



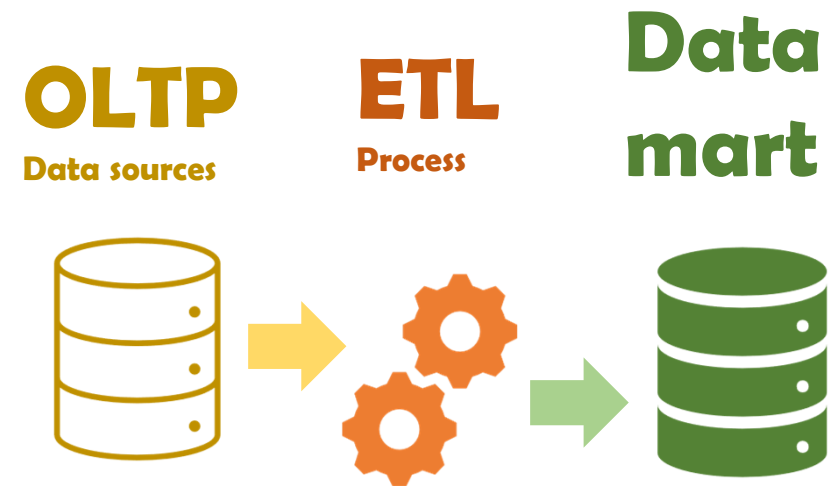
# Project Guide 01

Decision Support Systems (DSS), 2021-22

Degrees on Computer Systems Engineering and  
Medical Informatics Engineering

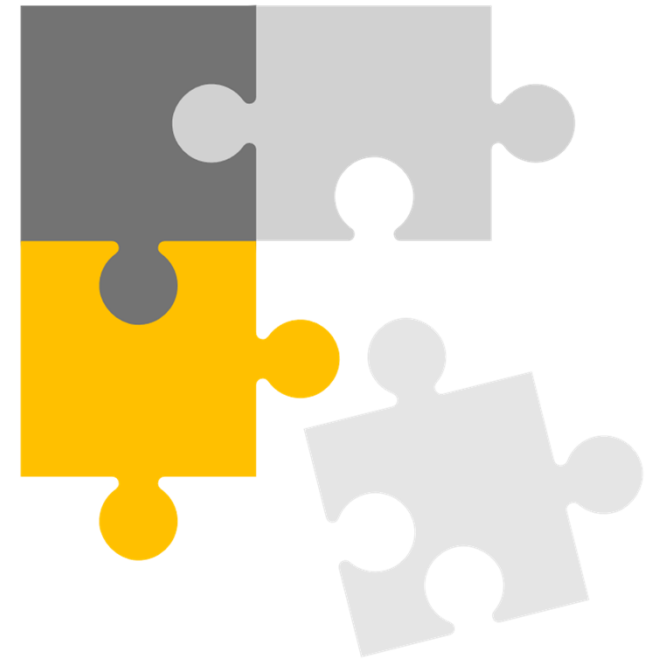
# Introduction

- The goal of project 01 is the implementation of a data mart based on an operational database.
- The team should undertake the following tasks
  - Business requirements and data profiling
  - Dimensional modeling of the data mart
  - Implementation of ETL Process
- OLTP data source
  - **Adventure Works 2021** database
  - The AW2021 is available on Moodle



# Project team and submission

- The project must be carried out in teams of **three members**
  - The project grade is individual, based on the discussion of the project
- The project must be submitted on the Moodle platform as a **zipped file** that must include
  - (1) the project report and (2) the ETL file
  - It should be named **DSS\_G##\_P01**, where ## corresponds to the team number. It also applies to (1)
  - The report must be submitted in PDF format and according to the template available on Moodle
- Projects submitted after the deadline may not be evaluated

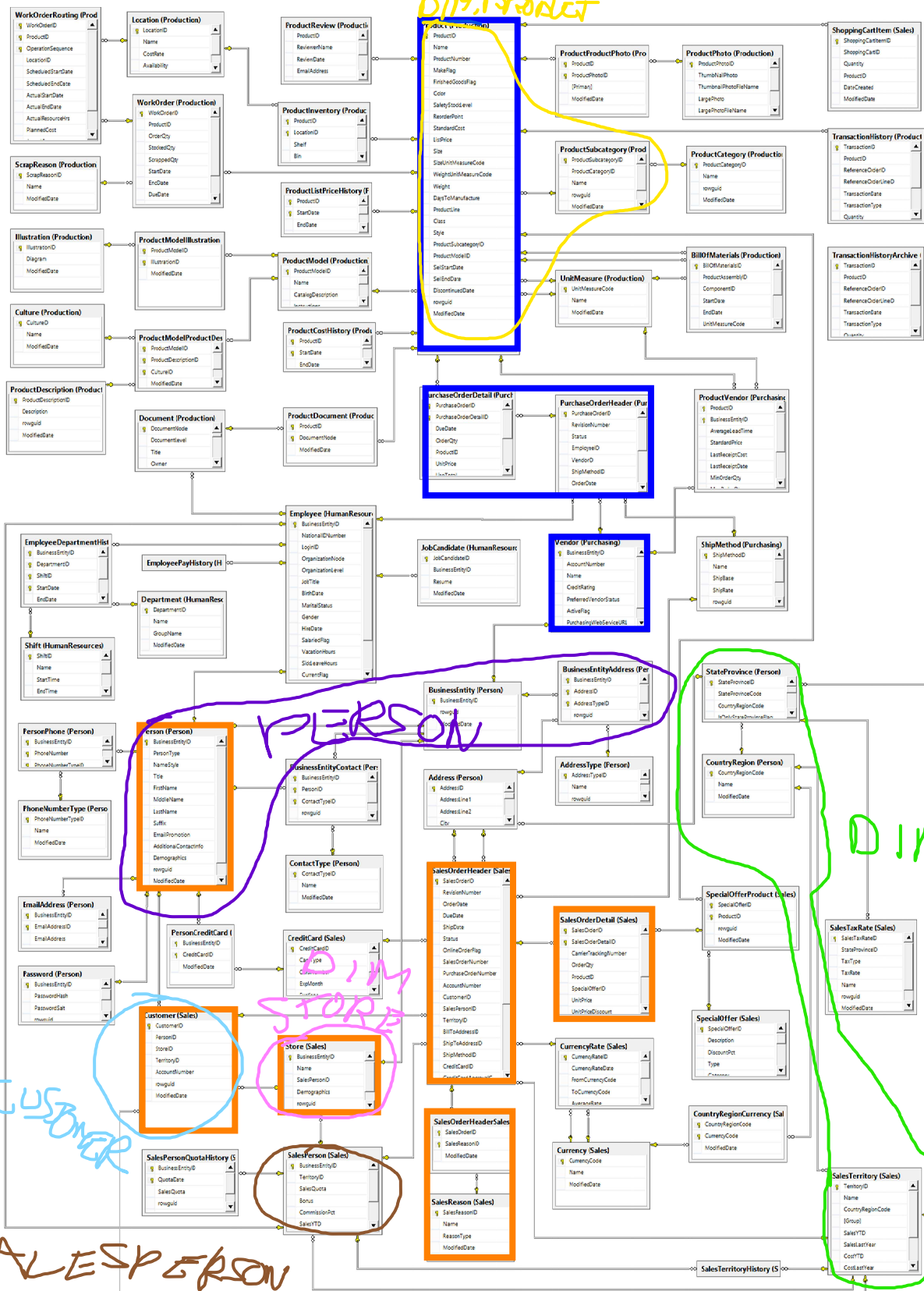


# Adventure Works database

- Adventure Works is a sample database for BI since the release of SQL Server 2005
- It is a fictional USA company, that is both a manufacturer and seller of bicycles and accessories
- The company has two main sales channels:
  - **Internet** sales to several thousand online customers
  - **retail** makes sales directly to a few hundred stores through the company's salespeople
- The average value of each retail order is much higher than the average value of orders obtained via the Internet.
- Sixteen special offers were created. The special offer 01 corresponds to a normal sale without discount.



# AW2021 ERD



# Tasks to be developed



## Data Profiling

- Analysis of the data schema
- Study of the data content



## Dimensional modeling

- Identify goals and objectives
- Develop the DW matrix
- Identify Facts and Dimensions
- Include the ER Model and data description maps



## Extract, Transform, Load (ETL)

- Implement the ETL process
- Document the transformations
- Run the ETL jobs
- Make a brief summary of the data mart content

## Final remarks



The main concepts and techniques about dimensional design, covered during the classes, should be put into practice.



The evaluation of projects will take into account, among other things, the application of skills, team commitment and the matching of the solution to the project objectives.

Thank you!