Practices for Lesson 20: Working in a Collaborative Environment

Chapter 20

Practices for Lesson 20: Overview

Practices Overview

In these practices, you will perform the following tasks:

- Create a Connection to Your Subversion Repository
- Add a Model to the Subversion Repository
- Make Changes to the Versioned Model
- Review Your Pending Changes
- Make Changes as a Different User
- Synchronize Changes with the Originating User
- Resolve Conflicts Between Users
- Revert Changes
- Review and Compare Versions in the Repository

Practice 20-1: Create a Connection to Your Subversion Repository

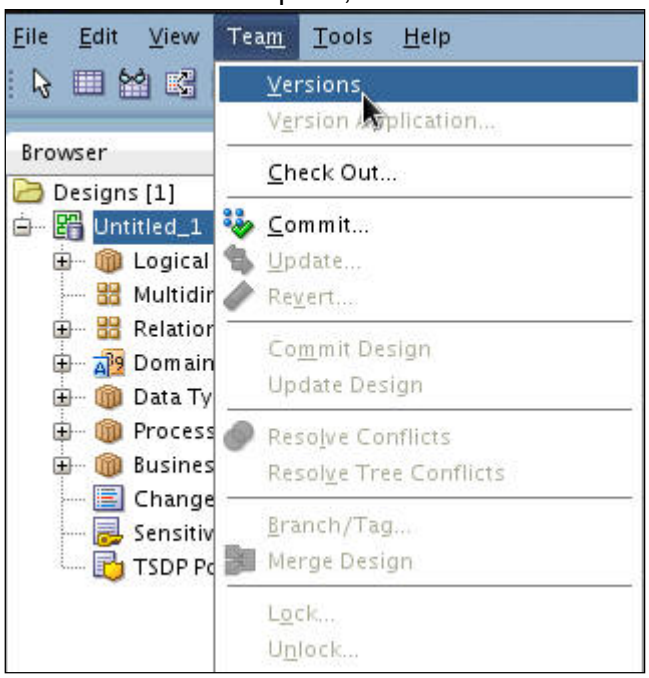
Overview

In this practice, you create a connection to the subversion repository, which is located on your local disk.

Tasks

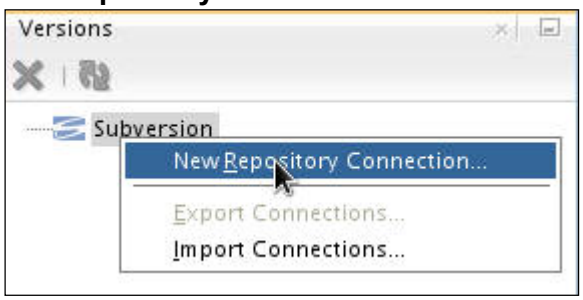
1. Open Oracle SQL Developer Data Modeler by using the 

icon on your desktop.
2. To view the Versions pane, select **Team > Versions**.

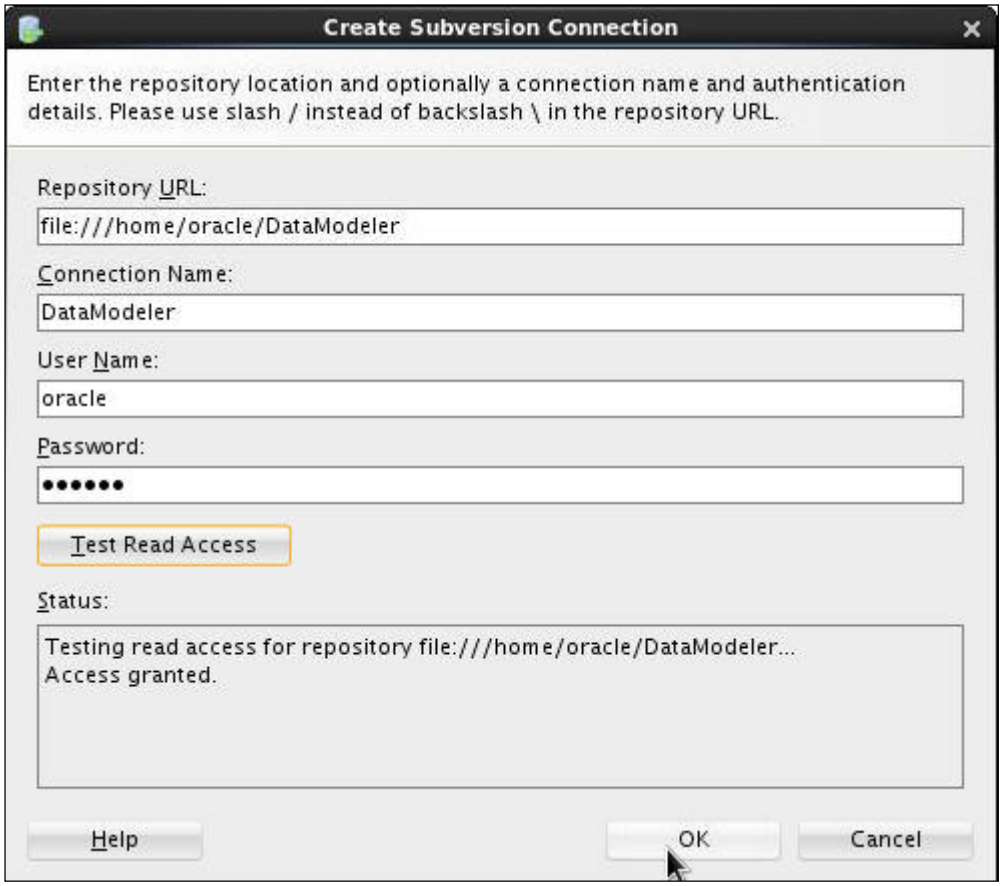


> **Note:** Verify whether the DataModeler Connection exists. If it does not, perform steps 3 to 5. If it does exist, skip to step 6.

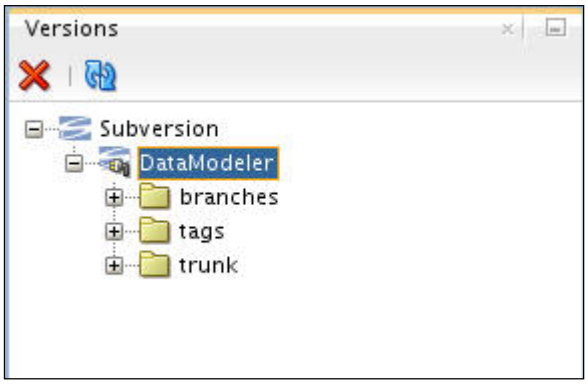
3. To create a new connection to the subversion repository, right-click **Subversion** and select **New Repository Connection**.



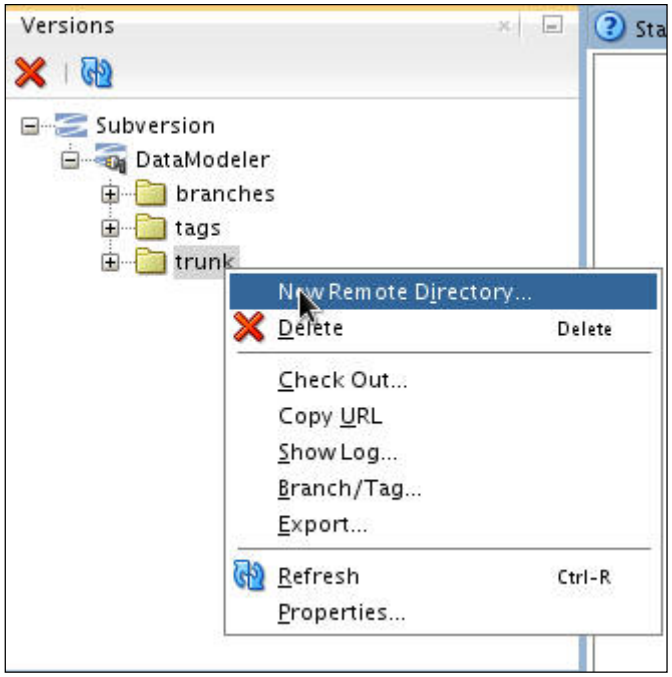
4. Enter the following information and click **Test Read Access**.
   a. Repository URL: `file:///home/oracle/DataModeler`
   b. Connection Name: `DataModeler`
   c. User Name: `oracle`
   d. Password: `oracle`



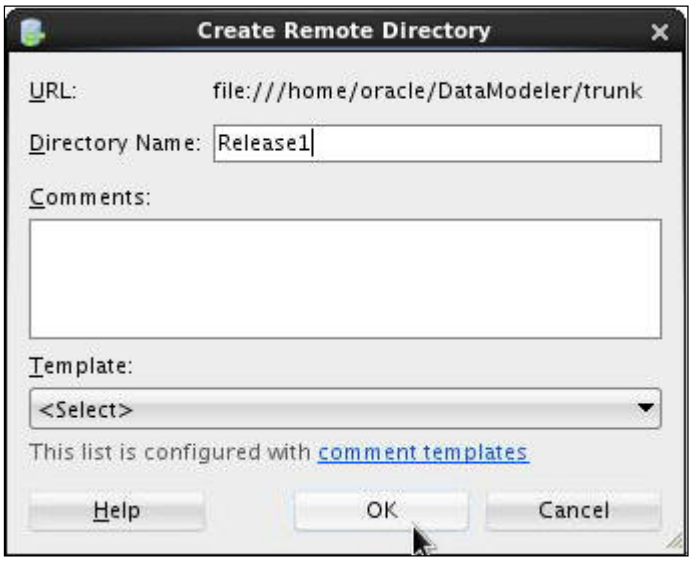
5. Once done, click OK. The Repository connection now appears in the Versions pane.



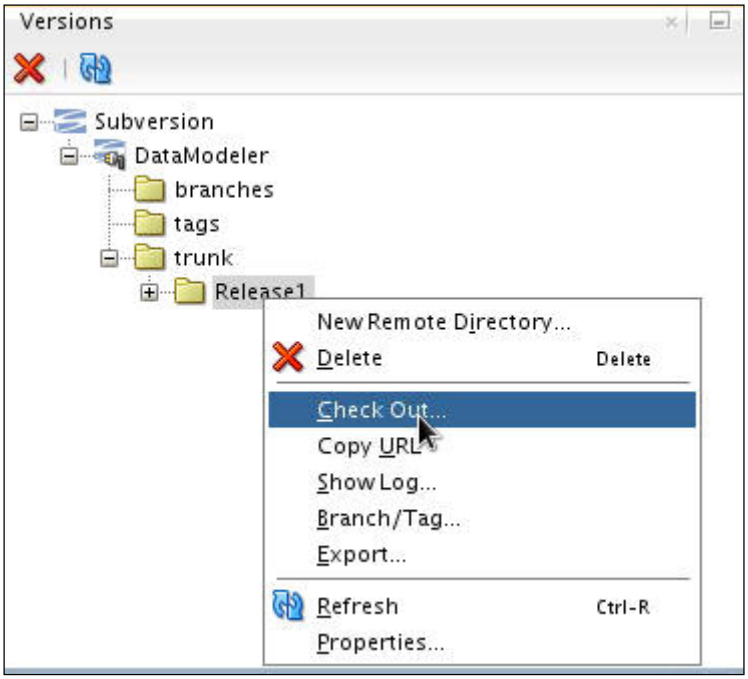
6. To check in your model, you now have to create a remote directory in your repository. To do so, right-click **trunk** and select **New Remote Directory**.



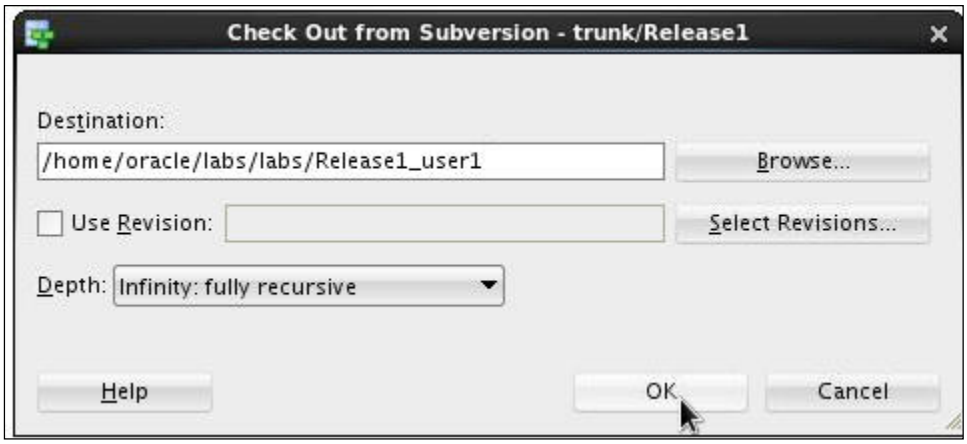
7. Enter `Release1` for the Directory Name and click OK.



8. To add your model for versioning, you must check out the directory. Right-click `Release1` and select **Check Out**.



9. The destination location should be to a directory where your working models are located. Enter the destination folder as `/home/oracle/labs/labs/Release1_user1`. Ensure that your destination is correct and click OK.



Note: You will simulate checking out your model for two different users. Therefore, the check-out directory reflects which user checked the model out.

Practice 20-2: Add Your Model to the Subversion Repository

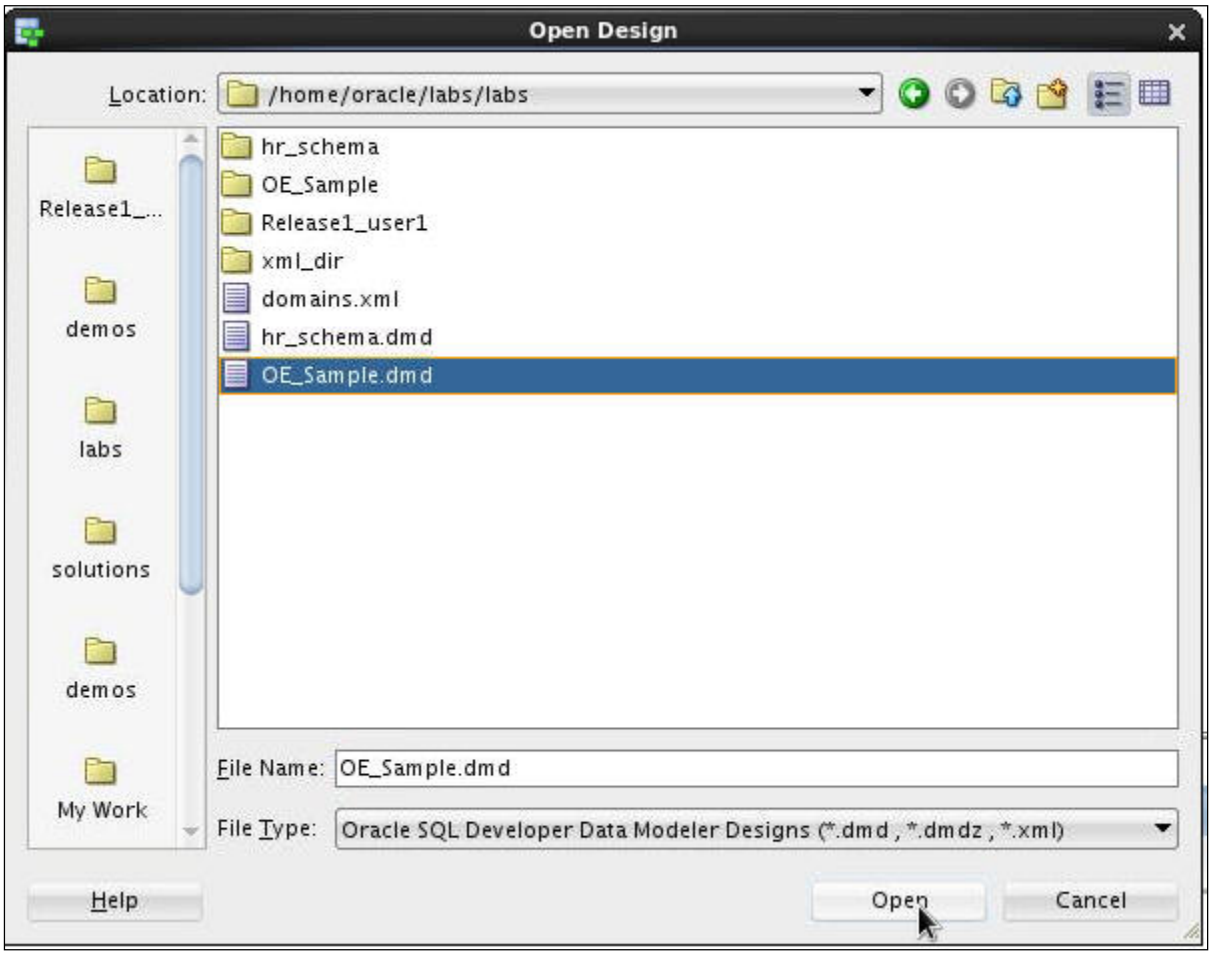
Overview

In this practice, you open your model and add the model to the Subversion Repository.

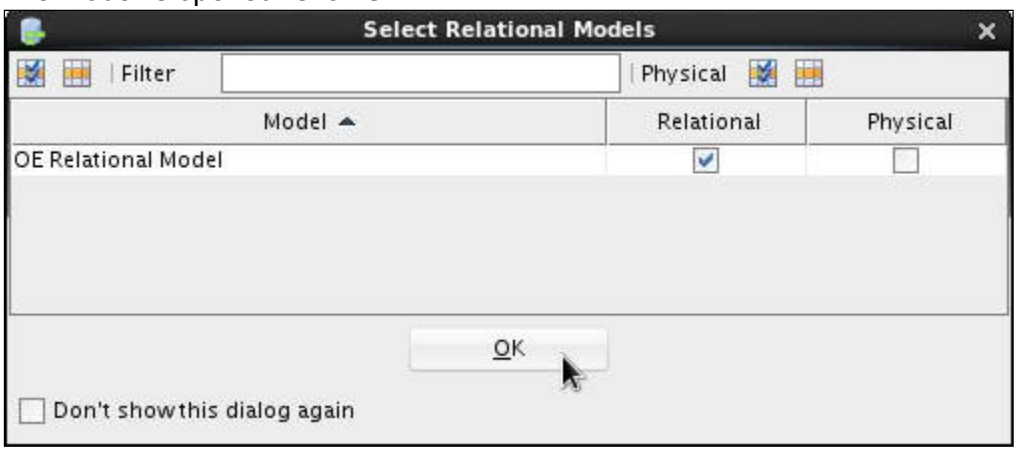
Tasks

1. To open your model, select **File > Open**.

2. To select the model that you want to start versioning, select `OE_Sample.dmd` located in `/home/oracle/labs/labs` directory and click **Open**.



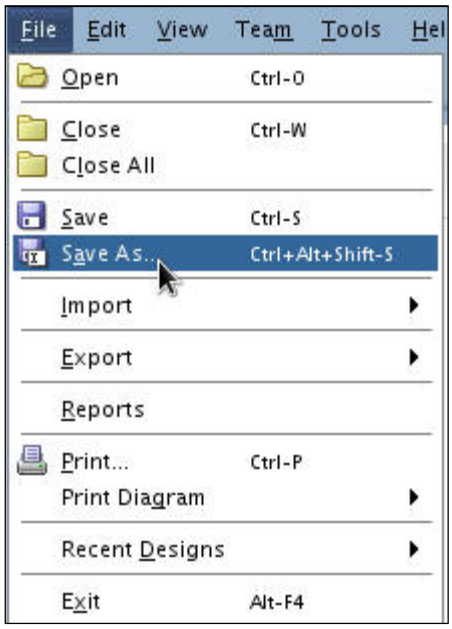
3. The model is opened. Click **OK**.



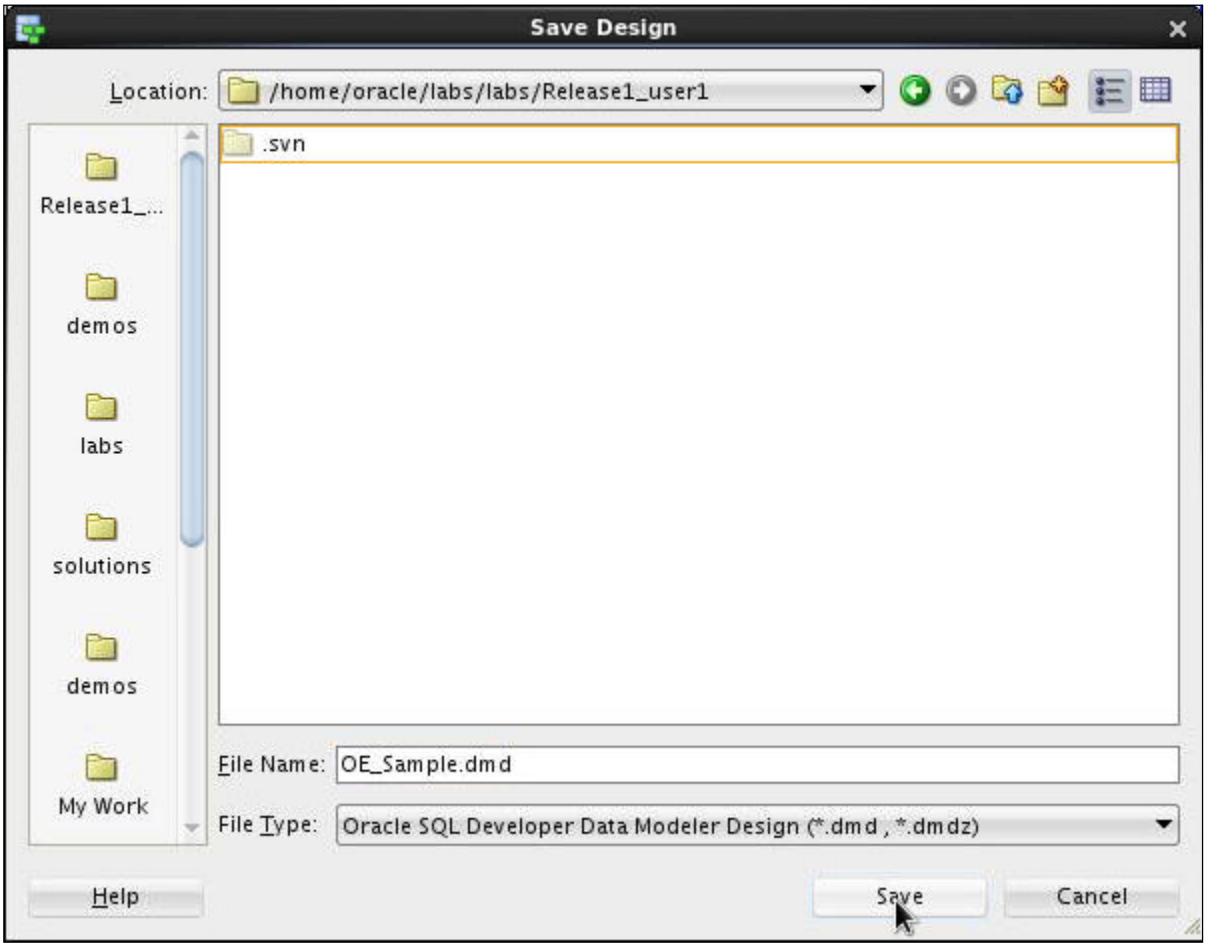
Note: You may not be prompted with the above dialog box if you checked the **Don't show this dialog again** option earlier.

4. You will now be able to view the Relational Model. In case you are not able to view it, right-click the relational model (OE Relational Model) in the Browser Navigator and select **Show**.

   To add this model so that it is versioned, you must add it into the subversion directory. To do so select **File > Save As**.

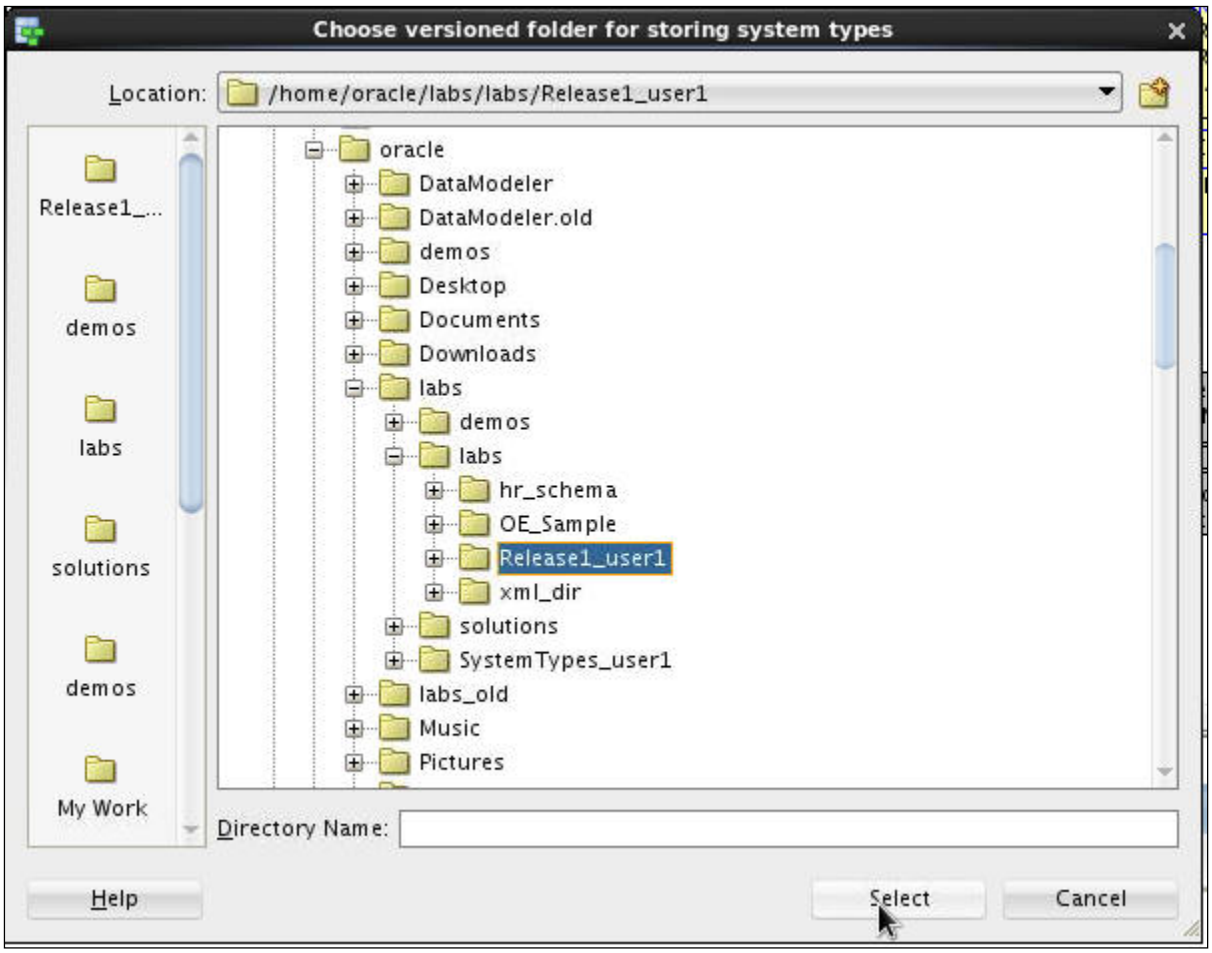


5. Save the model into the same directory (`/home/oracle/labs/labs/Release1_user1`) that you checked out the remote directory to and click **Save**.



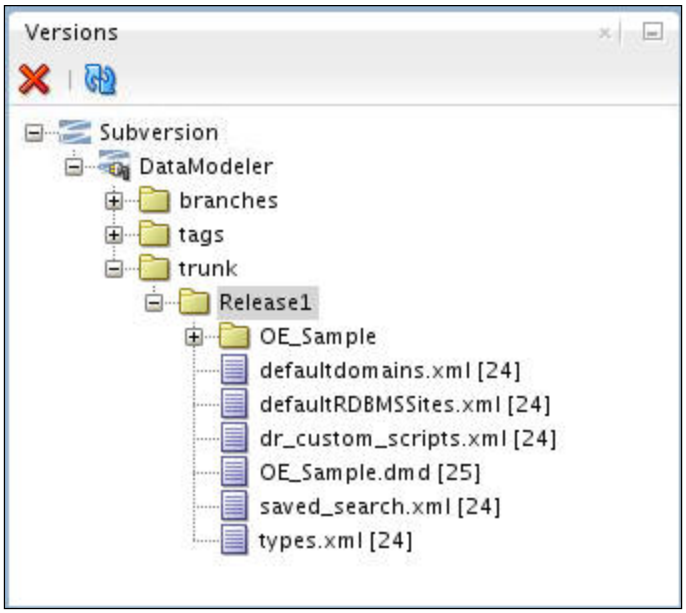
6. A dialog box appears asking you whether you want to add your design to the version control system. Click **Yes**. Note that the **Add Design** window may appear behind the progress window so you may need to drag it so that you can click **Yes**.

You will be prompted to choose a versioned folder for storing system types. Select the `Release1_user1` folder. Click **Select**.



7. When complete, you see a commit message in the SVN console – Log.

8. Select and expand **Release1** to view the model that has been added.



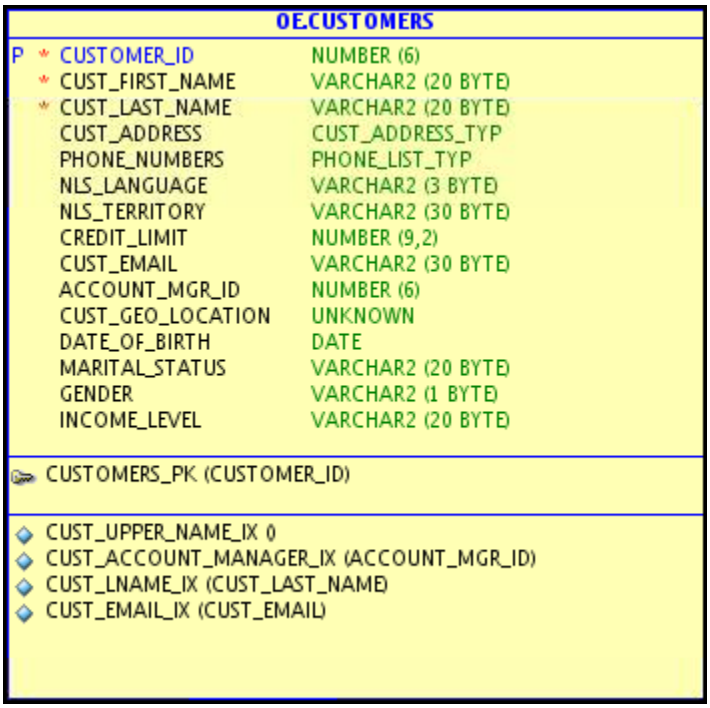
Practice 20-3: Make Changes to the Versioned Model

Overview

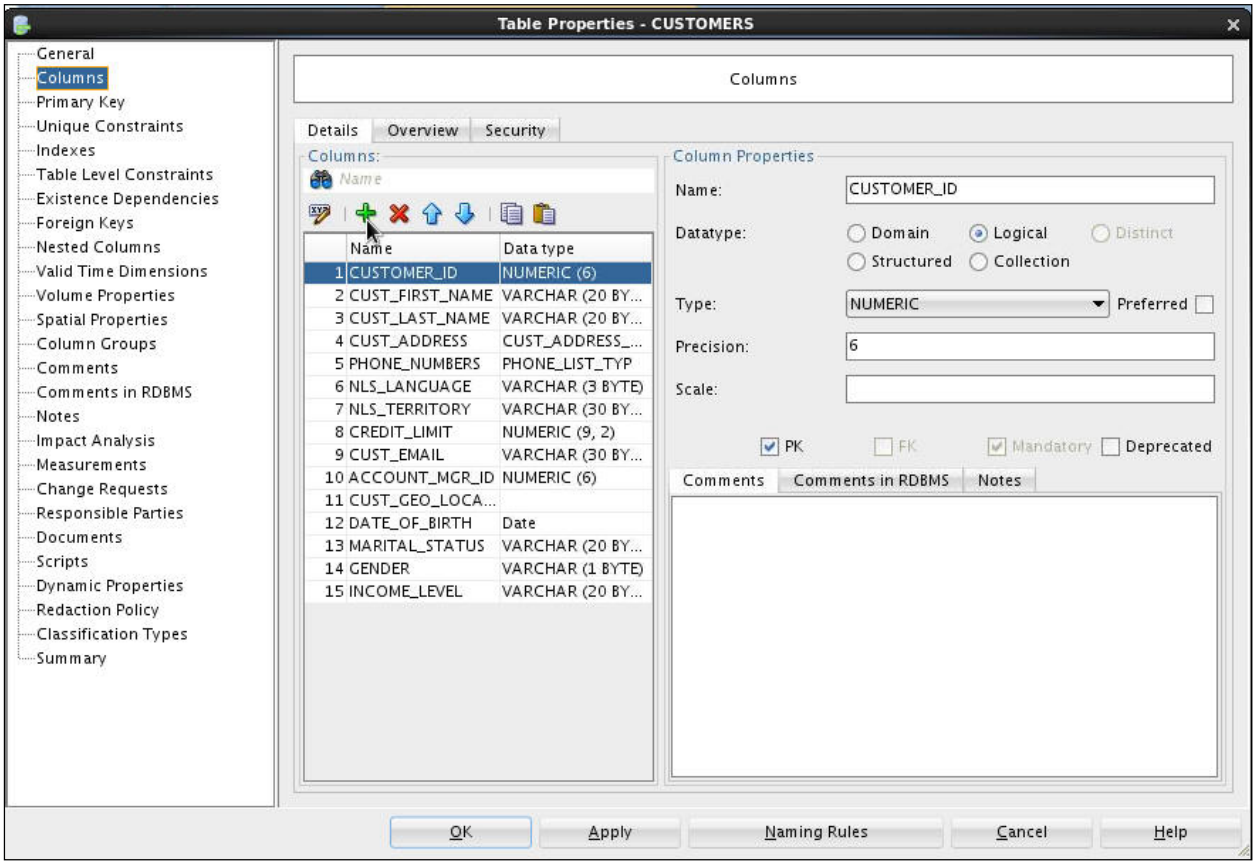
In this practice, you make changes to the model that you added into the subversion in the previous practice.

Tasks

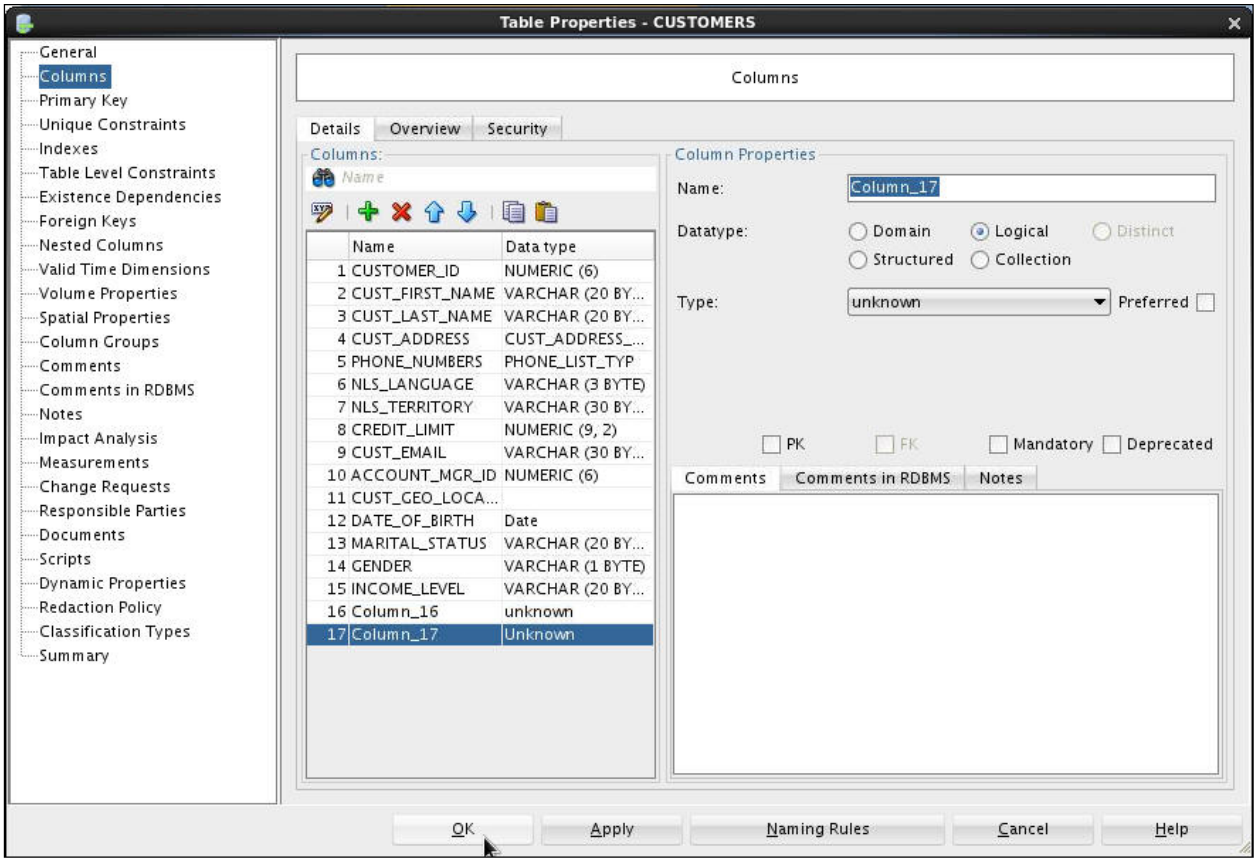
1. In the Relational Model diagram, scroll down and double-click the `OE.CUSTOMERS` table to make some modifications.



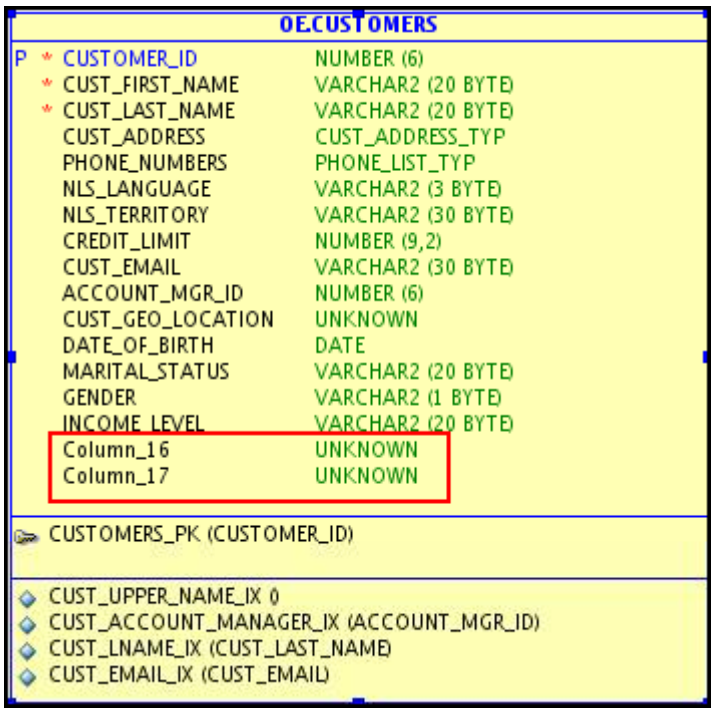
2. Select the **Columns** attribute and click the “+” icon to add an attribute.



3. Click the “+” icon again to add another column. Click OK to apply the new columns and return to the diagram.



4. The two new columns are displayed in the `OE.CUSTOMERS` table.



5. Select **File > Save** to save your work to the `/home/labs/labs/Release_user1` directory.

Practice 20-4: Review Your Pending Changes

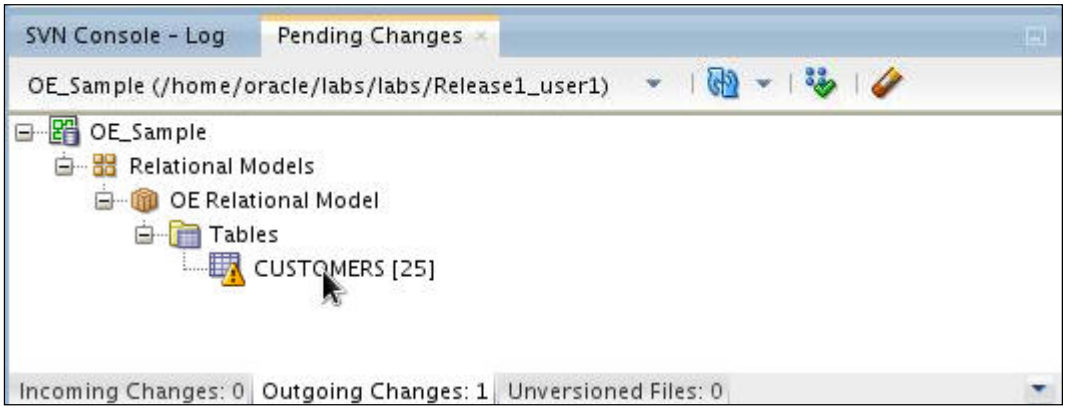
Overview

In this practice, you compare the changes that you have made to the working copy of your model and the one that is available in the subversion. You will then commit and apply the pending changes to the subversion.

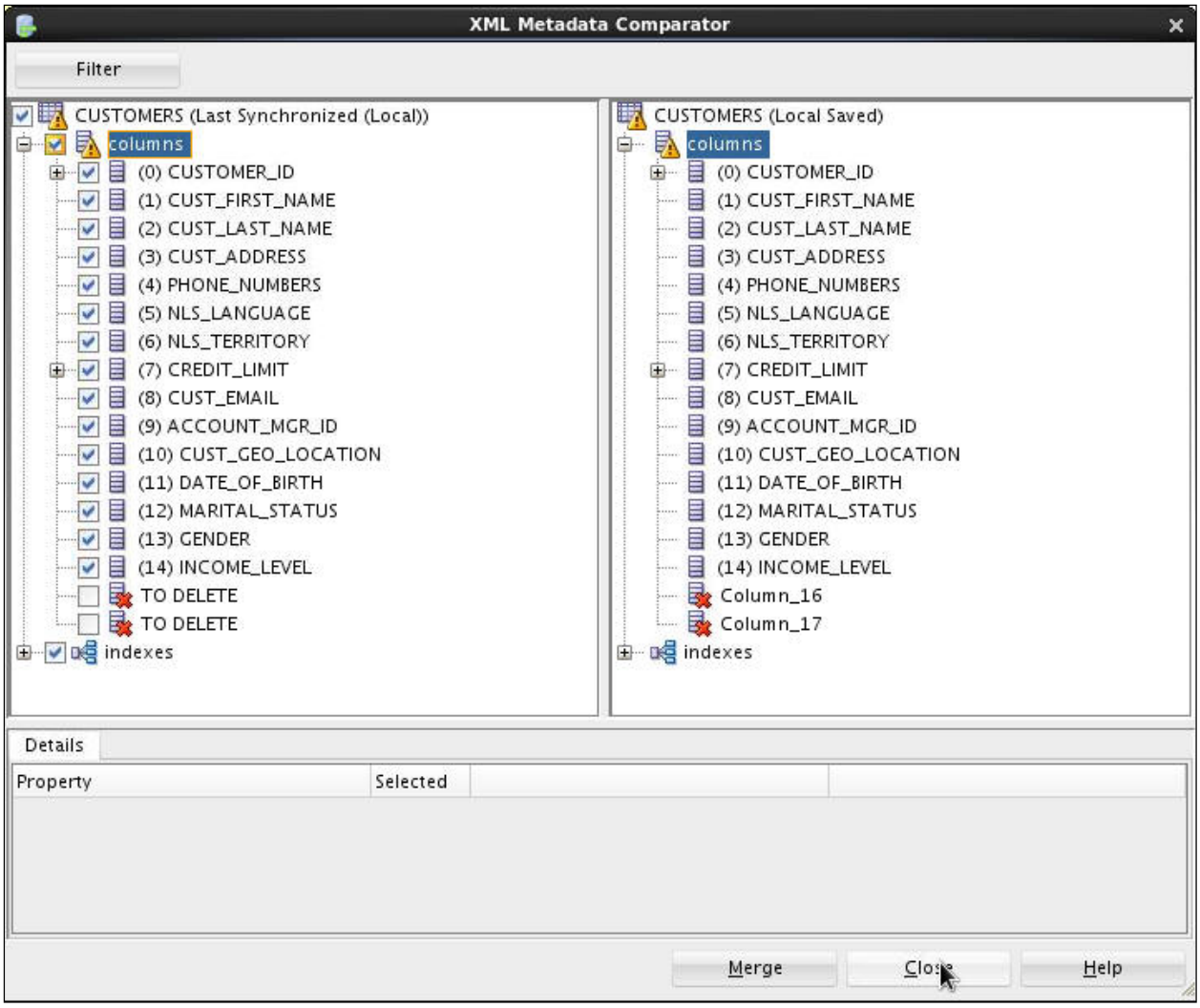
Tasks

1. Select **Team > Pending Changes**.

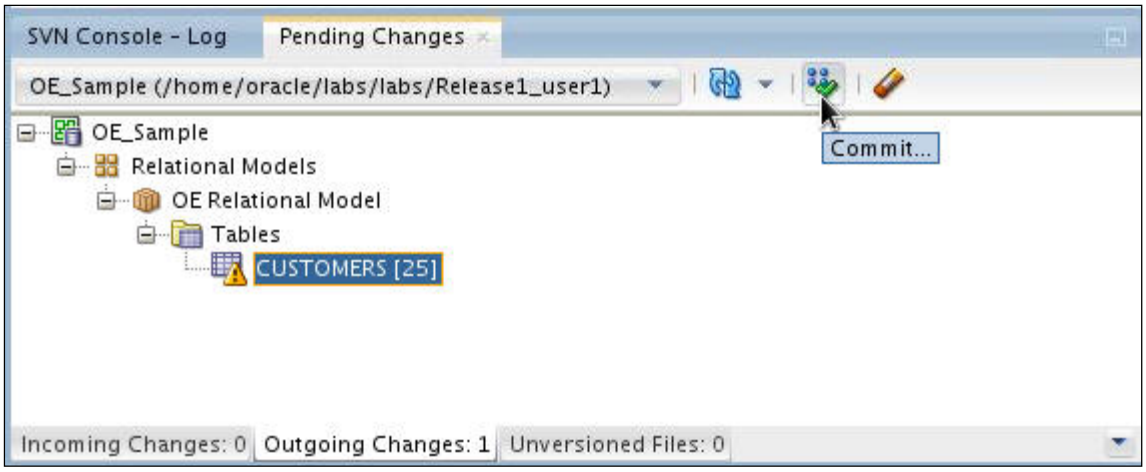
2. Double-click the Pending Changes tab to select it. There is an outgoing change detected. Select the **Outgoing Changes** tab. Expand the entire tree. Notice that the warning icon is next to the items in the tree that contain the pending outgoing changes. Double-click the **CUSTOMERS** item under Tables. Note the number [25] next to the objects in the tree. Each time you perform a check-in or check-out, this number is incremented.



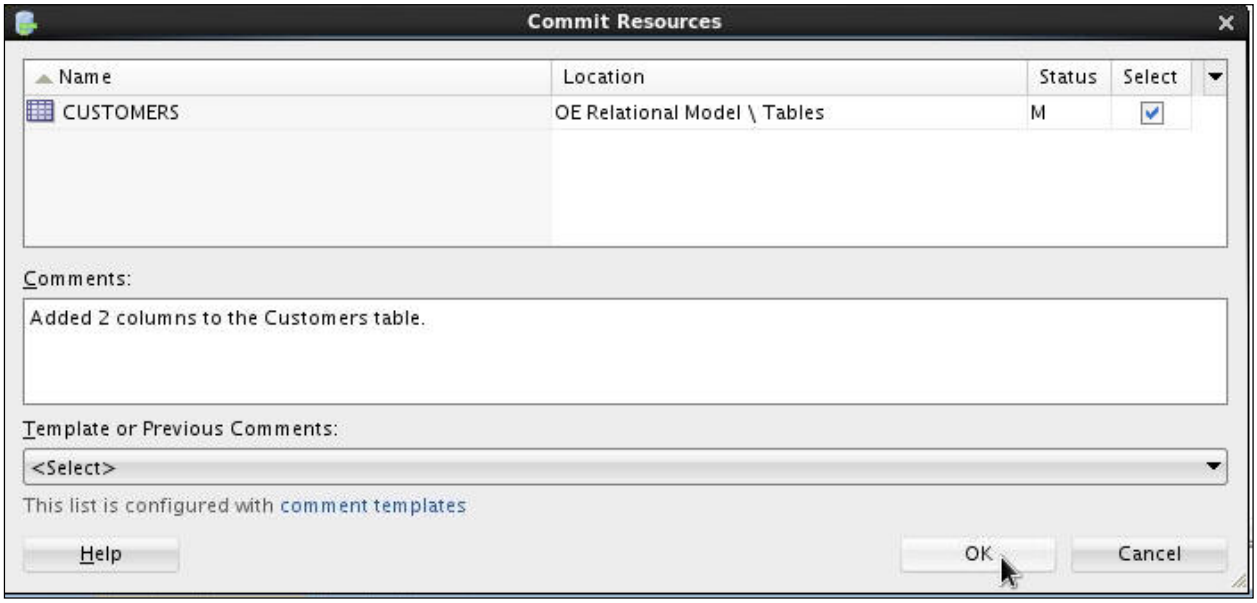
3. Your model in subversion (last synchronized) is contained on the left and your working model (the one you modified) is displayed on the right. That is why you see the TO DELETE for the columns you added on the left. If you were to select Merge, the two columns would essentially be deleted or the model reverted to its original. In this case, you want to commit to add the two new columns into subversion. Click **Close**.



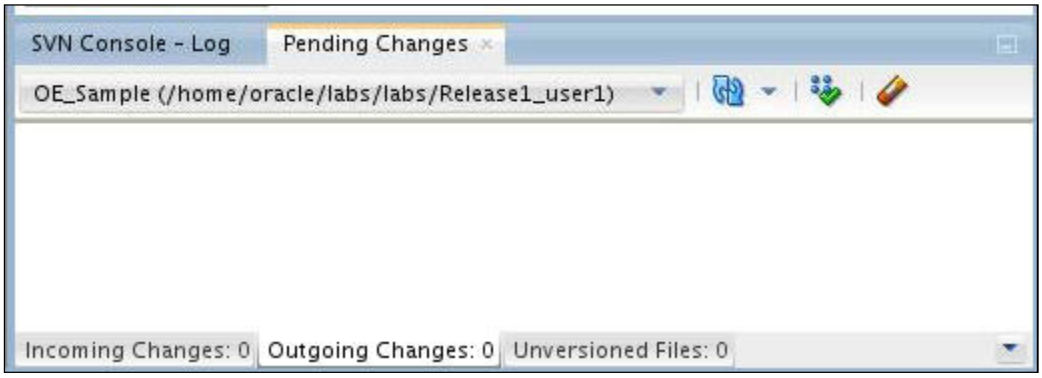
4. In order for all of the pending changes to be committed, you need to select the OE_Sample node in the tree. Click the Commit icon  to commit the changes.



5. Specify a comment in the Comments field and click **OK**.



6. All your changes have been applied to subversion.



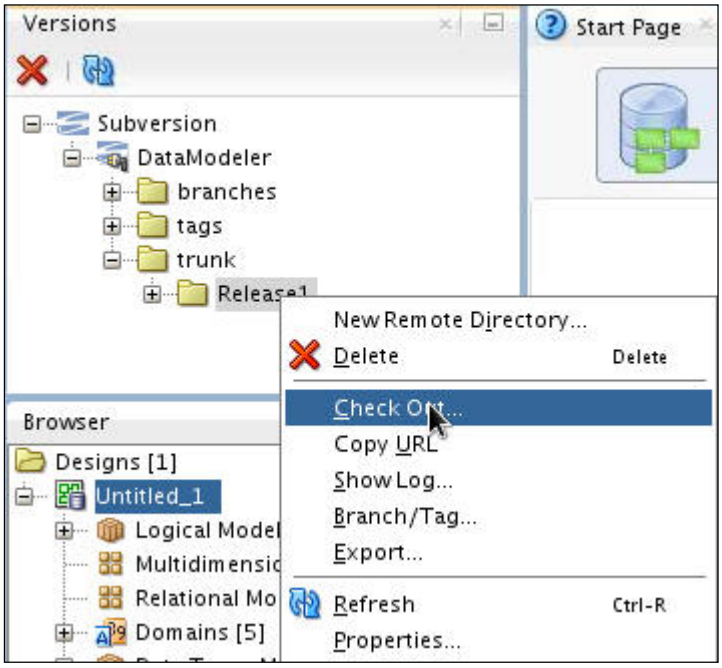
Practice 20-5: Make Changes as a Different User

Overview

In this practice, you check out the model from subversion as a different user, make some changes, and commit your changes.

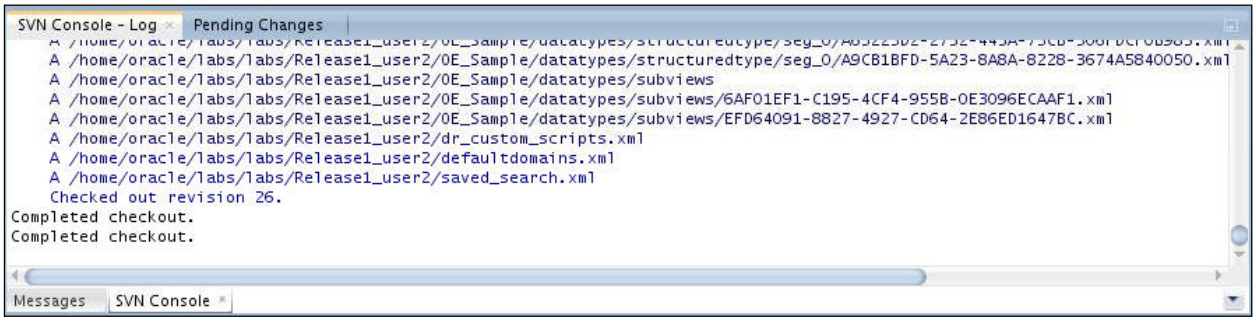
Tasks

1. Open SQL Developer Data Modeler again. Essentially, you are now USER2 who will access the same subversion repository.
2. To work on the model, you must check it out. Expand **Subversion > DataModeler > trunk** and right-click **Release1** and select **Check Out**.

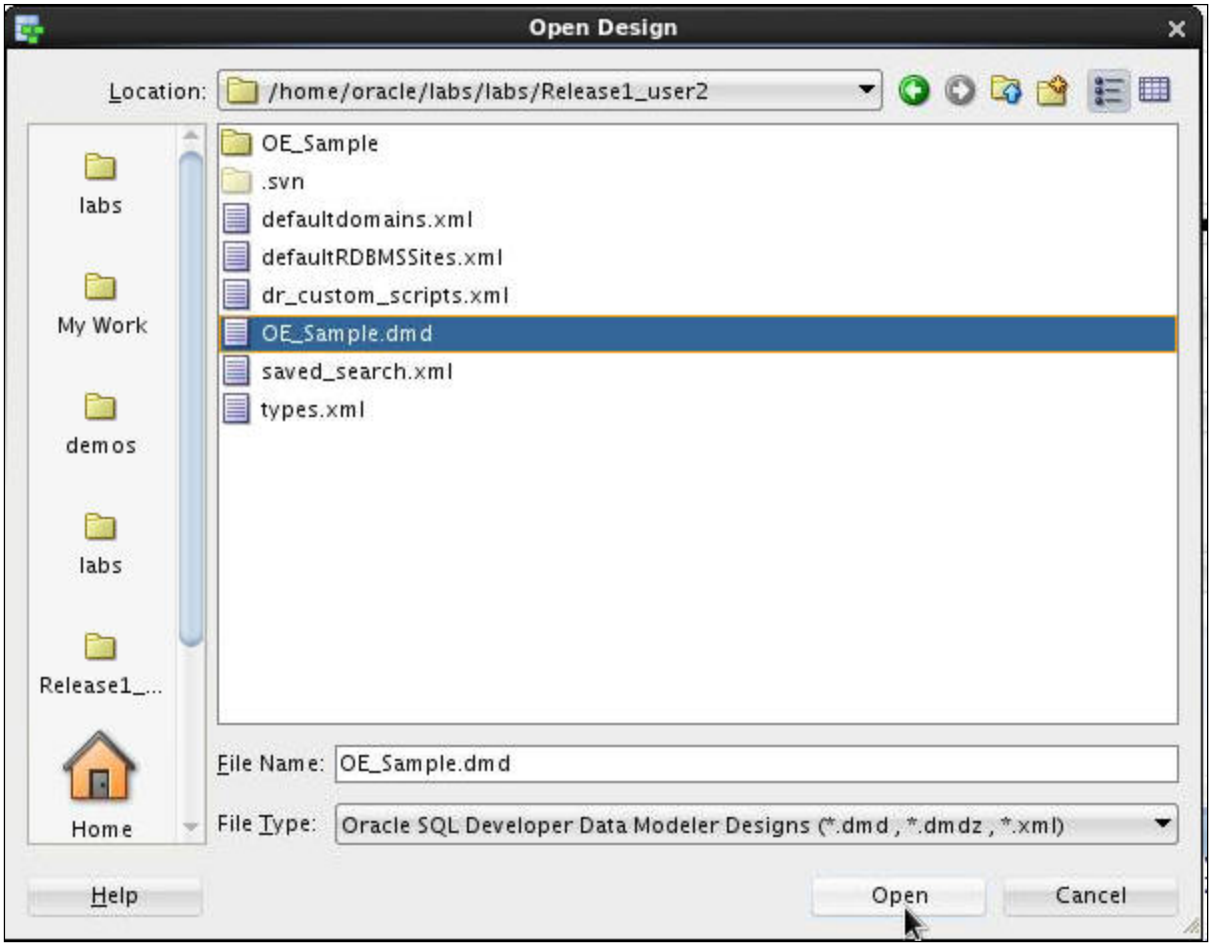


3. You need to check the model out into a different directory from the previous location. To do so, specify `/home/oracle/labs/labs/Release1_user2` and click OK.

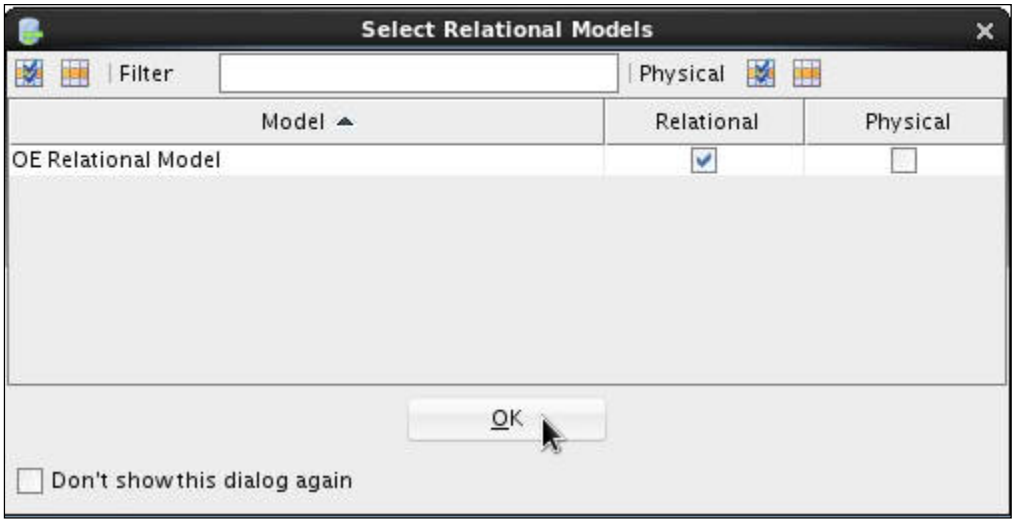
4. The model was checked out to the `Release1_user2` location as revision 26.



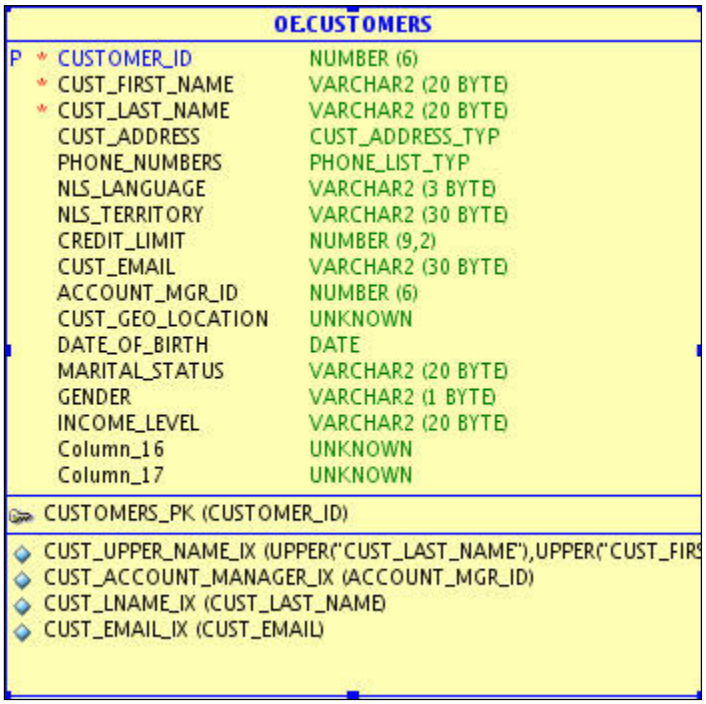
5. You need to open the model you just checked out. Select **File > Open** and navigate to the directory (`/home/oracle/labs/labs/Release1_user2`) where you checked out the model and select `OE_Sample.dmd`. Click **Open**.



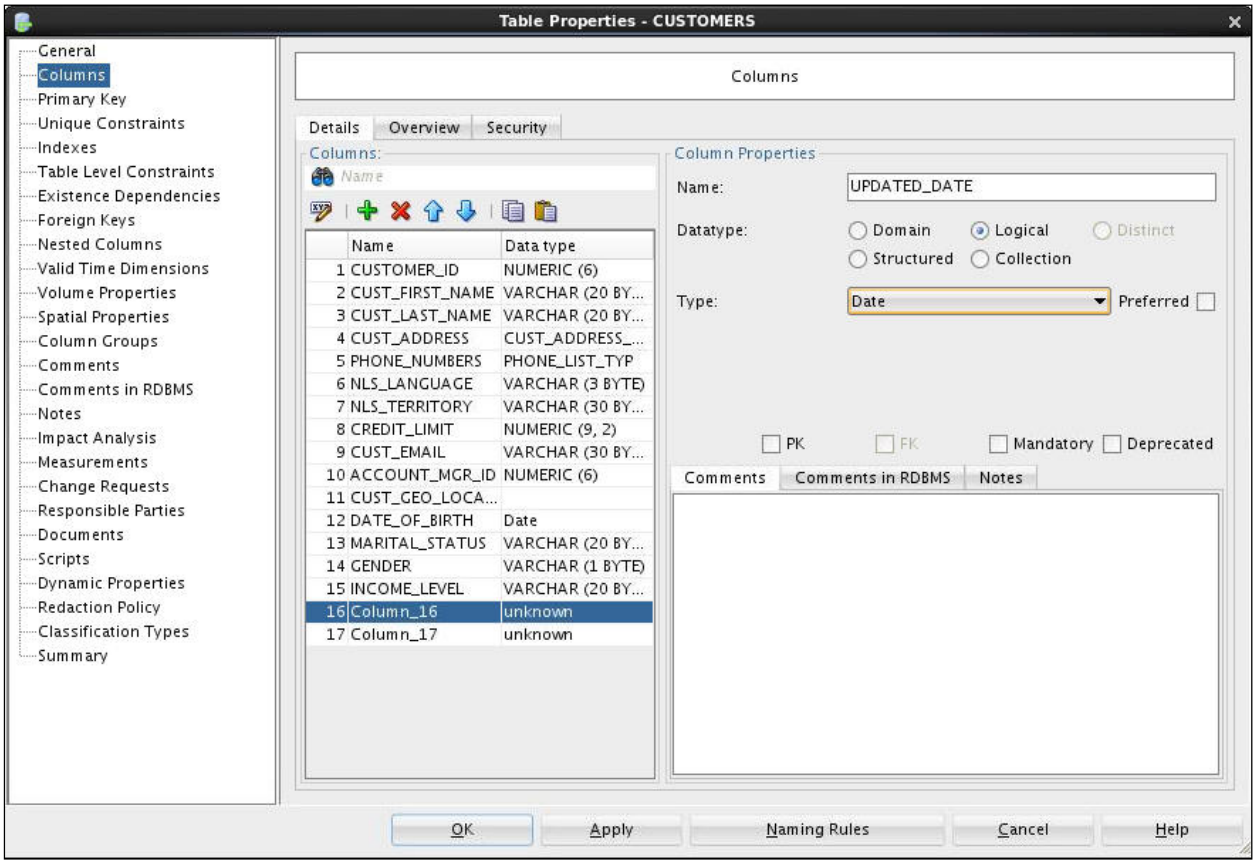
6. If the Select Relational Models dialog box appears, click OK.



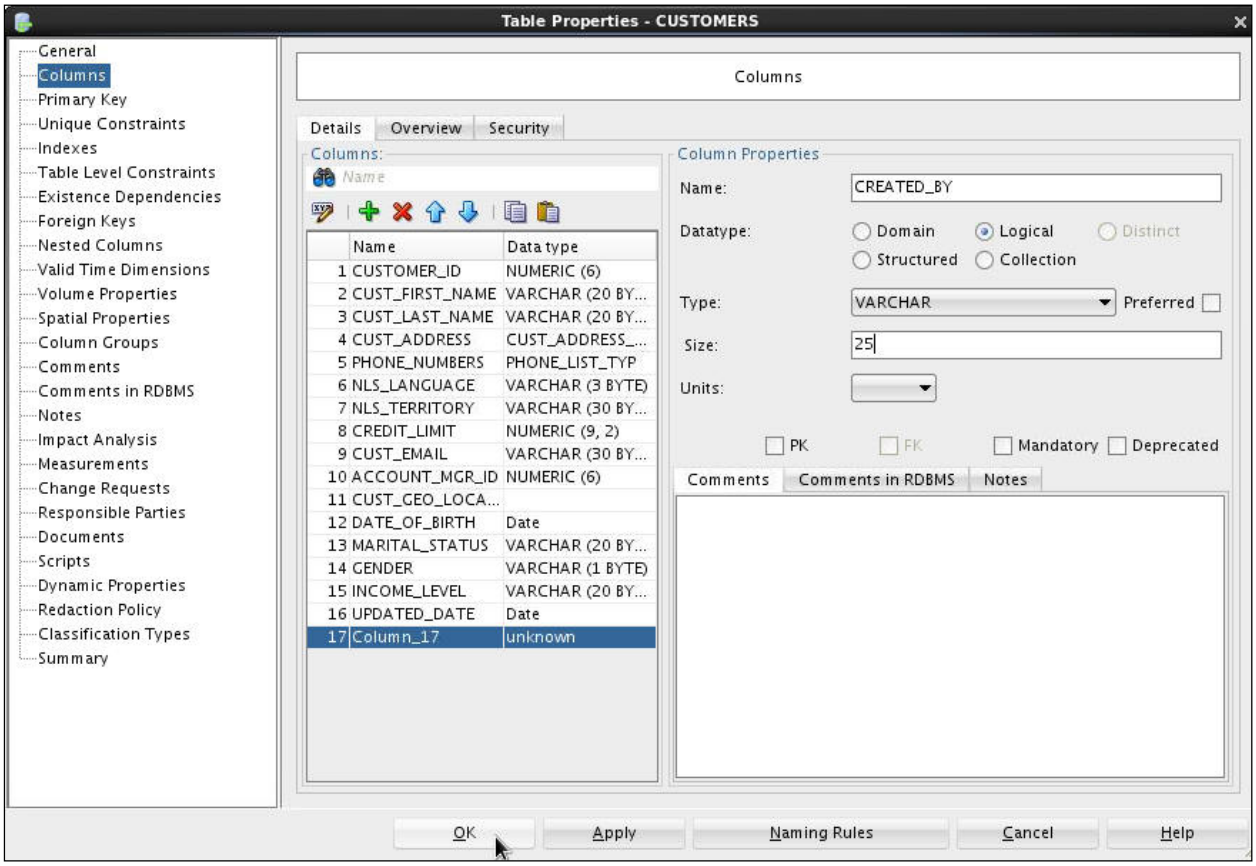
7. Note that the two columns you added as the other user are displayed. You need to make some additional changes to the entity. To do so, double-click `OE.CUSTOMERS`.



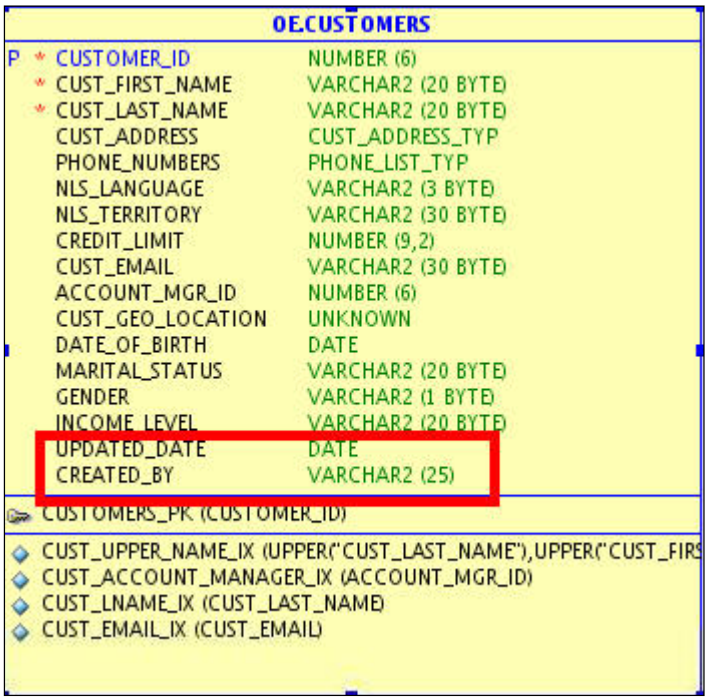
8. Select the Columns attribute. Select **Column_16** and change the name to `UPDATED_DATE`. Select Logical for Datatype and Date for Type.



9. Select **Column_17** from the list of columns. Enter `CREATED_BY` for Name, select Logical for Datatype, select VARCHAR for Type, and enter 25 for Size. Once done, click OK.

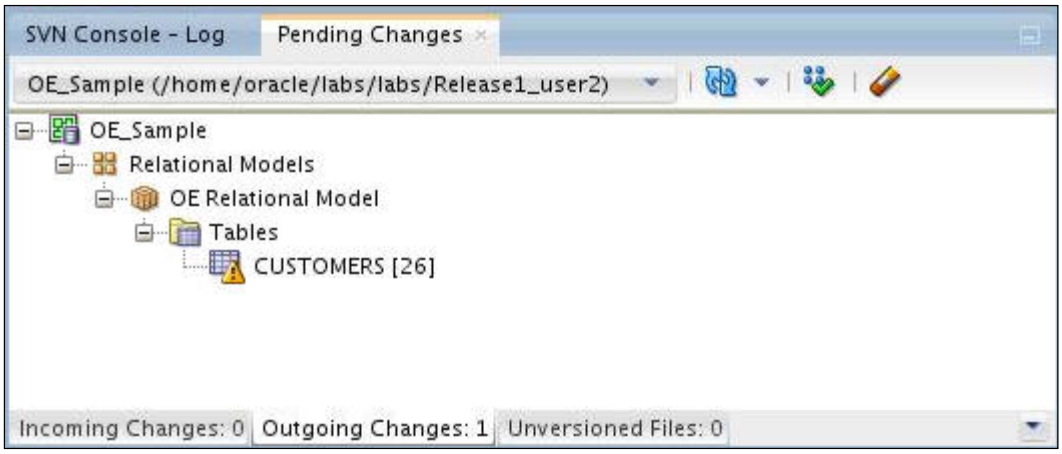


10. The changes you have made are reflected on the table.

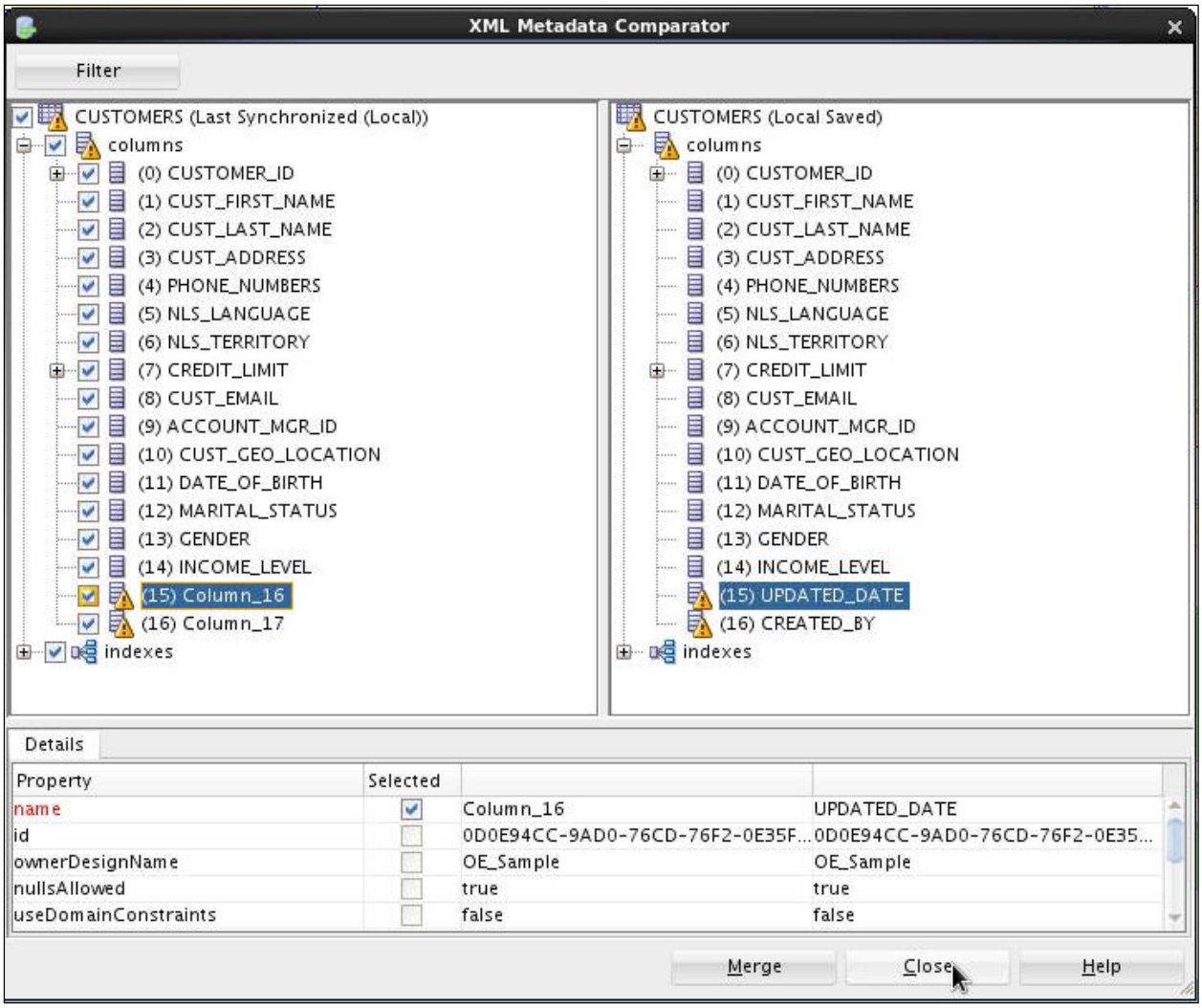


11. To view the pending changes, you must save the model. Select **File > Save**.

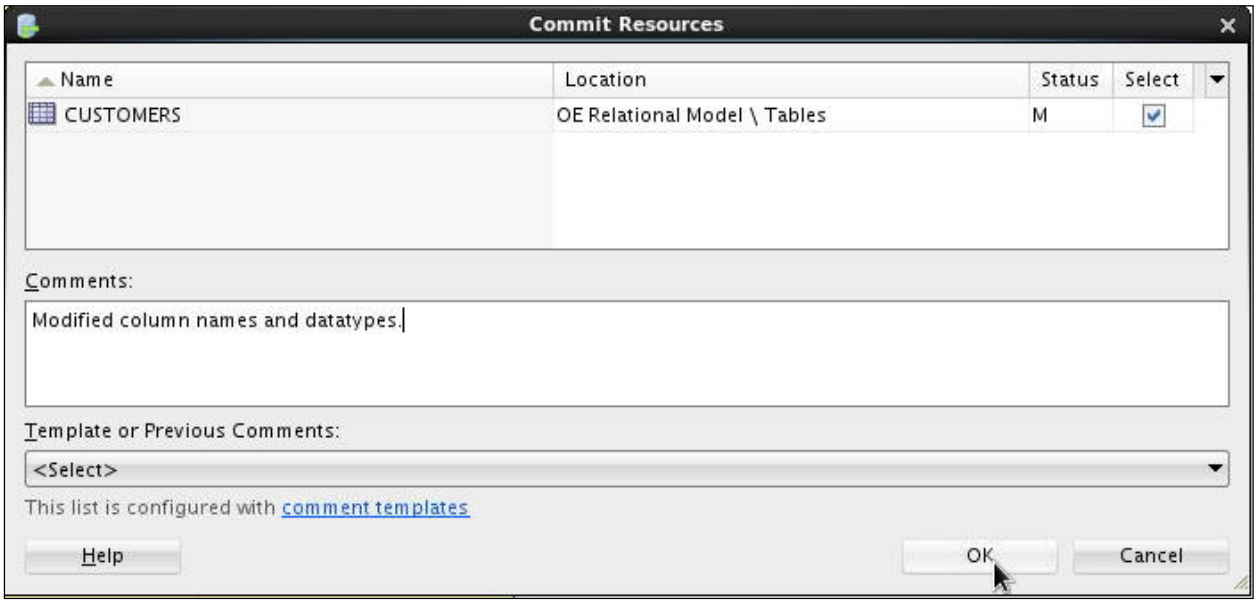
12. Open the Pending Changes window (**Team > Pending Changes**). Note that there is only one outgoing change.
13. Select the **Outgoing Changes** tab and expand the tree. Double-click **CUSTOMERS**.



14. Expand columns to see the differences. It shows the previous change in subversion (Column_16) and what you changed it to in your local model (UPDATED_DATE). Select Column_16 to see the differences. Once done reviewing the changes, click **Close**.



15. Select the **OE_Sample** node and click the **Commit** icon. Enter some text in the Comments field and click **OK**.



16. Your changes have been committed to subversion.

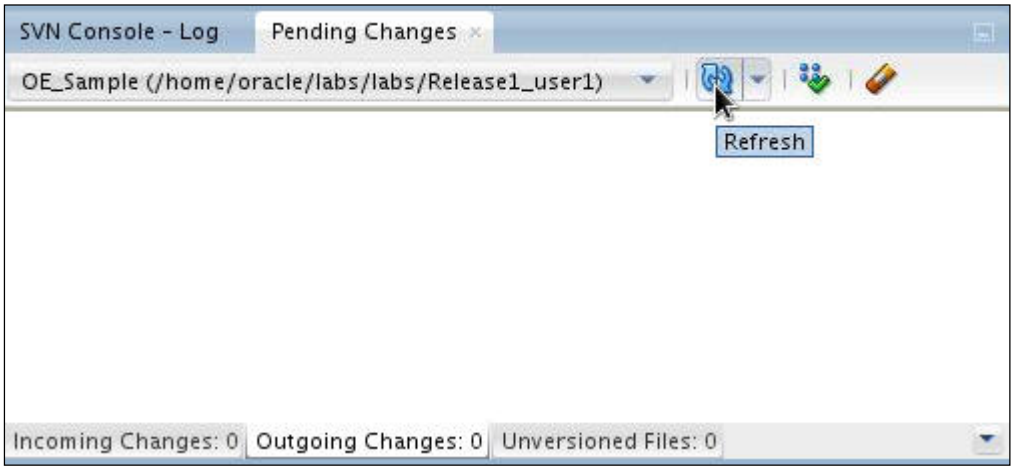
Practice 20-6: Synchronize Changes with the Originating User (USER1)

Overview

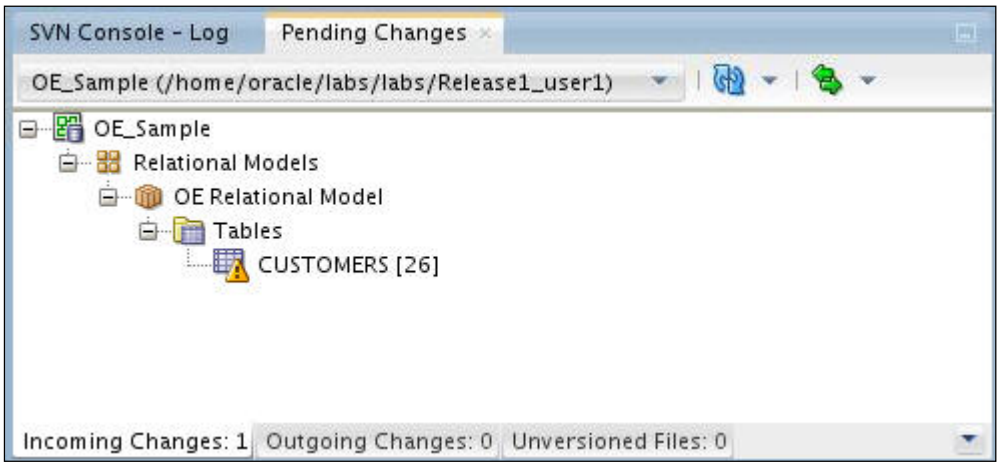
In this practice, you go back to the model that USER1 is working on to check whether there are any incoming changes.

Tasks

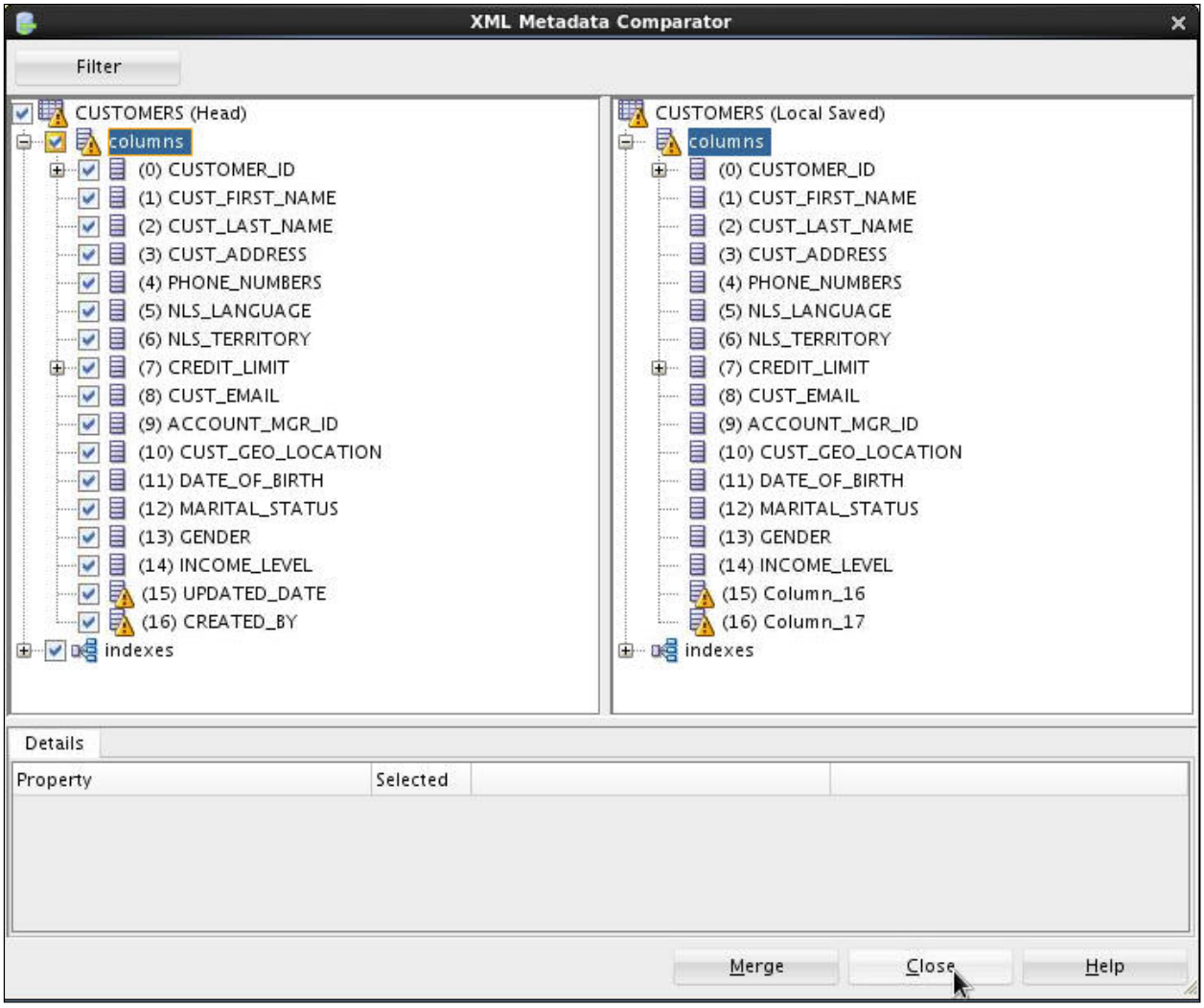
1. Switch to the first Data Modeler session for User1. Select the **Incoming Changes** tab and click **Refresh**.



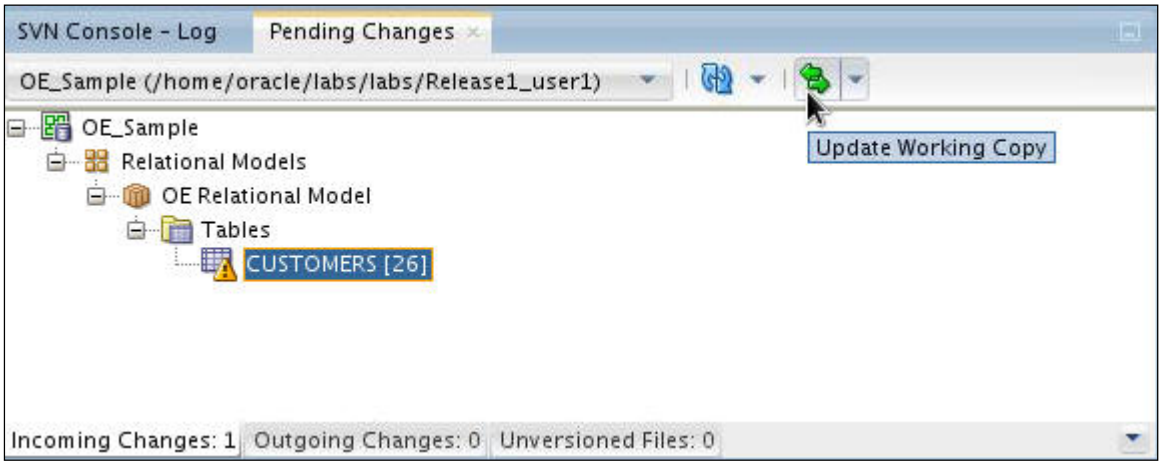
2. Notice that you have one incoming change. Expand the entire tree. To see the change, double-click `CUSTOMERS`.



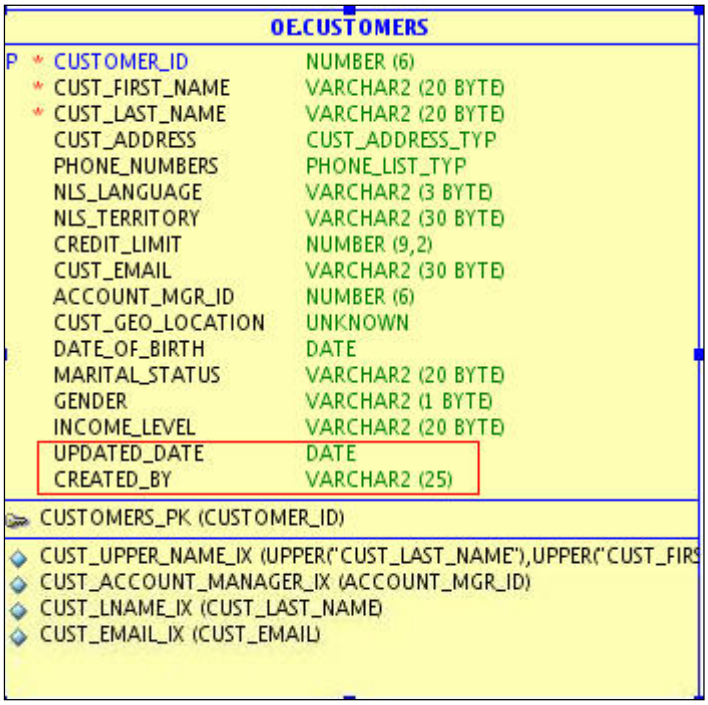
3. Expand columns. Note that the left side indicates what is contained in subversion and the right side indicates what is saved in your local copy. In this case, you want to update the locally saved model. Click Close.



4. Select the **OE_Sample** node and then click the **Update Working Copy** icon.



5. The `CUSTOMERS` table now has the changes from subversion.



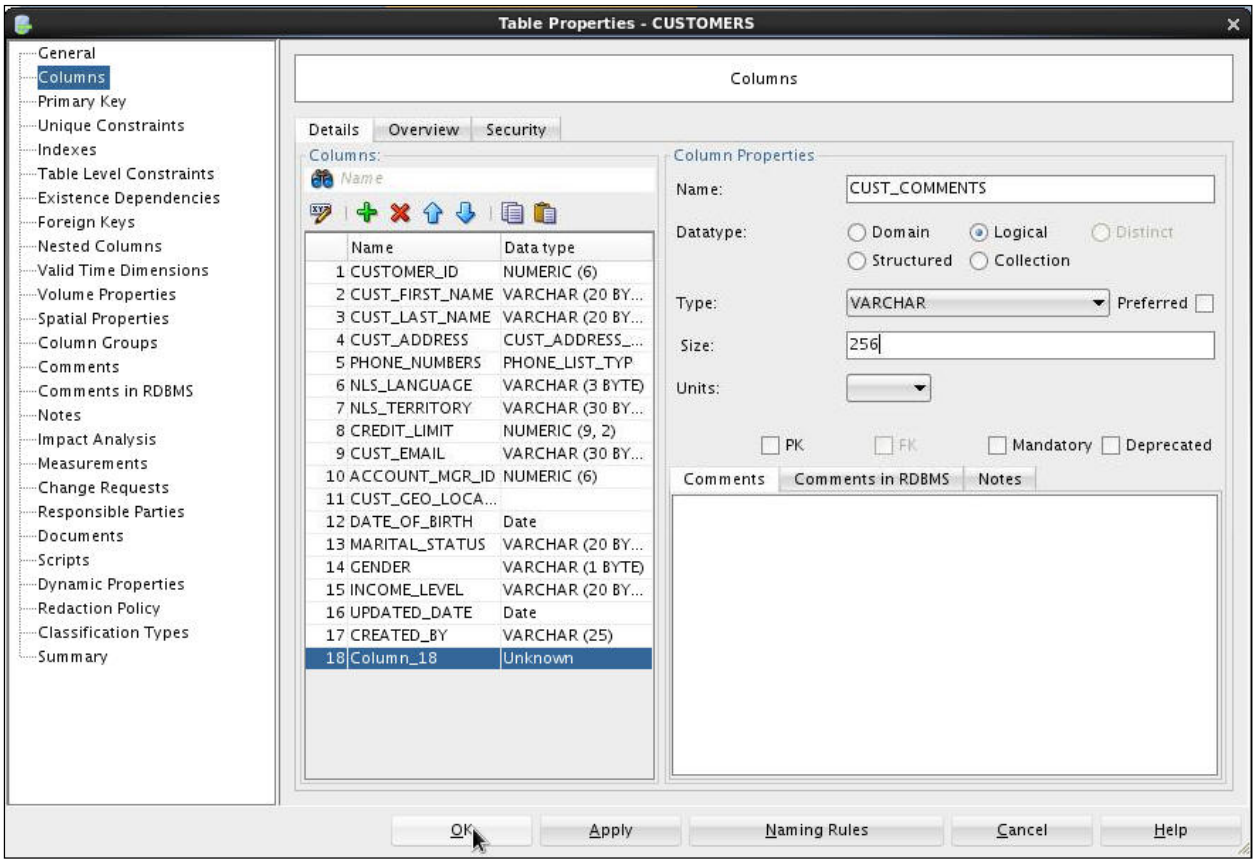
Practice 20-7: Resolve Conflicts Between Users

Overview

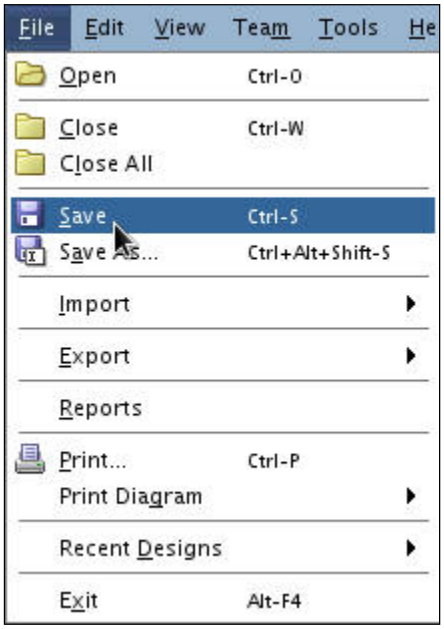
In this practice, two different users add a column to the same table. One user saves changes into subversion and the other user notices that there is a conflict to resolve.

Tasks

1. As User1, you want to add a column to the `CUSTOMERS` table. Double-click the **`OE.CUSTOMERS`** table.
2. Select the **Columns** attribute. Click "+" to create a new column.
3. Change the name of the new column to **`CUST_COMMENTS`**, select **Logical** for Datatype, select **VARCHAR** for Type, and enter **256** for Size. Click **OK**.

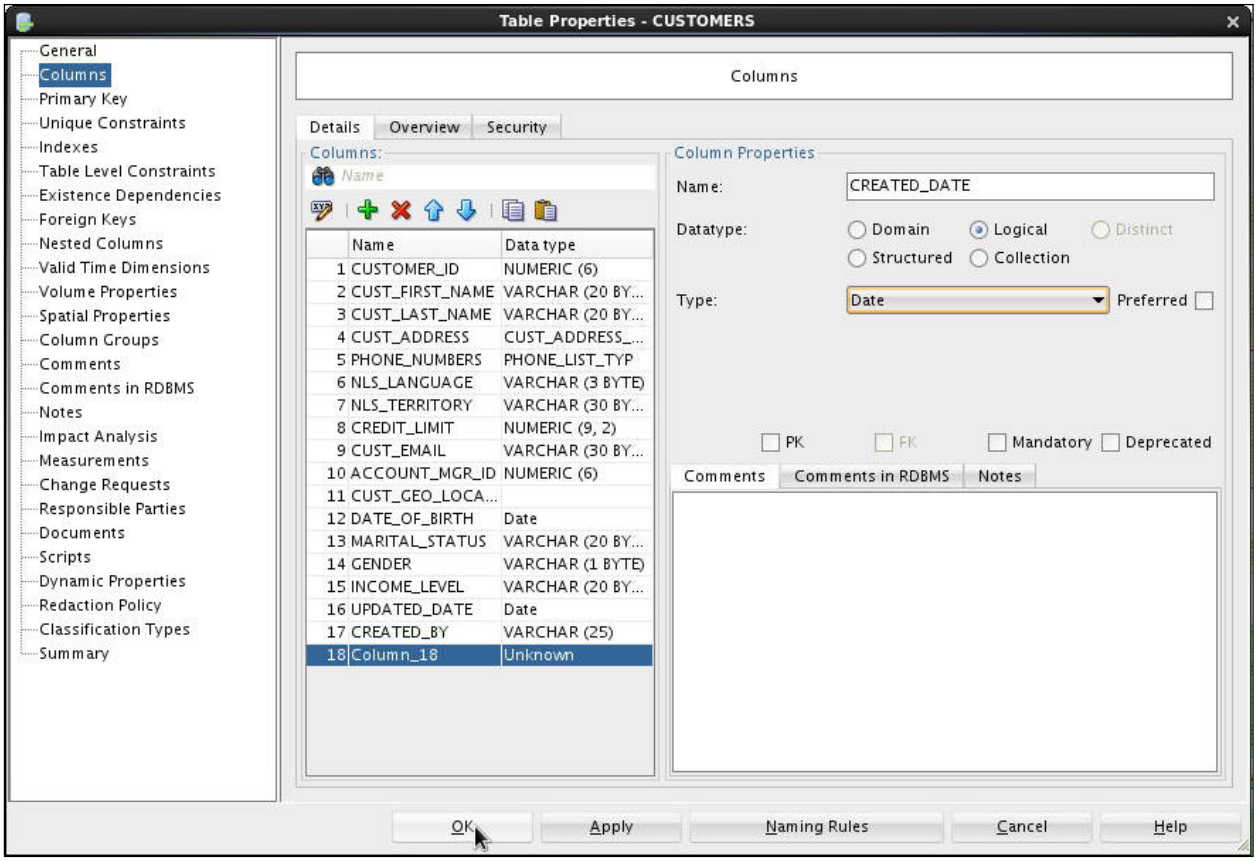


4. You want to save the change locally. Select **File** > **Save**.



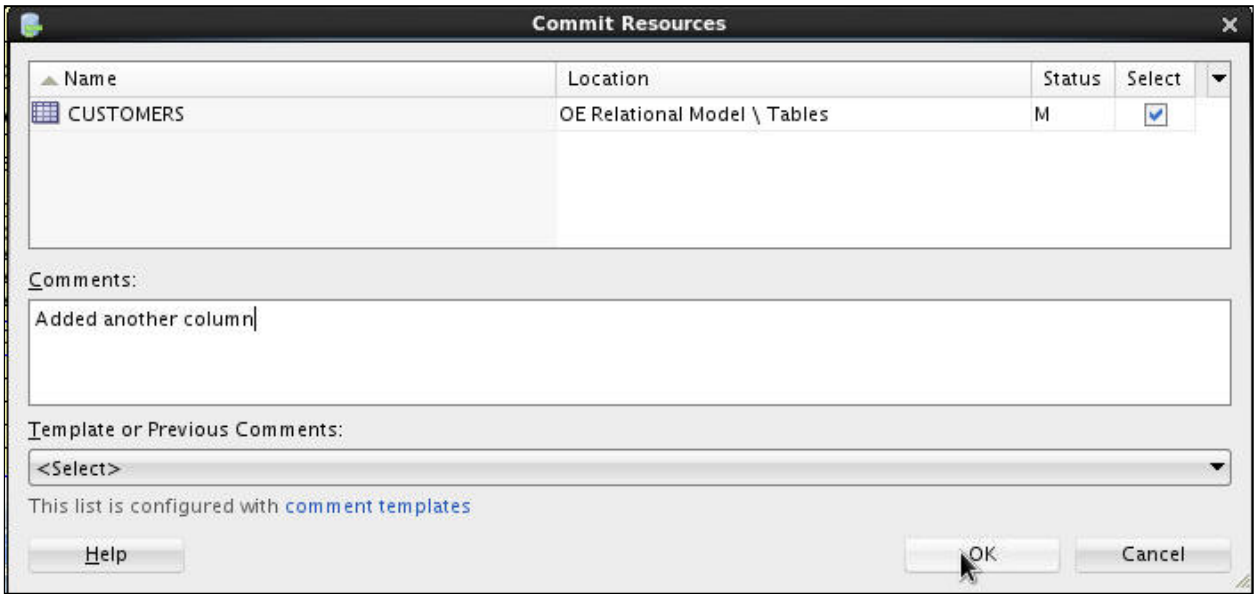
5. Switch to **User2**. Double-click the **OE.CUSTOMERS** table. Select the **Columns** attribute. Click “+” to add a new column.

6. Change the name of the new column to **CREATED_DATE**, select **Logical** for Datatype, select **Date** for Type, and click **OK**.



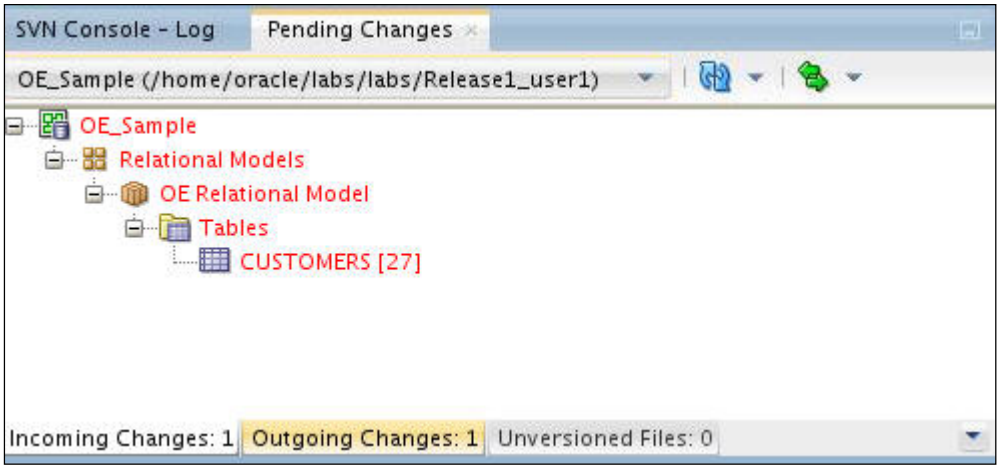
7. To save the change locally, select **File** > **Save**.
8. To commit the changes to the repository, under Pending Changes, click the **Outgoing Changes** tab. Select **OE_Sample** and click the **Commit** icon.

9. Enter a comment and click **OK**.

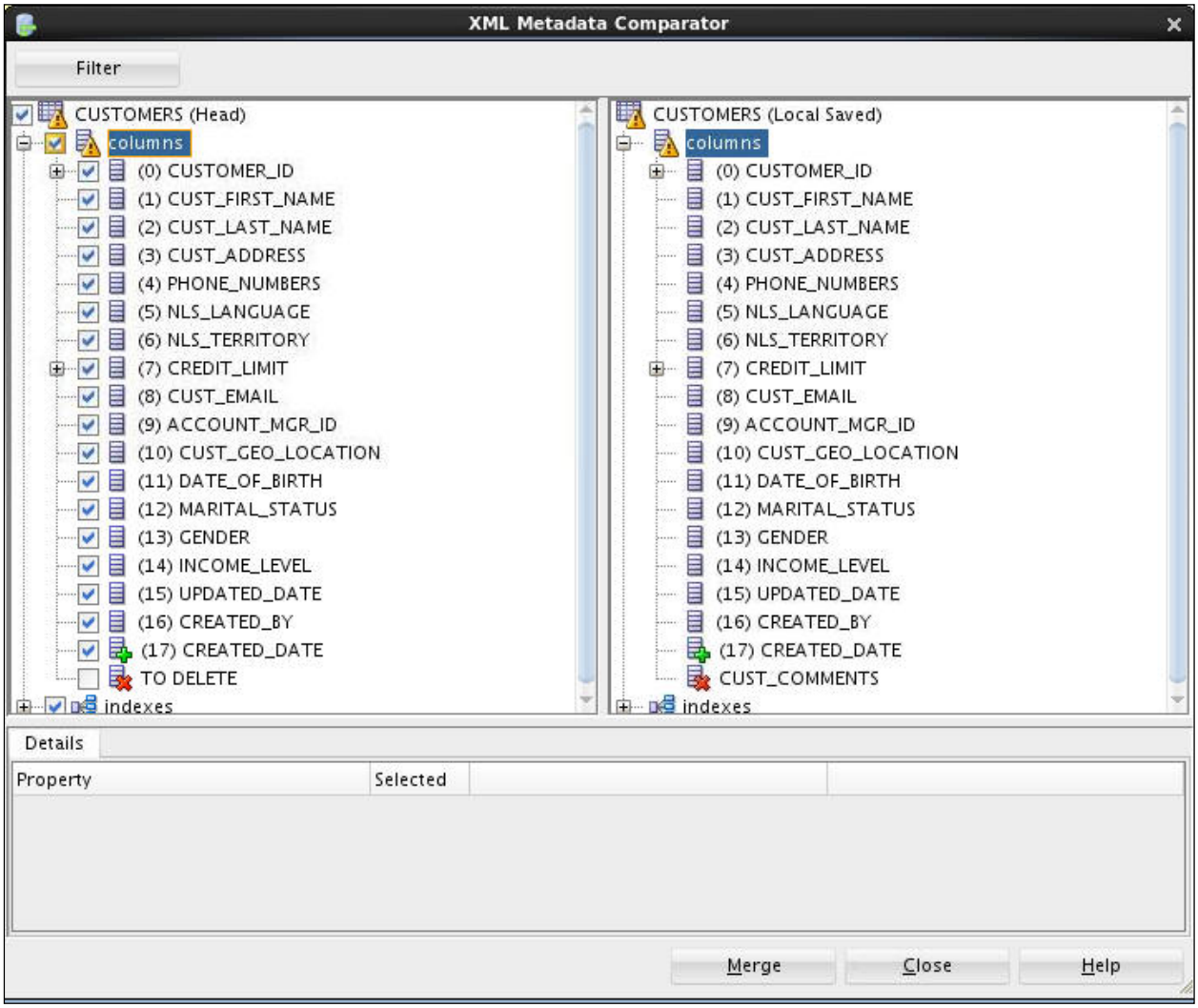


10. Notice that you have no incoming or outgoing changes.
11. Switch to User1. Select the **Incoming Changes** tab and click the **Refresh** icon.

12. You have an incoming change, but it is in red. This indicates that there is a conflict. Expand the tree and double-click **CUSTOMERS** to see the conflict.

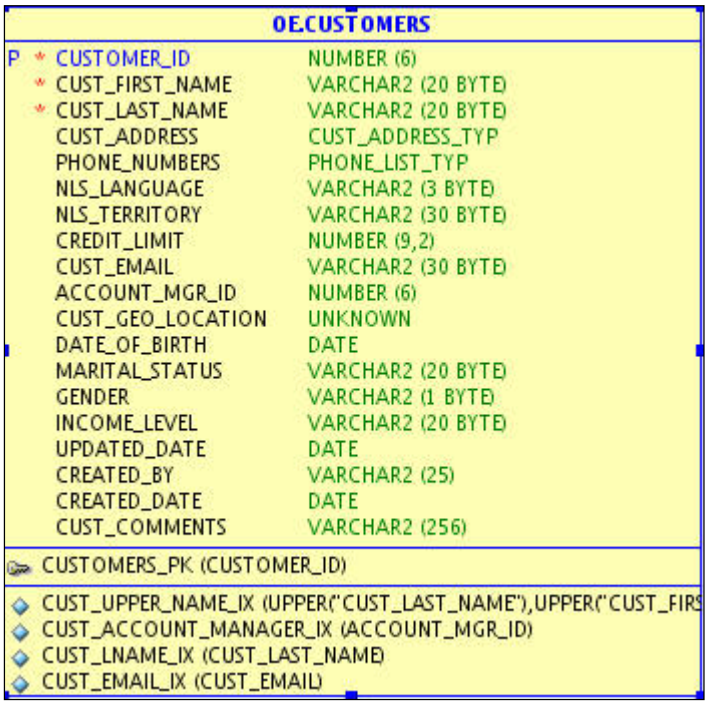


13. Expand columns. Notice that there is a column (`CUST_COMMENTS`) that is not contained in the repository. You can resolve the conflict by merging from the repository into your local design. To keep the column you added to the local design, the `CUST_COMMENTS` column, you must deselect the check box next to the TO DELETE column.

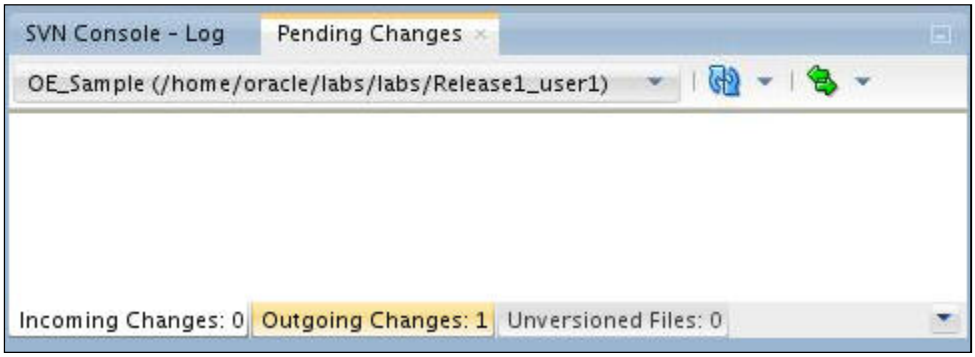


14. Now you can merge the change made in the repository into your local design. Click **Merge**.

15. The `CREATED_DATE` column from the repository was merged into the design. In addition, the `CUST_COMMENTS` column remains in the local design.



16. Click the **Refresh** icon.



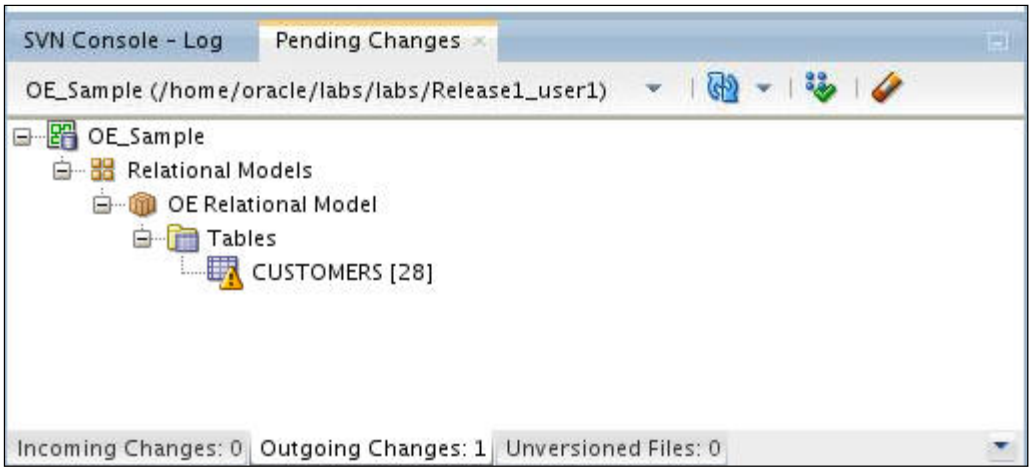
Practice 20-8: Revert Changes

Overview

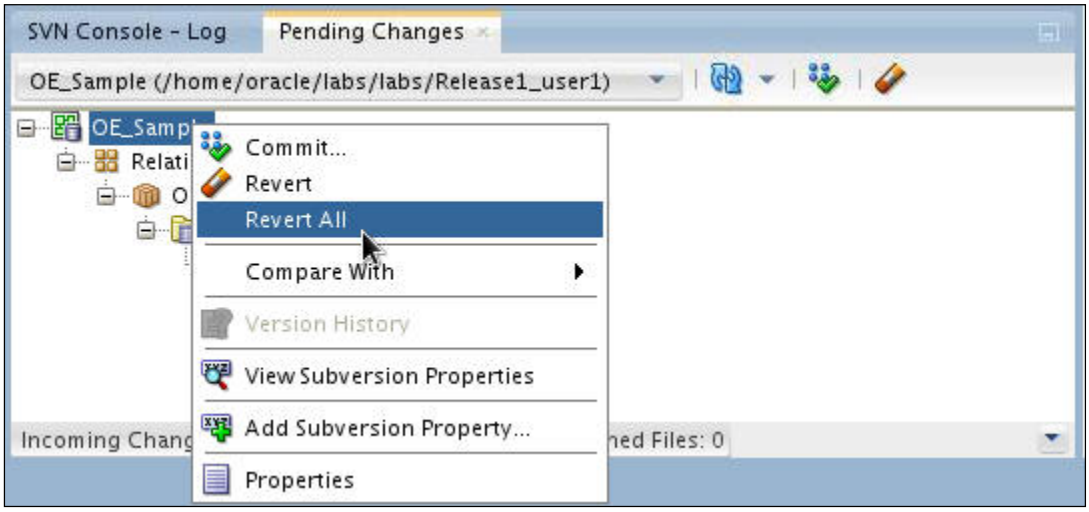
In this practice, you revert the change you made to remove the `CUST_COMMENT` column from your local design.

Tasks

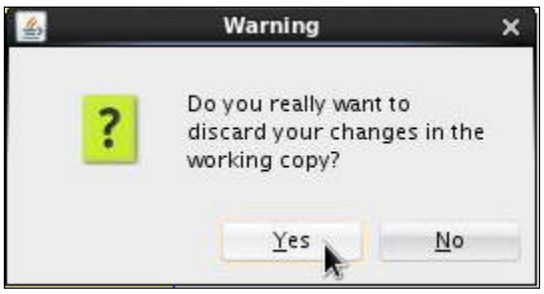
1. Select the Outgoing Changes tab (as User1) and then expand the tree to see the changes.



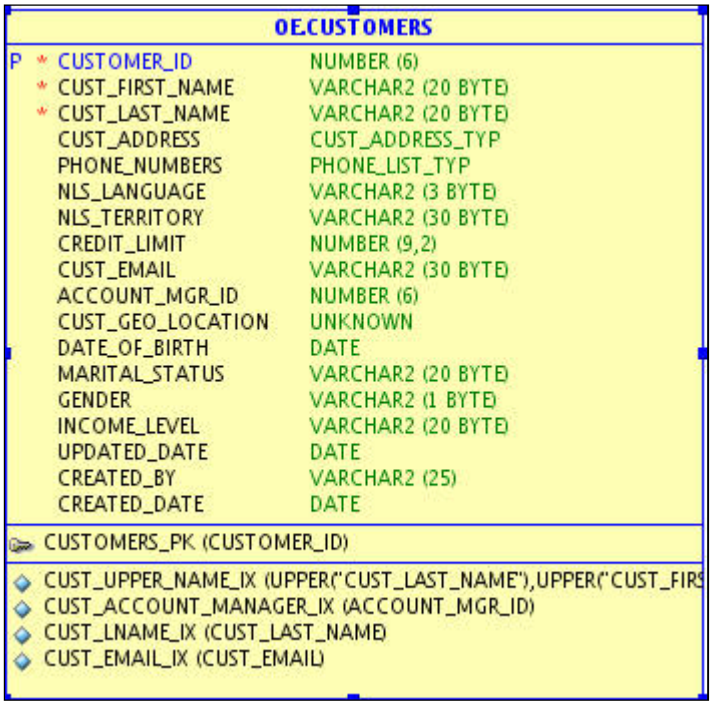
2. To revert all the changes, right-click `OE_Sample` and select Revert All.



A warning message is displayed. Select **Yes**.



3. Notice that the `CUST_COMMENTS` column no longer exists in the `CUSTOMERS` table because that change was reverted.



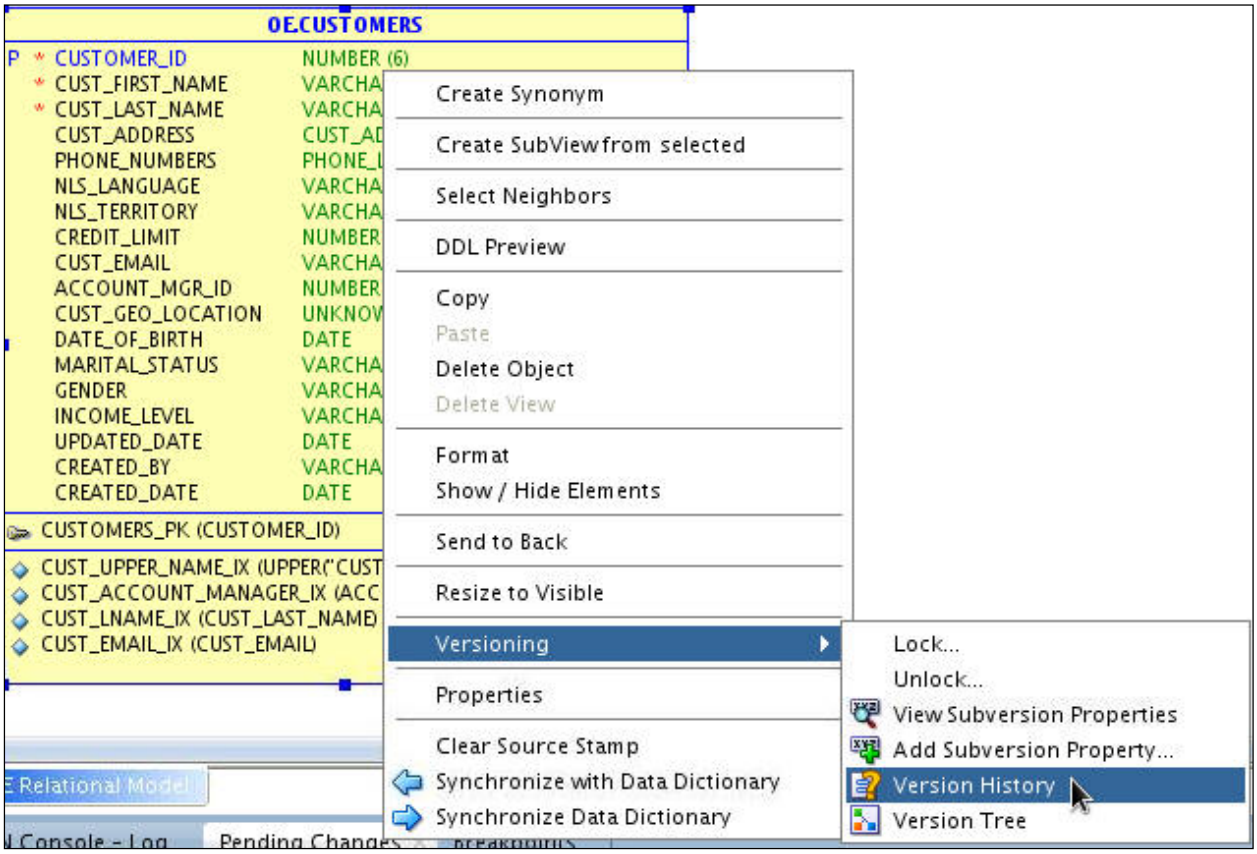
Practice 20-9: Review and Compare Versions in the Repository

Overview

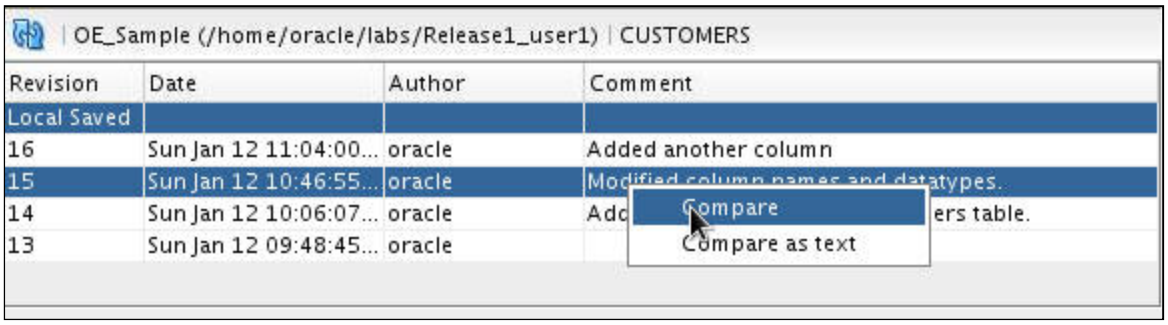
In this practice, you review the list of versions in the repository, compare two versions, merge the repository version into the local version, and then commit the changes so that the previous version is now the most recent.

Tasks

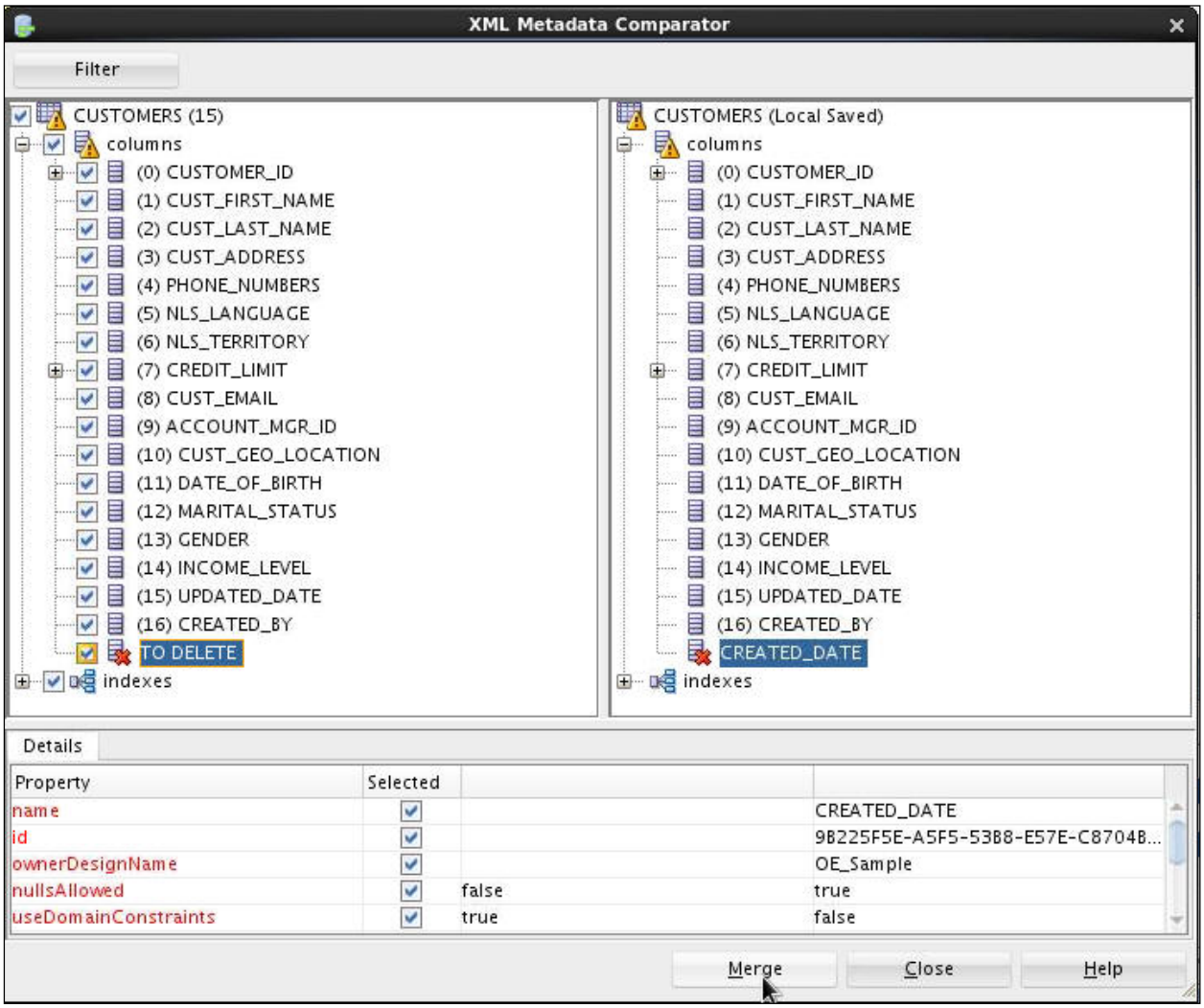
1. Right-click the **CUSTOMERS** table and select **Versioning > Version History.**



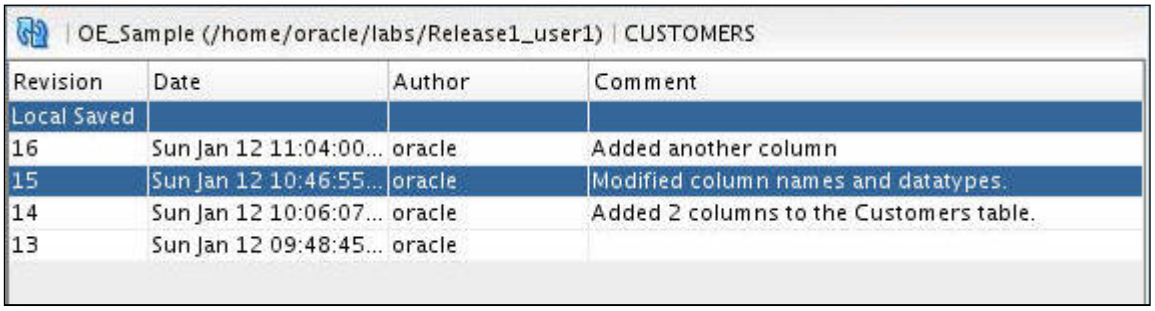
2. Every time you commit changes, you create a new version. The comments that you entered when committing the changes are visible. To compare two versions, Ctrl-select the Local Saved Revision and the revision where you modified the column names and datatypes. Right-click either revision that you selected and select **Compare**.



3. Expand **columns**. Notice that the difference between the two versions is that the local version has the `CREATED_DATE` column. In this case, you want to go back to the repository version so you do want to delete the column. Select the check box against the `TO DELETE` option and click **Merge**.



4. Notice that the design no longer contains `CREATED_DATE`. Select **File > Save** to save your design.
5. To make this the current version, you must commit the change to the repository. Click **Commit.** Enter a comment and click **OK**.
6. Notice that the change was committed and you no longer have any pending changes. To see the new version, click the **Version History** tab.



7. You need to refresh the list. Click the Refresh icon. Notice that the version that you just committed is now in the list and it is the most recent version.