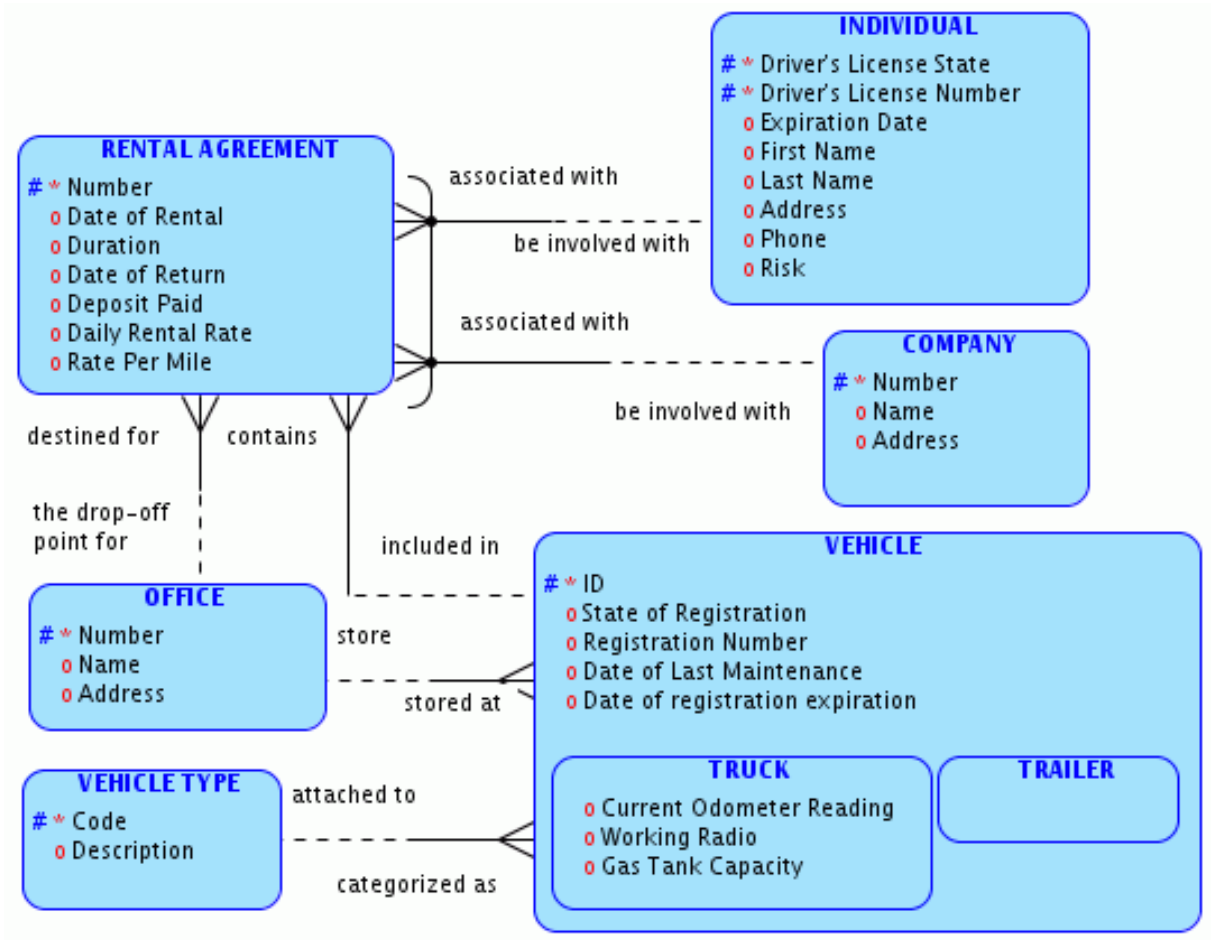
Practices for Lesson 13: Adding and Using Data Types

Chapter 13

Practice 13-1: Create and Assign Data Types

Task

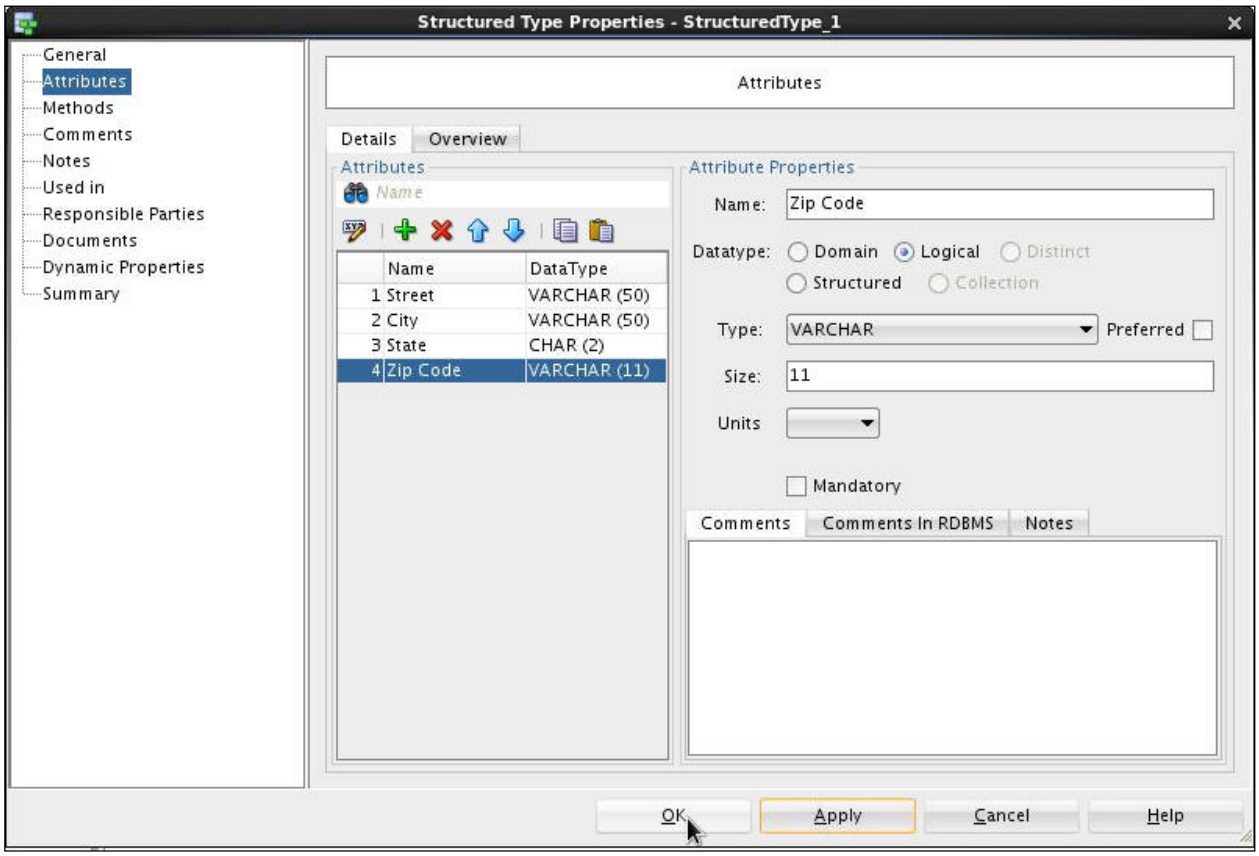
In this practice, you define the data types for each attribute in the following model. Create a data type model with structured types and then use them within your data model for addresses. Create two domains for `id_6` and `name_50` and assign them to appropriate attributes in your model.



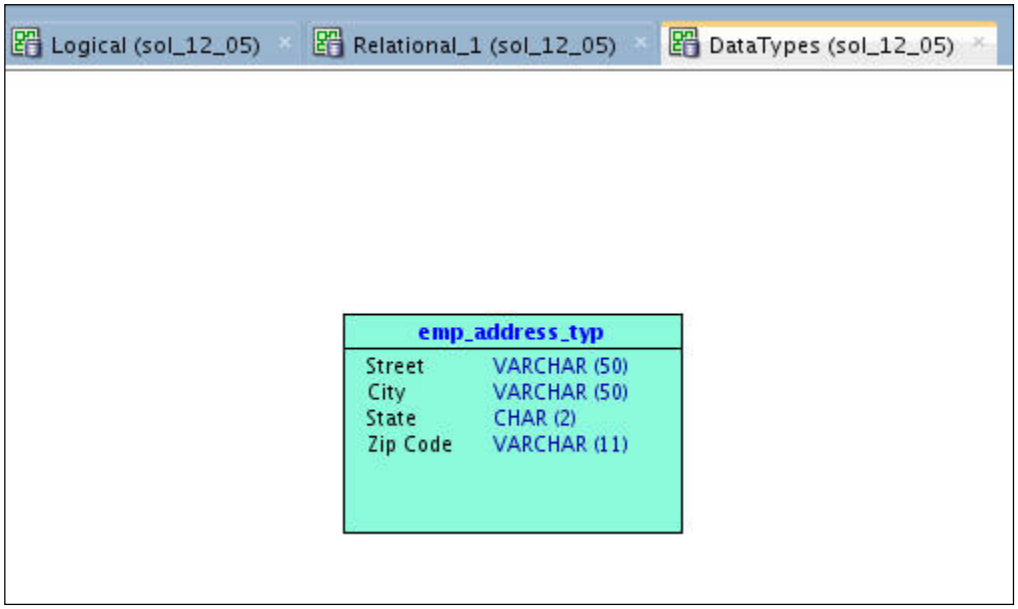
Solution 13-1: Create and Assign Data Types

To create the data type model, perform the following steps:

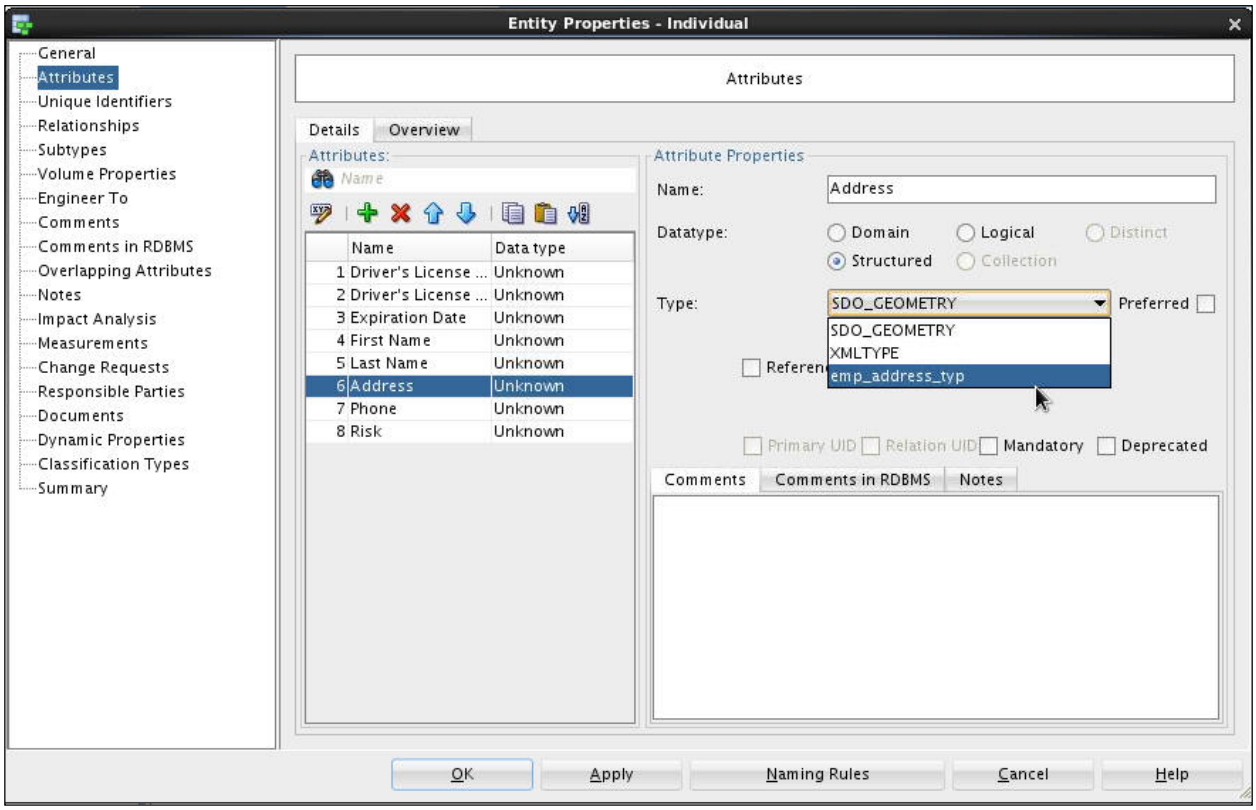
1. Open the solution file, `sol_12_05.dmd`.
2. Right-click **DataTypes Model**, and then select **Show**.
3. Click the **New Structured Type** icon, and then click in the white space of the diagram.
4. Enter `emp_address_typ` for the name, and then click the **Attributes** property in the left navigator.
5. Click the **Add** icon.
6. Enter `Street` for Name, select the **Logical** option for **Datatype**, select `VARCHAR` for **Type**, and enter `50` for **Size**. Next, click the **Add** icon.
7. Enter `City` for **Name**, select the **Logical** option for **Datatype**, select `VARCHAR` for **Type**, and enter `50` for **Size**. Next, click the **Add** icon.
8. Enter `State` for **Name**, select the **Logical** option for **Datatype**, select `CHAR` for **Type**, and enter `2` for **Size**. Next, click the **Add** icon.
9. Enter `Zip Code` for **Name**, select the **Logical** option for **Datatype**, select `VARCHAR` for **Type**, and enter `11` for Size. Next, click **OK**.



10. Your structured type was created successfully. Now you can use it in your model.



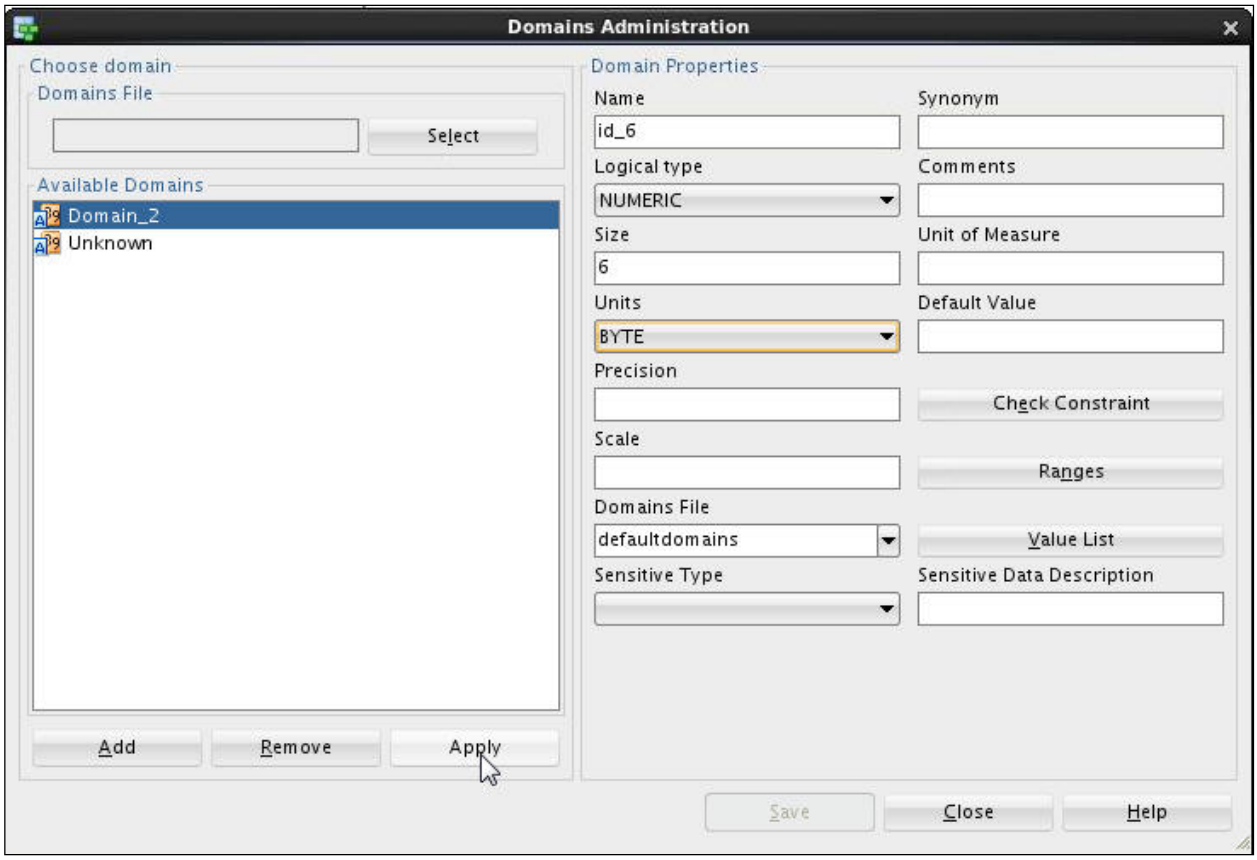
11. Click the **Logical** tab, and then double-click the `INDIVIDUAL` entity.
12. Select the **Attributes** property in the left navigator.
13. Select the **Address** attribute, select the **Structured** option for **Datatype**, select `emp_address_typ` in the list of Types, and then click **OK**.



14. Perform the same steps for the other Address attributes in your model.

You can also create some domains and assign them to various attributes in your model.

1. Select **Tools > Domains Administration**.
2. Under **Available Domains**, click **Add**.
3. Enter `id_6` for **Name**, select `NUMERIC` for **Logical** type, enter `6` for **Size**, and select `BYTE` for **Units**. Next, click **Apply**.



4. Under **Available Domains**, click **Add**.
5. Enter `Name_50` for **Name**, select `VARCHAR` for **Logical** type, enter `50` for **Size**, select `CHAR` for **Units**, and select **defaultdomains** for Domains File. Next, click **Apply**.
6. Notice that your two domains appear in the **Available Domains** list. Click **Save** to save them to the file.
7. Click **Close**.
8. Double-click the `INDIVIDUAL` entity, and select the **Attributes** property in the left navigator.
9. Select the `Driver's License Number` attribute.

10. Make sure that Domain is selected for **Datatype**, select the `id_6` domain in the list of **Types**, and then click **Apply**.
11. You can now select the `First Name` attribute and assign the `Name_50` domain.
12. You can assign many of the attributes that have the same data type and size using the domains throughout the entire model.
13. If the attribute does not use the structured type or domain that you have defined, you can also create a logical type by selecting the **Logical** option (in the **Datatype** section of the **Entity Properties** dialog box) and assigning the type specifically for that attribute.