

Exercise 1: AdventureWorks – project part 1

(save your answers, they will be part of the first hand in)

You are allowed to work on this exercise in groups.

(I assume that you have **downloaded and installed SQL Server and SQL Server Management Studio**)

1. Download and install the source database **AdventureWorks2017.bak**
(Q:-> Software for Students -> ICT_GBE -> DAI)

2. We will design a data mart that supports the (internet) sales process.

Specifically we assume that the business requirements are similar to the NorthWind sales process:

Sales reporting. *Senior management would like to be able to track sales by customer, employee (here: SalesPerson) and product, with the goal of establishing which products are the top sellers, which customers are the top buyers, which SalesPersons place the most orders, and sales per month for top 3 selling products.*

You will identify the grain, the dimensions (and the attributes for these dimensions), the facts, and do an initial design of your Data Warehouse/Data Mart.

*For inspiration, you can have a look at an (minimum) example of a NorthWind Data Warehouse for the Sales process (see the file **NorthWindStarSchemaV1.pdf**)*

- a) Study the source database **AdventureWorks2017**, and find out which tables you will need in order to fulfill the user requirements
- b) Fill in the worksheets for the fact table and the dimension tables (**Documentation.xlsx**)
Follow the process described in **NorthWind case.pdf** (you should of course work on AdventureWorks ☺)
- c) Draw an ER diagram for your Data Warehouse in **UML notation**
- d) Create your Data Warehouse design in SQL Server according to your documentation