**Welcome To The Data Warehouses Course**

In this course, we'll cover the following:

1. Introduction to Data Warehouses
2. Introduction to the Cloud and AWS
3. Implementing Data Warehouses on AWS

# Introduction To Data Warehouses

Welcome to this lesson on Introduction to Data Warehouses!

### Objective

Students will be able to understand the purpose, architecture, and technologies used in a data warehouse.

### Prerequisites

* Relational database design & SQL
* Programming in Python
* Basic familiarity with dimensional modeling

### Lesson Overview

* What is a Data Warehouse? A Business Perspective
* What is a Data Warehouse? A Technical Perspective
* Dimensional Modeling (Recap)
* DWH Architecture
* OLAP Cubes
* DWH Storage Technology

**What Is A Data Warehouse? A Business Perspective**

You are in charge of a retailer’s data infrastructure. Let’s look at some business activities.

* Customers should be able to find goods & make orders
* Inventory Staff should be able to stock, retrieve, and re-order goods
* Delivery Staff should be able to pick up & deliver goods
* HR should be able to assess the performance of sales staff
* Marketing should be able to see the effect of different sales channels
* Management should be able to monitor sales growth

Ask yourself: Can I build a database to support these activities? Are all of the above questions of the same nature?  
Let's take a closer look at details that may affect your data infrastructure.

* Retailer has a nation-wide presence → **Scale?**
* Acquired smaller retailers, brick & mortar shops, online store → **Single database? Complexity?**
* Has support call center & social media accounts → **Tabular data?**
* Customers, Inventory Staff and Delivery staff expect the system to be fast & stable → **Performance**
* HR, Marketing & Sales Reports want a lot information but have not decided yet on everything they need → **Clear Requirements?**

Ok, maybe one single relational database won’t suffice :)

## Book References

Here are links to the three books referenced in the video:

* [**The Data Warehouse Toolkit: The Complete Guide to Dimensional Modeling (Kimball)**](https://www.amazon.com/Data-Warehouse-Toolkit-Complete-Dimensional/dp/0471200247)
* [**Building the Data Warehouse (Inmon)**](https://www.amazon.com/Building-Data-Warehouse-W-Inmon/dp/0764599445)
* [**Building a Data Warehouse: With Examples in SQL Server (Rainardi)**](https://www.amazon.com/Building-Data-Warehouse-Examples-Experts/dp/1590599314)

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