Welcome to the Introduction to Modeling in the SAP HANA Studio for SAP Business One data. This is the topic that introduces you to how to use the HANA Studio Modeler.

In a prior topic we looked at how to go from questions that need answering to conceiving of a model that will meet our analytic needs. Now we will look at the tool, the SAP HANA Studio’s modeler where we can create those models.
At the end of this unit, you will be able to:

- Define terminology and concepts used in business analytics
- Use the SAP HANA Studio Modeler to view tables and information models in the SAP HANA database
- Create packages for organizing models
SAP HANA Modeler is the tool in SAP HANA studio for managing your models, a place where you can work with and extend the semantic layers. The modeler displays all of SAP’s predefined models as well as those you create.

Within the modeler perspective you can build and manage database views. In the graphic, one of our models, a calculation view, was chosen in the tree structure on the left. When the model is opened, the properties and structure of the model are visible on the right.

Besides modeling views, this perspective provides the ability to preview data in the physical tables and information models. Another important feature is the ability to import and export objects. Additionally, analytic privileges and security are embedded in the modeler.
The Modeler is organized by SAP HANA systems. In the modeler, a HANA database is also called an instance because it is the individual database source. You can connect the modeler to one or more HANA databases. In the Navigation pane you will see the SAP HANA server at the top of the tree.

Underneath each HANA server, you will find an icon for backup, followed by 4 folders. During this course we focus on two of the folders: Catalog and Content.

The Catalog folder is organized by schemas. Schemas are analogous to databases. There are system schemas containing system tables and views. Each company database is represented by a schema and there is a schema for the SBOcommon database. To query a table or view, you must specify a schema.

The Content folder is organized by packages and sub-packages. Packages are a way to group the models and procedures used for analytics. The SAP package contains a sub-package for each company database schema. Within the company database schema package, you will find packages containing SAP delivered models as well as any custom models deployed to that company database. When we work in the Modeler, we will create a package to organize and manage the models we create.
The Content folder is made up of packages that organize the views and procedures used for analytics. Here we see the SAP package with its sub-packages that organize models by company database schemas and by module within that schema.

Views are models that contain combinations and selections of data from tables modeled to serve a particular purpose, such as to provide the opportunity to analyze sales revenue or to manage cost centers. Views appear like readable tables, therefore, database operations which read from tables can also be used to read from views.

The SAP HANA database provides pre-built views and also allows you to model your data as views. When you perform an interactive analysis, run a SAP HANA report or view a dashboard in your cockpit, you are most often querying a view.

Views define the metadata. Unlike a traditional data warehouse, no data is pre-aggregated and stored in the models. Instead the SAP HANA in-memory computing engines pull in the data and aggregates data in real time.

When we begin modeling views in the SAP HANA Studio, we create a package to organize our views.
The first time you open the SAP HANA Studio, you may not see the folders. This is because you need to connect the SAP HANA Studio to your SAP HANA database by adding a system.

To add a system, open the context menu and choose the option Add System.

There are two steps to add a system.

First, in the Specify System form, you need to include the host name and related information on the HANA instance. The host name is either an IP address or hostname. The instance number is the HANA installation on the server. You can put a description for the instance to make it more easily identifiable.

In the Connection Properties form, you need to enter HANA user authentication information. For the authentication by database user, you enter the user name and a password.
When you begin working with the models, you will need a package to organize your work.

It is easy to create a package. You can create new packages by right-clicking on the Content folder and choosing New Package. Then give the package a name and a description.

If you wish to place a package underneath another package in the hierarchy, name your new package to begin with the higher-level package first followed by a dot then the name of the new package. In the example shown, we are creating a package called KSD under the package called test.

A newly created new package is empty. Folders will be created for any models you create.
Here are some key points for this topic:
The SAP HANA Studio's Modeler is where we create and manage information models in the semantic layer.
A system or instance represents an SAP HANA database instance.
A schema must be specified to query tables and views.
Packages are used to organize information models.
This concludes the introduction to the SAP HANA Studio Modeler.

Thank you for your time.