Practices for Lesson 17: Defining Your Physical Model

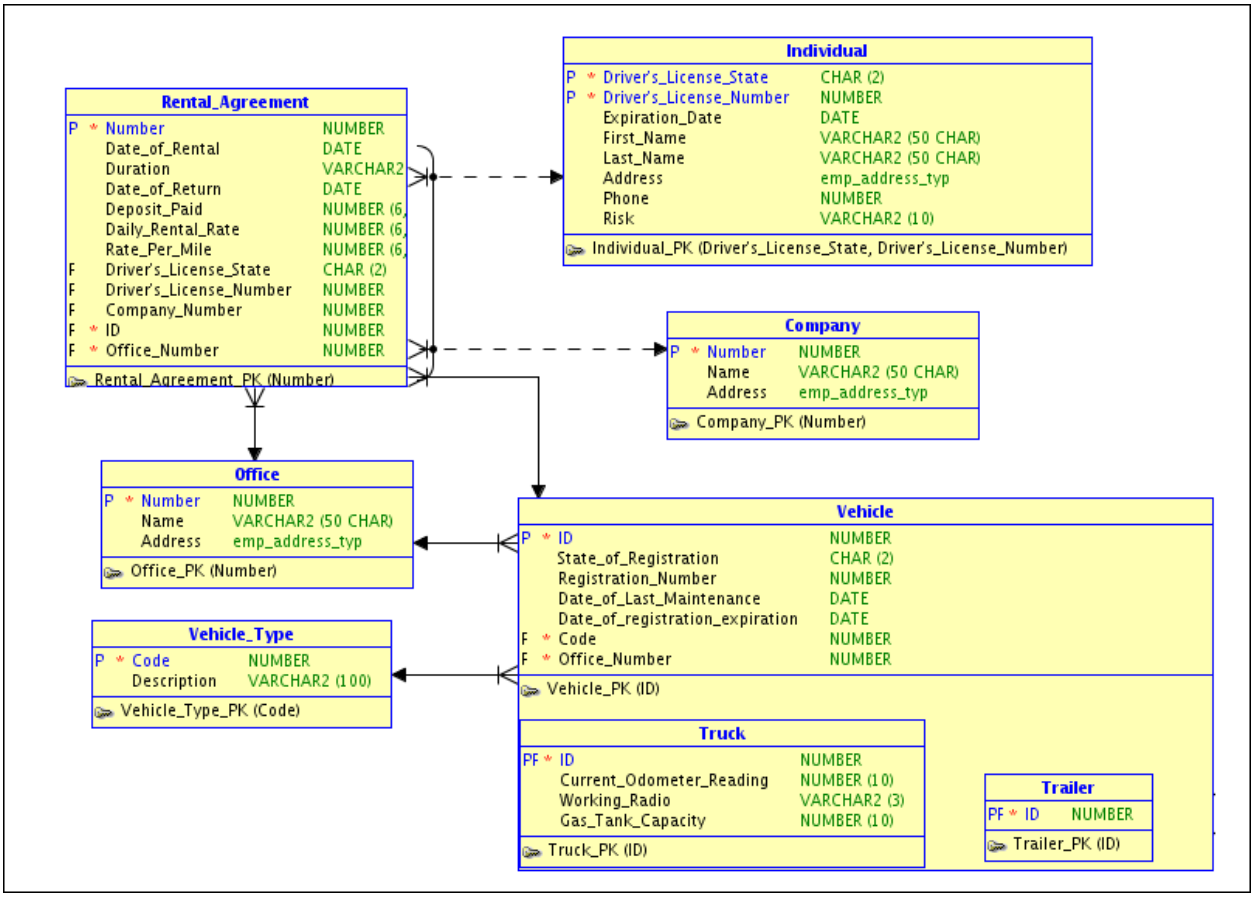
Chapter 17

Practice 17-1: Create a Physical Model

Task

In this practice, you perform the following:

1. Create a physical model for the Rental Agreement relational model `Relational_1` from Practice 15-2 (`sol_15_02_a.dmd`).
2. Change the name of `Relational_1` to `Vehicle Rentals`.
3. Create a tablespace and a user for the model.
4. Add a partition to the `Rental Agreement` table so that you can access the rental agreements for a given month quickly.



Solution 17-1: Create a Physical Model

The following is one possible solution to this practice.

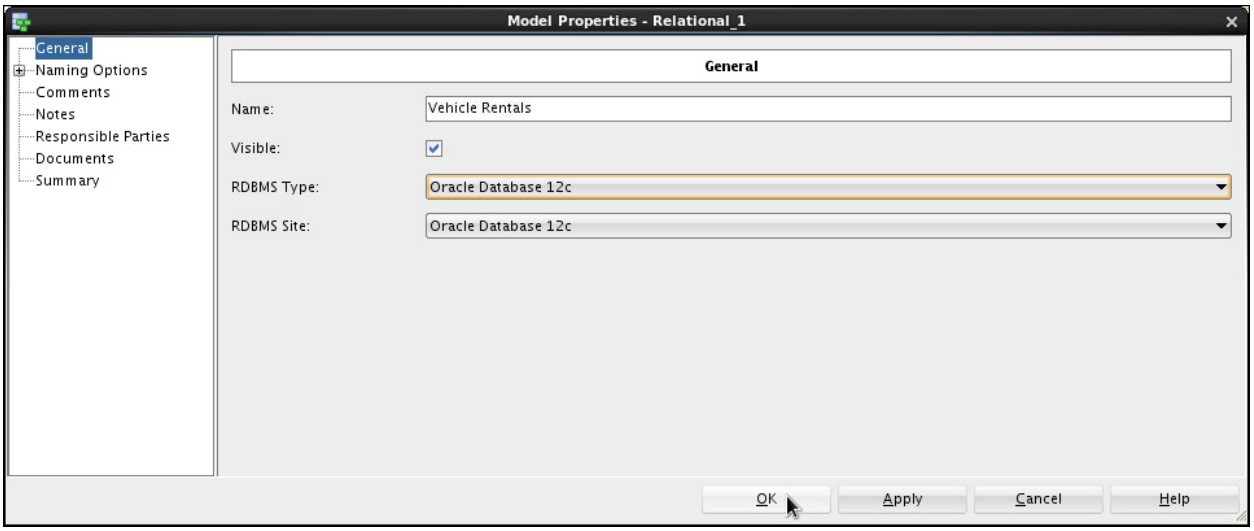
1. Open the solution to practice 15 (`sol_15_02_a.dmd`). Note that some of the column names in the `Rental Agreement` and `Vehicle` tables in the preceding relational model screen capture have changed from practice 15-2 for better clarity.

   `Rental Agreement.Number1` was renamed to `Rental Agreement.Company_Number`.

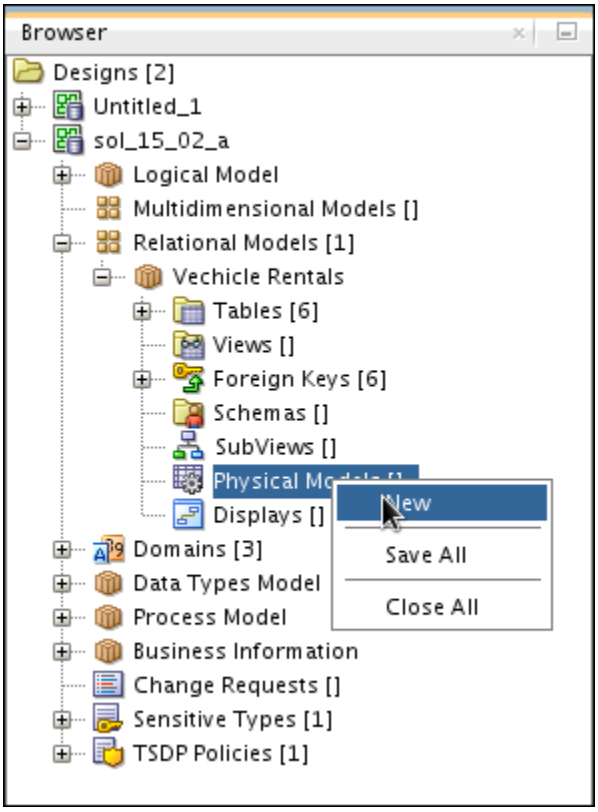
   `Rental Agreement.Number3` was renamed to `Rental Agreement.Office_Number`.

   `Vehicle.Number` was renamed to `Rental Vehicle.Office_Number`.

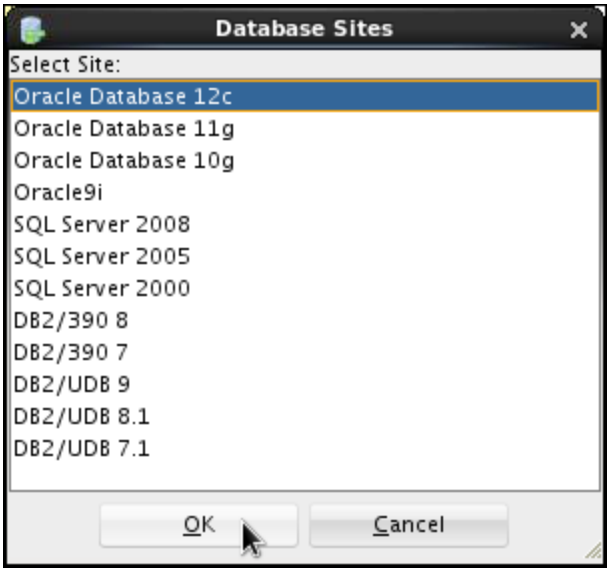
   Note: If the **`Truck`** and **`Trailer`** tables are not visible, right-click the **`Vehicle`** table and select **Send to Back**.
2. In the **Object Browser**, expand the **Relational Models** node, and then double-click `Relational_1`.
3. Change the **Name** to `Vehicle Rentals`, select the **Visible** check box, make sure that RDBMS Type is set to Oracle Database 12*c*, and then click **OK**.



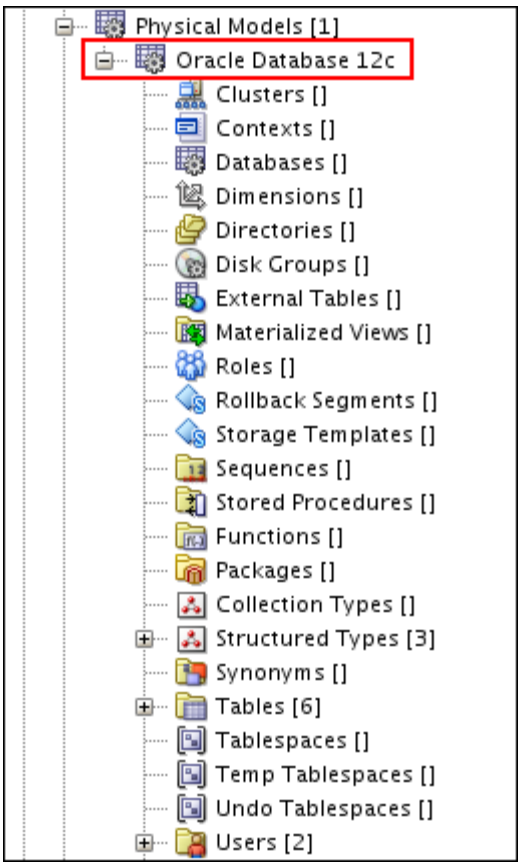
4. Expand the **Vehicle Rentals** node, right-click **Physical Model**, and then select **New** from the pop-up menu. The **Database Sites** dialog box is displayed.



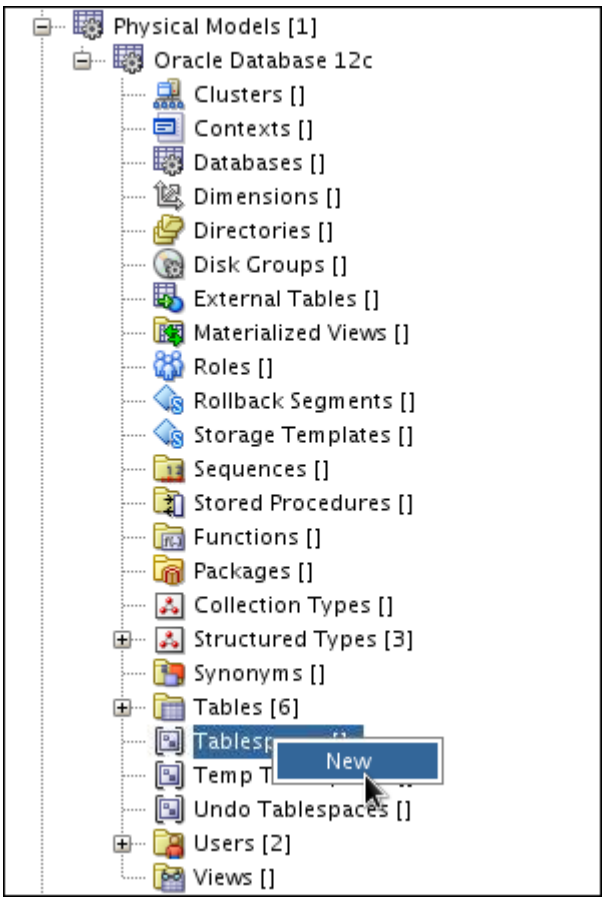
5. Select **Oracle Database 12c** from the list, and then click **OK**.



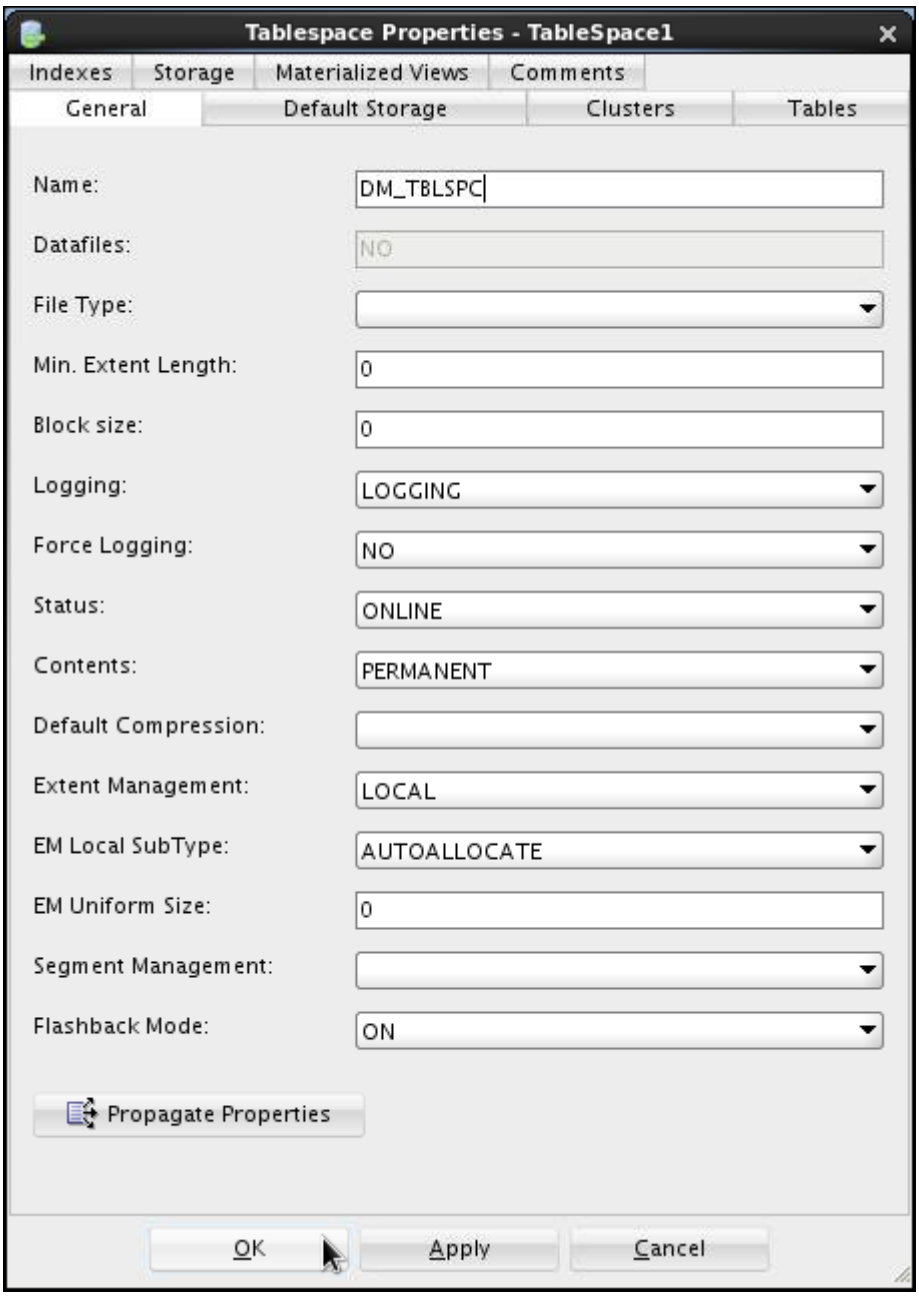
6. Your physical model is created successfully. Expand the **Physical Model > Oracle Database 12c** node in the **Object Browser**.

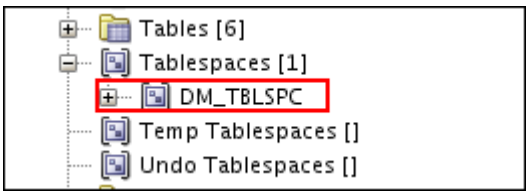


7. You want to create a tablespace. Right-click the **Tablespaces** node and then select **New** from the pop-up menu. The **Tablespace Properties** dialog box is displayed.



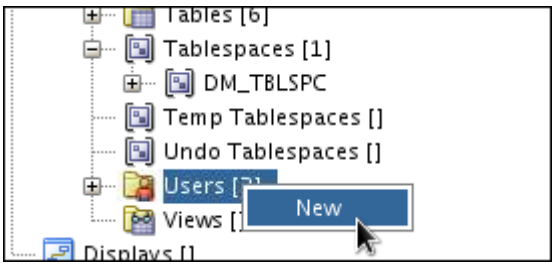
8. Enter `DM_TBLSPC` for the name, and then click **OK**. The new tablespace is displayed under the **Tablespaces** node.

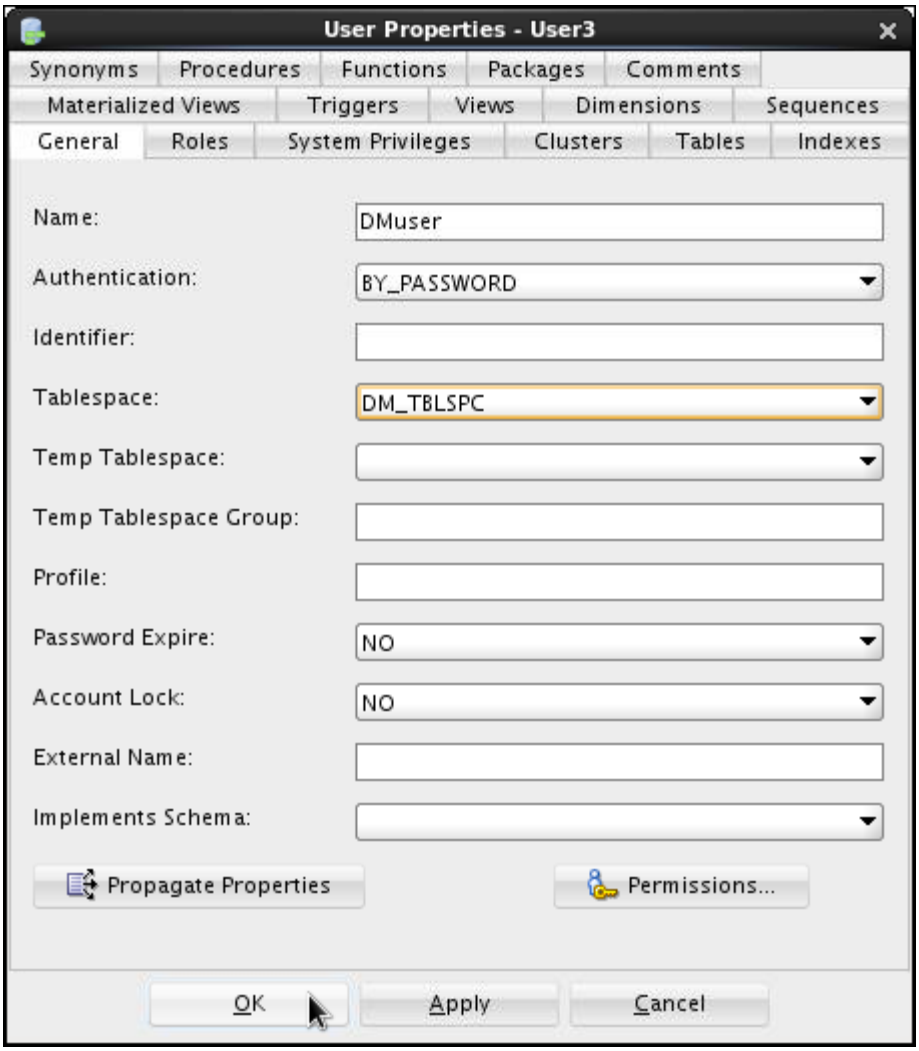


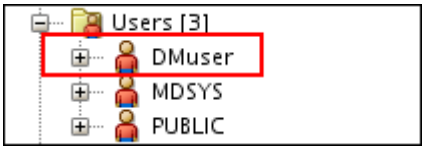


9. You want to also create a new user. Right-click **Users** and then select **New** from the pop-up menu. The **User Properties** dialog box is displayed.

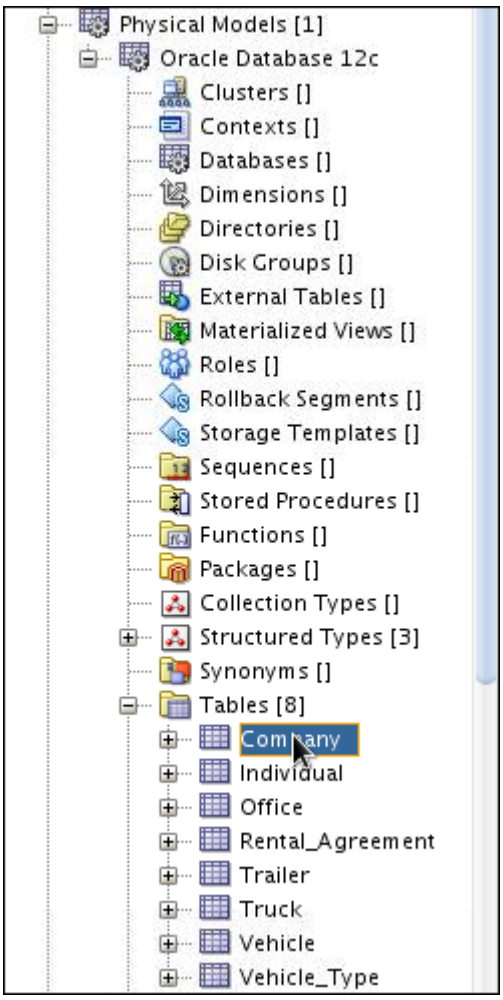
10. Enter `DMuser` for the **name**, select `DM_TBLSPAC` for the **Tablespace**, and then click **OK**. The new user is displayed under the **Users** node.





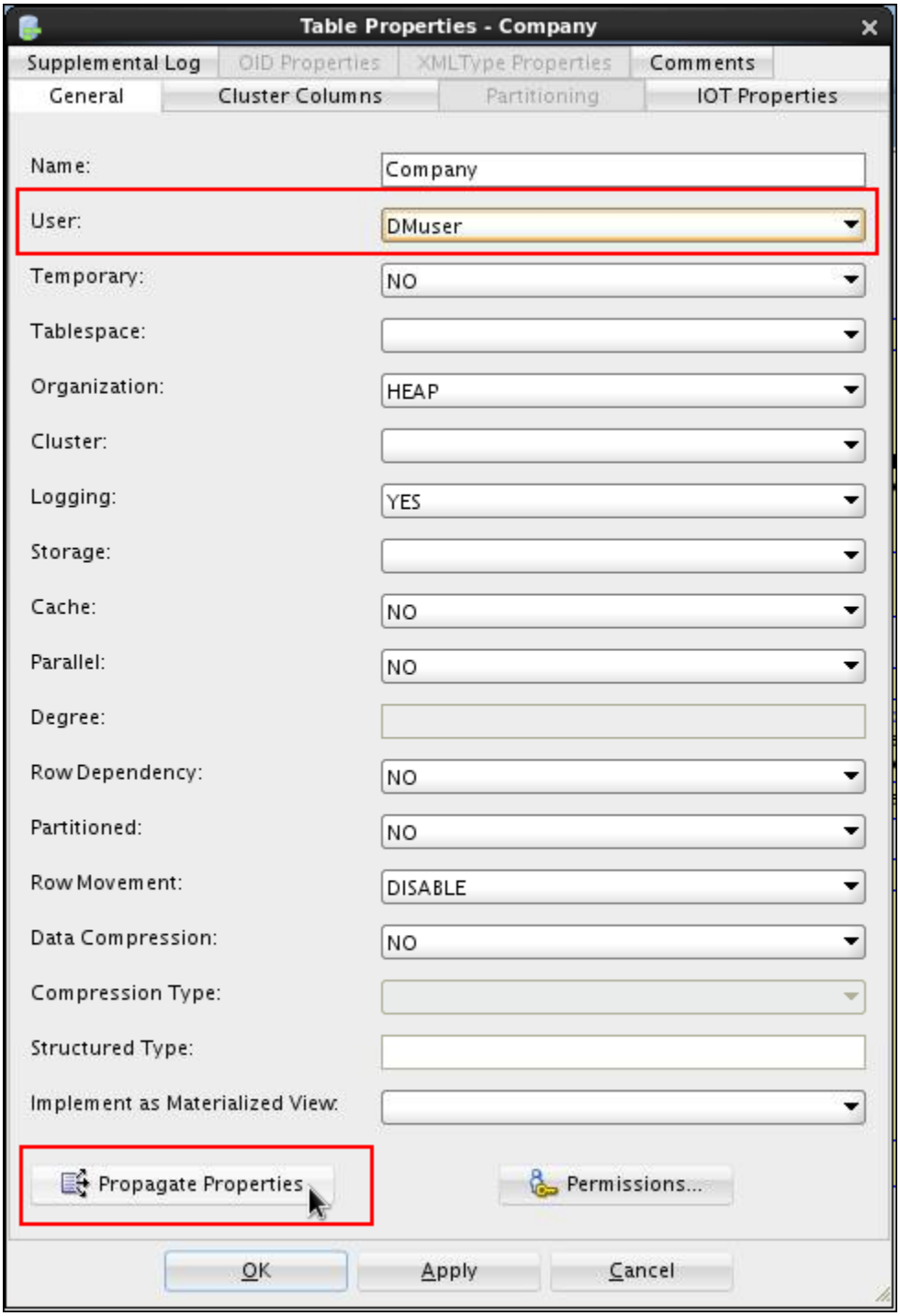


11. Assign your tables to the new user. Expand the **Tables** node, and then double-click the first table, `Company`. The **Table Properties** dialog box is displayed.

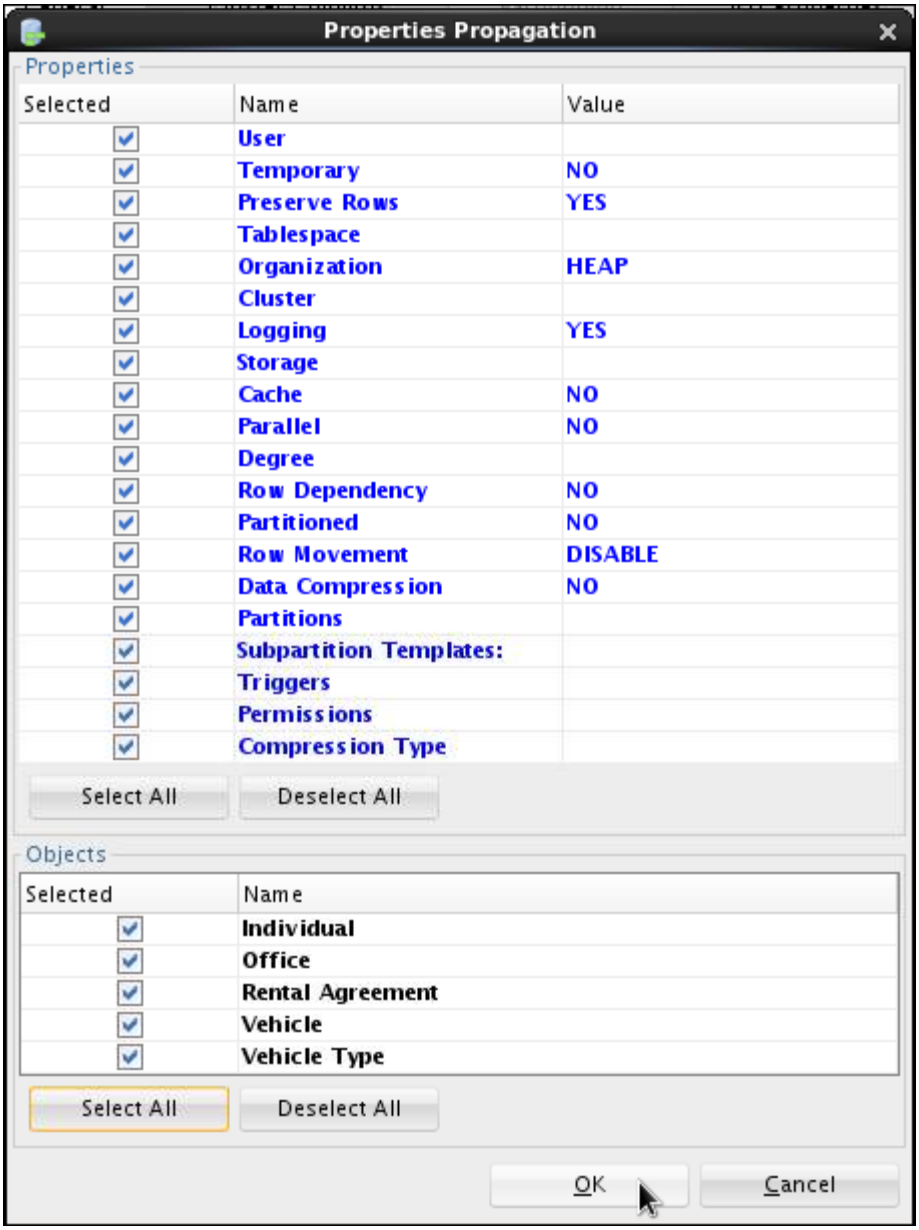


12. Select `DMuser` from the **Users** drop-down list.

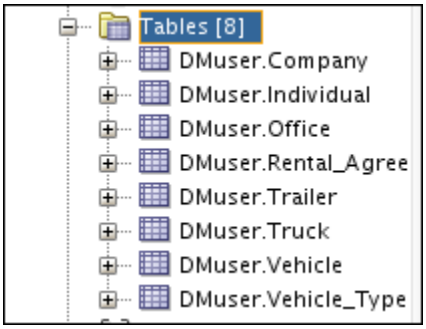
13. You want to propagate this change to the other tables. Click **Propagate Properties**. The **Properties Propagation** dialog box is displayed.



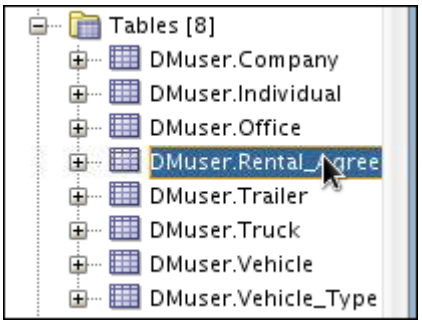
14. In the **Objects** region, select the check box next to each of the other tables or click the **Select All** button, and then click **OK**. Next, click **Apply**, and then **OK** to exit the **Table Properties** dialog box.



15. Notice that the username qualifies each of the tables in the list.



16. You want to create a partition for the `Rental Agreement` table so that you can access the rental agreements for a given month quickly. Double-click the `DMuser.Rental Agreements` table. You must first designate this table a partitioned table. Select **Yes** from the **Partitioned** drop-down list, and then click **Apply**.



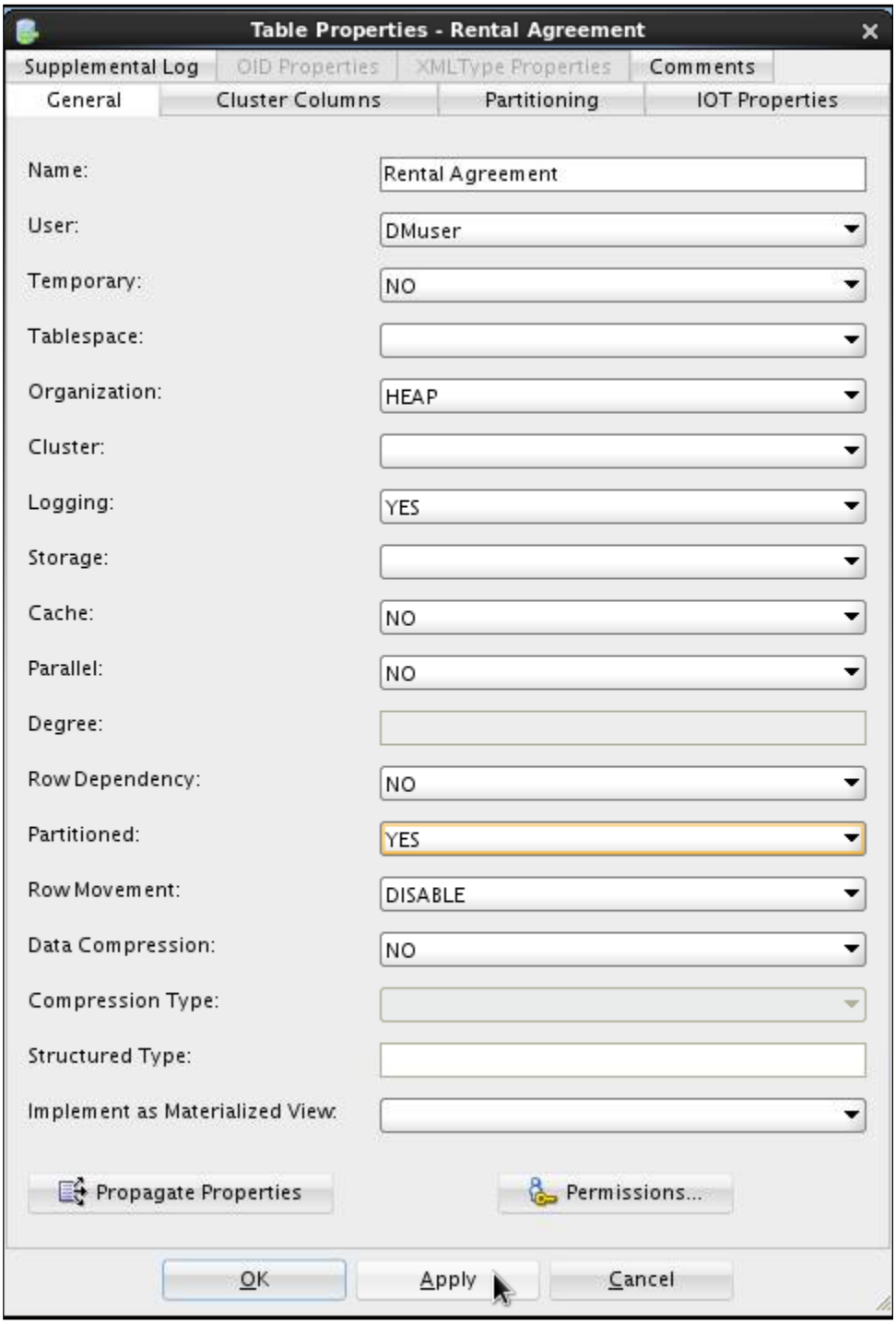
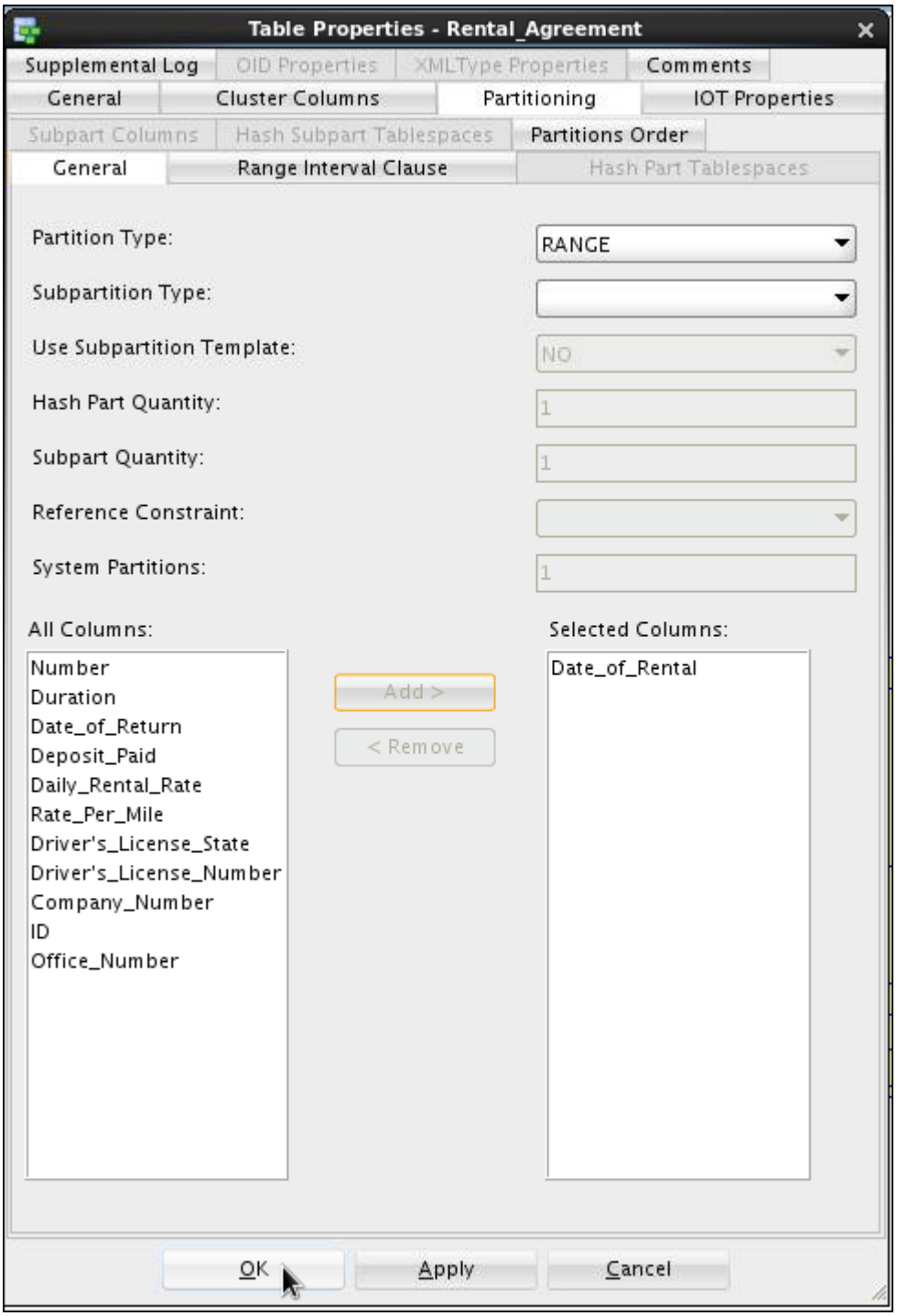
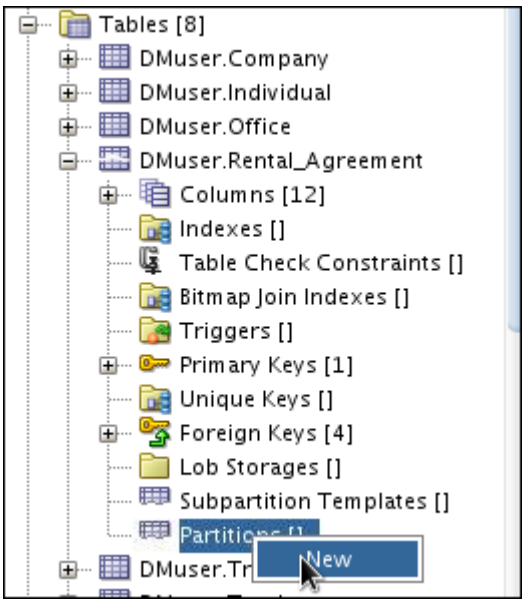


Table Properties - Rental Agreement
Supplemental Log
OID Properties
XMLType Properties
Comments
General
Cluster Columns
Partitioning
IOT Properties
Name:
Rental Agreement
User:
DMuser
Temporary:
NO
Tablespace:
Organization:
HEAP
Cluster:
Logging:
YES
Storage:
Cache:
NO
Parallel:
NO
Degree:
Row Dependency:
NO
Partitioned:
YES
Row Movement:
DISABLE
Data Compression:
NO
Compression Type:
Structured Type:
Implement as Materialized View:
Propagate Properties
Permissions...
OK
Apply
Cancel

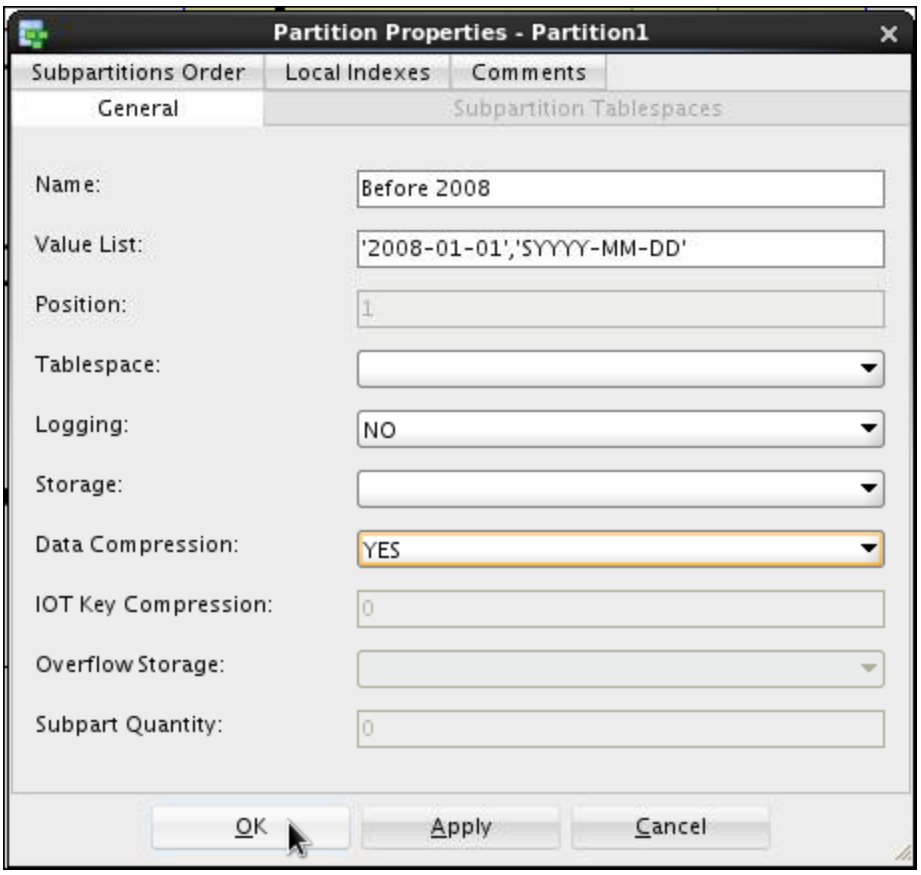
17. Click the **Partitioning** tab. You can define what type of partition and the column(s) on which it will be based. You will create a Range partition based on the `Date of Rental` column. Select `Date_of_Rental`, click **Add>** to move it to the **Selected Columns** area, and then click **OK**.



18. Now you can create the partition itself. Expand the `DMuser.Rental Agreement` table, right-click **Partitions**, and then select **New** from the pop-up menu. The **Partition Properties** dialog box is displayed.



19. You can create a partition for rentals before 2008. Enter `Before 2008` in the **Name** field, enter the expression `TO_DATE('2008-01-01','SYYYY-MM-DD')` in the **Value List** field, select **No** for **Logging**, **Yes** for **Data Compression**, and then click **OK**.



20. Your partition is created successfully.