# DATABASE DESIGN WITH ORACLE SQL DEVELOPER DATA MODELER

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**Keywords:**

Data Modeler, Developer, Database, database design, agile

## Introduction

The IT work has changed a lot in the past ten or so years: everything is very agile nowadays. So at the same time I have been trying to adjust to the agile world and solving a lot of performance problems due to bad database design or SQL that is made by a person who does not understand the data model.

When I stopped to think I realized that a lot of problems can be avoid by designing the database well and by documenting the design in a way that a professional IT person is able to understand how the database should be used. The more agile the project is the more flexible and well documented the database design must be. In order to be able to design database well, one needs a tool. Is Oracle SQL Developer Data Modeler a good tool for that?

## Database design

The work on designing the database has not actually changed: the same rules still apply and relational theory is still alive and kicking. What has changed? The change is that the database designer is in risk not to have enough information to be able to do his/her job well. So the database designer needs a lot of time to find the information and in order to get time for that he/she needs a tool that will automate everything that can be automated and a tool for documenting.

## Oracle SQL Developer Data Modeler

Before we (Oracle database designers) had Oracle Designer to help us to do our job better. But for many years it has been a problem because the new features of Oracle database have not been implemented to Oracle Designer. Now Oracle offers us Oracle SQL Developer Data Modeler (later Data Modeler) as a replacing tool. The best thing is that this tool is for free. But is it a real tool that really helps database designers? Does it allow us to document database issues? Does it allow many users to use it at the same time? Does it automate our work where it is possible? Is this a tool to make database designers life easier?

## Database design with Data Modeler

Data Modeler allows you to do all the phases that are needed when designing the database: conceptual design, logical design, physical design. And it also enables designing the data architecture. All the

phases that can be automated are automated in the tool. Integrated version control allows versioning and multiuser environment. Reporting functionality allows information sharing to all the other people in the system development process. And integrated Data Modeler viewer in Oracle SQL Developer (from version 3.0) makes information sharing even easier. Starting to use Data Modeler with databases that have not been documented is easy because Data Modeler also supports reverse engineering.

In general Data Modeler is a very good tool for designing databases and documenting the designs. It is still in evolving stage so there might be some problems in using it but usually the problems are due to unexperienced user.

The logic and interface in Data Modeler is very different from Oracle Designer and that can easily make one feel that Data Modeler is wrong and Oracle Designer is the right way of working. But I can seriously say that it is a pleasure to work with Data Modeler because:

- it is easy to install
- mouse scrolling works (it never worked with Oracle Designer, small thing but feels important now that it works)
- new Oracle features are supported
- DW features are supported
- database designing is supported, even in agile projects
- database designing is supported not only for Oracle databases but for other brands as well
- Data Modeler helps to keep up the different kind of standards like naming standards

**About the author**

Heli Helskyaho is the CEO for Miracle Finland Oy and Kantamestarit Oy. She is also the president of Oracle User Group Finland and the Ambassador for EMEA Oracle User Groups Community (EOUC). Heli is an Oracle ACE. Heli has worked with Oracle products in several positions since 1993, but her key interest lies with databases. Heli has been an Oracle Designer user since 1996 and Data Modeler user since 2010.

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