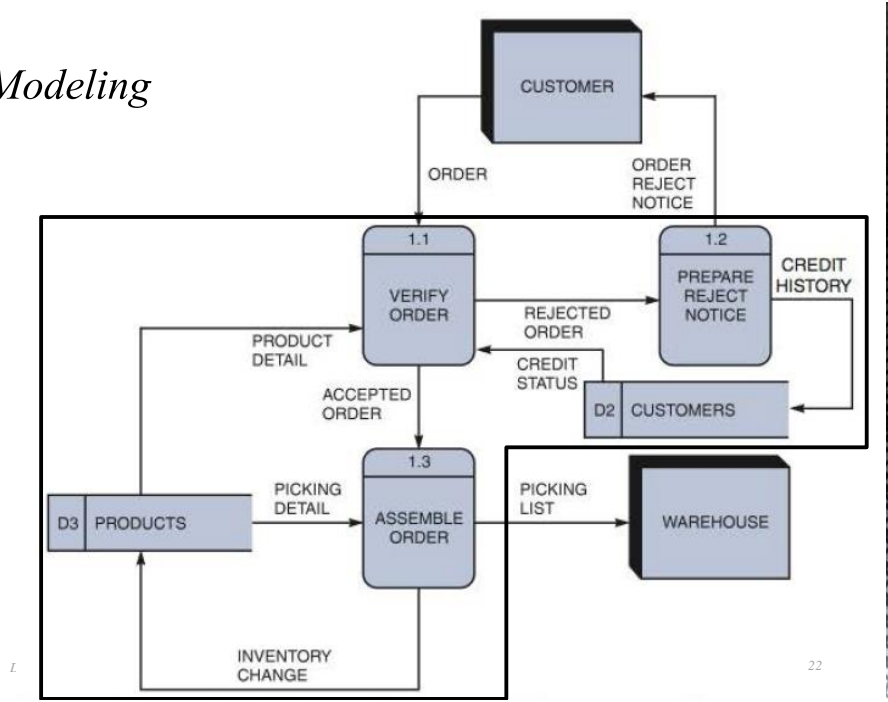
- Data Flow Diagrams
 - DFD
 - DFD 0 Diagram (Level 1)



Department of
M

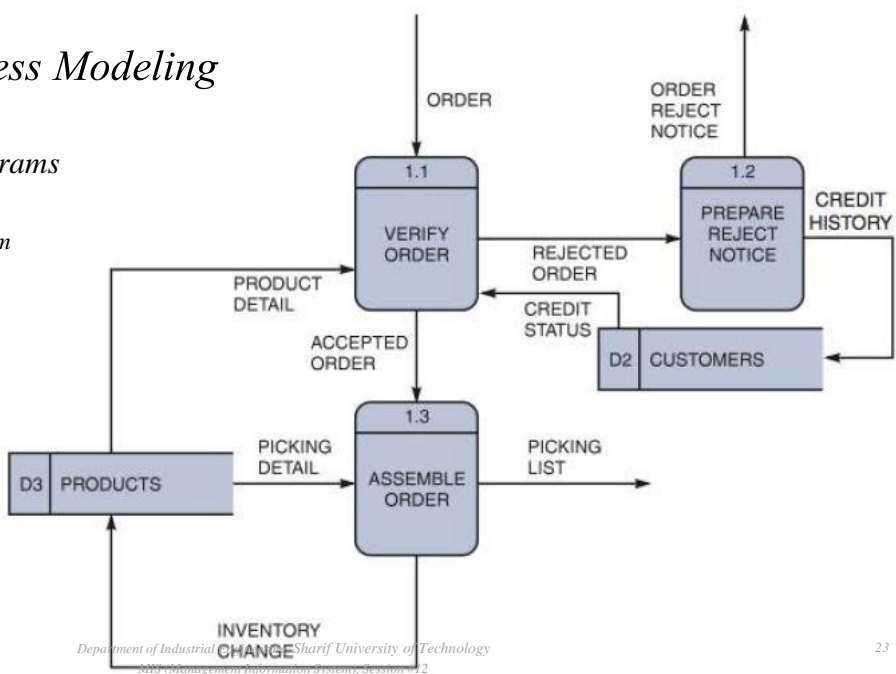
Data and Process Modeling

- Data Flow Diagrams
 - DFD
 - DFD 1 Diagram (Level 2)



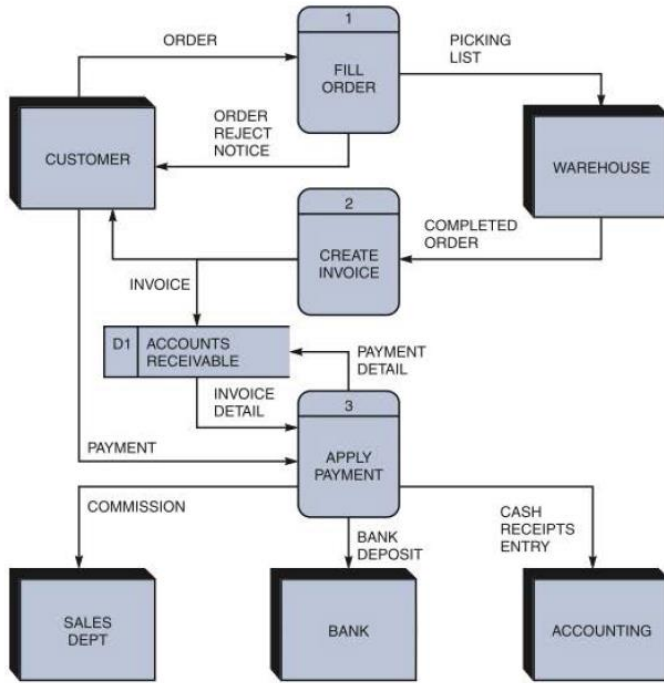
Data and Process Modeling

- Data Flow Diagrams
 - DFD
 - DFD 1 Diagram (Level 2)



Data and Process Mode

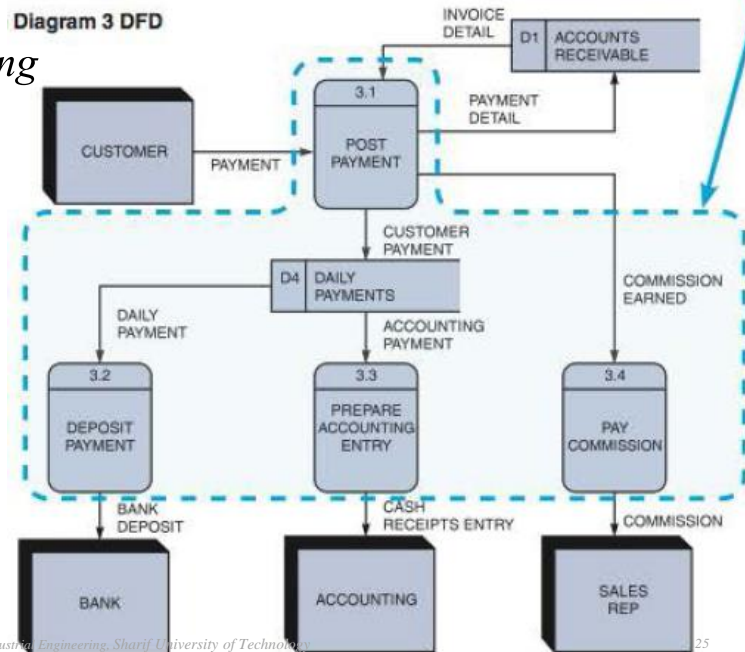
- Data Flow Diagrams
 - DFD
 - DFD 0 Diagram (Level 1)



Department of Industrial Engineering, Sharif University of Technology, MIS (Management Information System), Session #12

Data and Process Modeling

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



Department of Industrial Engineering, Sharif University of Technology, MIS (Management Information System), Session #12

25

Data and Process

- Data Flow Diagram
 - DFD
 - Homework

