

Smart, Creative and Entrepreneurial



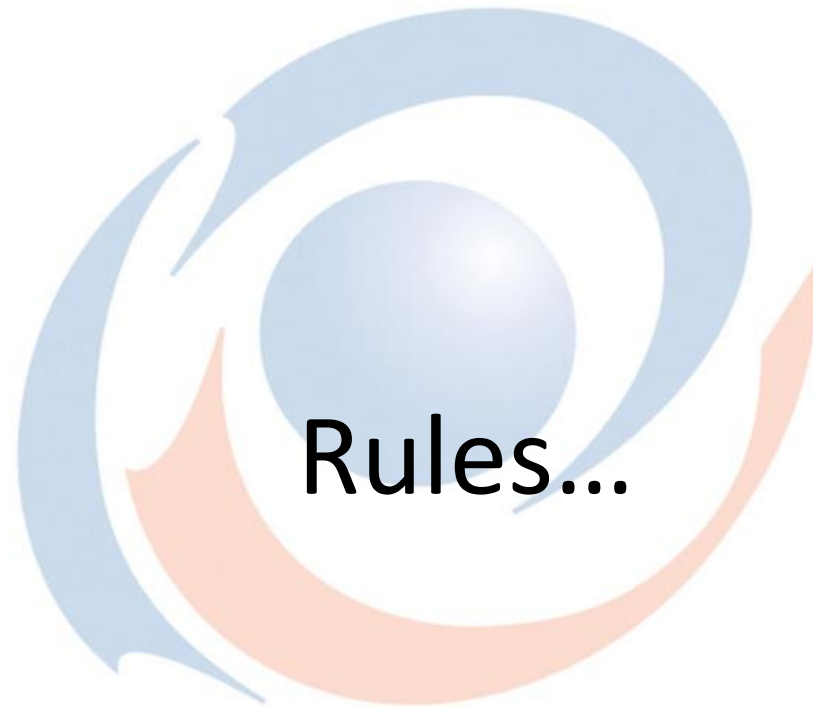
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Data Warehouse

Munawar, PhD

Course Rules





Rules...

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Syllabus

Before Mid Exam		After Mid Exam	
1	Introduction to Data Warehouse	8	Logical Design
2	Data Warehouse Architecture	9	ETL (Extract Transform Loading)
3	DW Development Phase	10	Physical Design
4	Data Quality on DW Dev Phase	11	Data Warehouse Benefits
5	DW Framework with Data Quality Consideration	12	DW Case Study
6	Requirements Analysis	13	Pentaho in Practice
7	Conceptual Design	14	Review and Presentation

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Assessment

- 15 % Quiz
- 25 % Assignment
- 25 % Mid Test
- 35 % Final Test

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Group Assignment

- Designing Data Mart or Data Warehouse for real business
- Group can be 2 students (maximum)
- Assignment #1 will be marked 40%
- Assignment #2 will be marked 60%

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Project Semester

- At least 5 years data (You must collect the necessary data for 5 years and should have a first draft of the project description approved by the instructor before initiating on detailed work)
- Case Study on a certain field is allowed
- Final outcome could be a data warehouse or data mart

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Project Semester ...

The project report to include, but is not limited to, the following as documentation:

- Narrative description of business and tables of appropriate data.
- Descriptions of decisions to be supported by information produced by system.
- Summary narrative of results produced.
- Structure charts, class diagrams and/or other diagrams to document the structure of the system.
- Listings of computer models/programs utilized.
- Reports displaying results.
- Recommended decision from results.
- User instructions.

Assignment #1

- Assignment due – Mid Exam
- Describe your DW requirements analysis more detail in word.
- Complete your document with real data at least for 5 years

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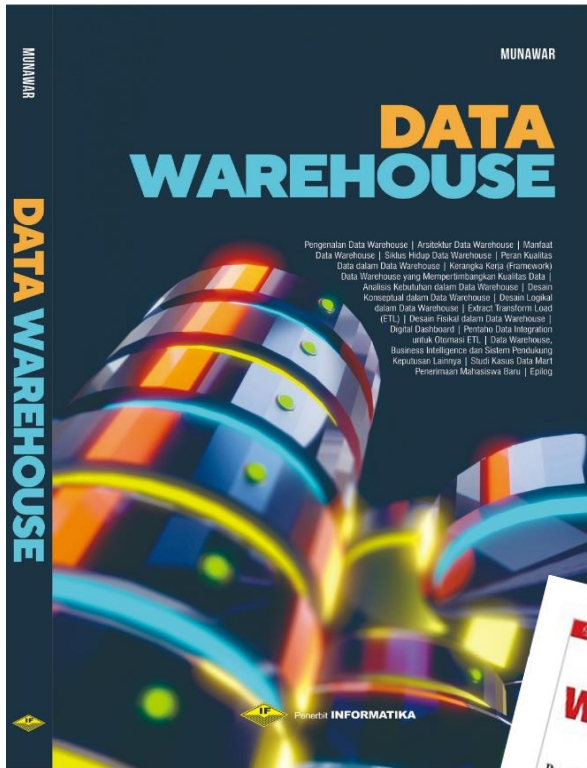
Assignment #2

- Assignment due – Final Exam
- Modify your assignment #1 based on your findings after completing your DW design
- Complete your final assignment with the following criteria:
 - Description of your case study in detail
 - Requirements analysis
 - Designing of DW (conceptual, logical & physical)
 - ETL design with pentaho or other tools
 - 5 years of data
 - Dashboard to show the report & recommendation for your DW/ DM

Tools

- Case tool : Power Designer → DW design
- Pentaho
- Microsoft Excel, Power BI or Others

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References

01

Munawar
Data Warehouse

02

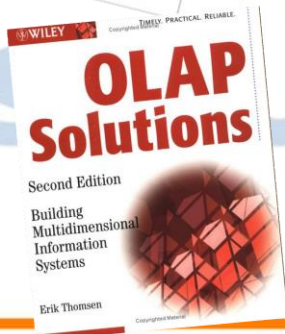
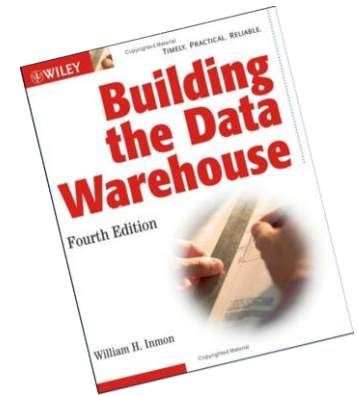
Ralp Kimball
The Data Warehouse Life Cycle Toolkit

03

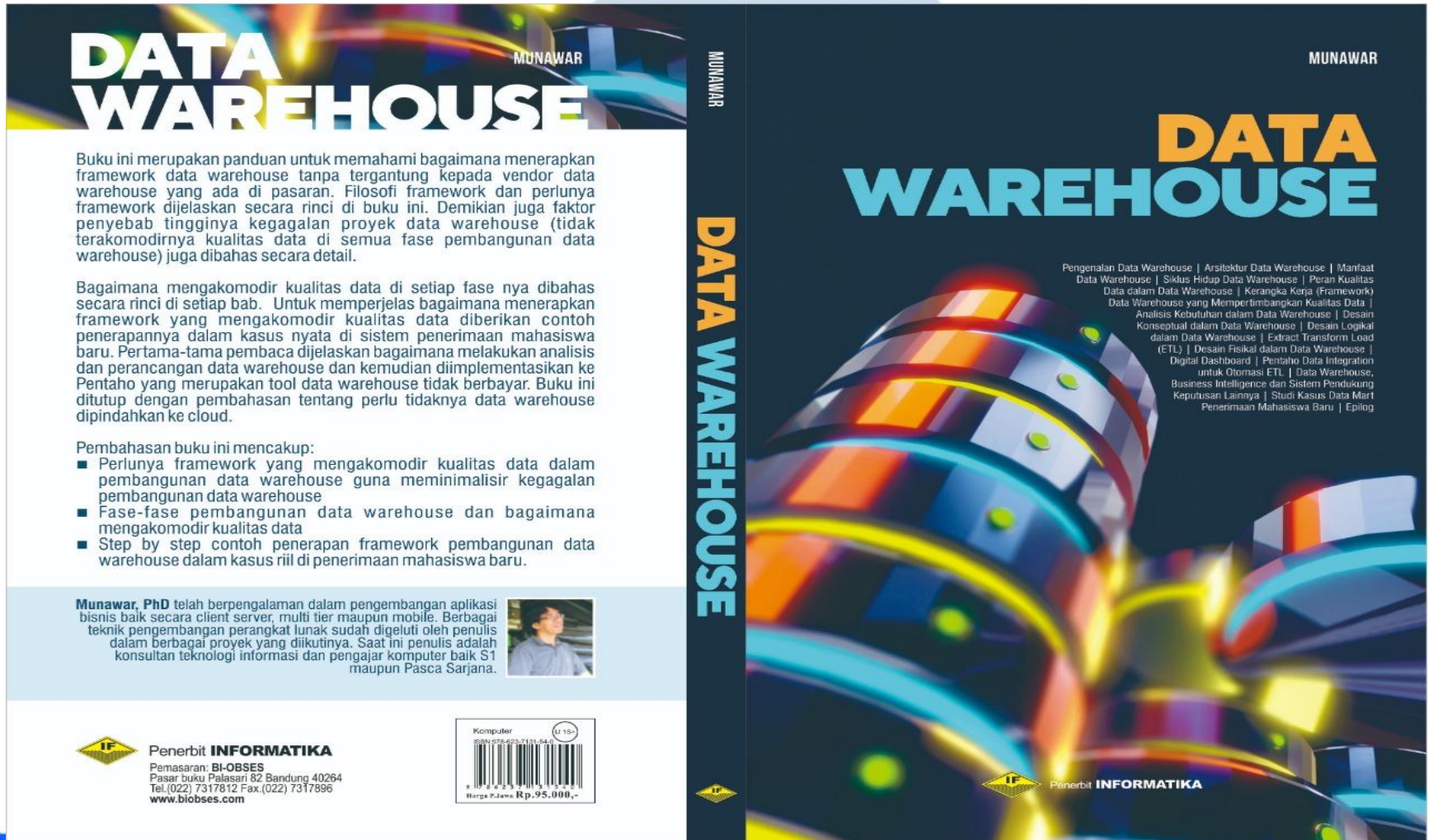
Bill Inmon
Building the Data Warehouse, 4th Edition

04

Wrembel and Konicila
Data Warehouses and OLAP : Concepts,
Architectures and Solutions.



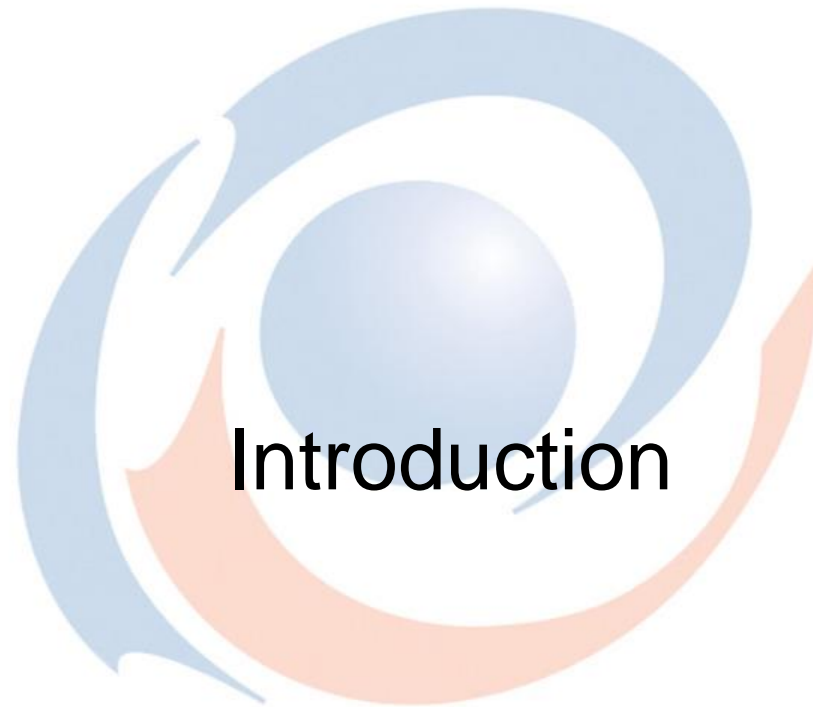
Main Reference



Learning Outcome

- *Student will be able to understand the DW development Phase*
- *Student will be able to incorporate data quality in data warehouse design*
- *Student will be able to apply data warehouse design for a real business*

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Introduction

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Why this Course?

- The world is changing (actually changed), either change or be left behind.
- Missing the opportunities or going in the wrong direction has prevented us from growing.
- **What is the right direction?**
- Harnessing the data, in a knowledge driven economy.

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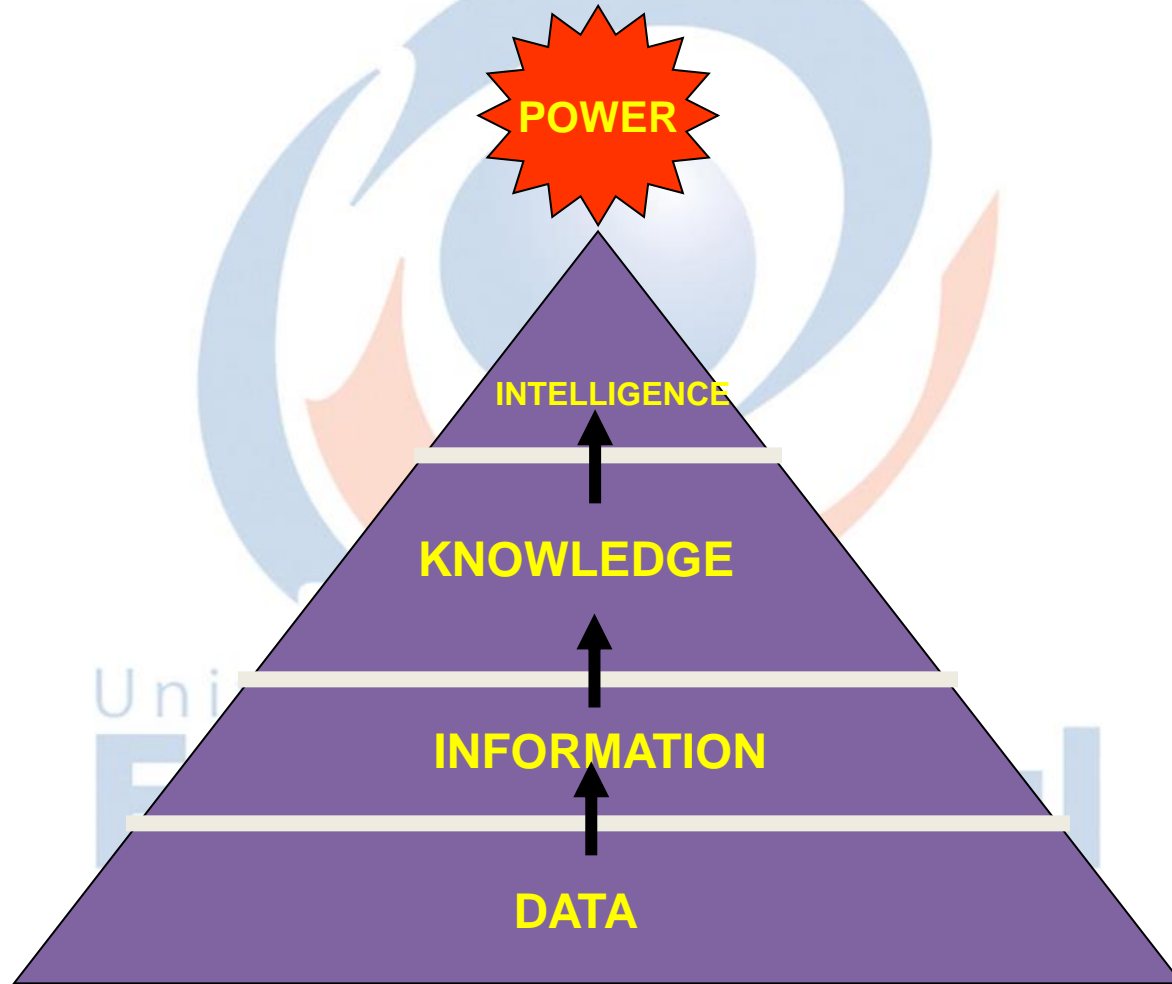
The Need ...

“Drowning in data and starving for information”

Knowledge is power, Intelligence
is absolute power!

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The Need ...





Thank You...

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