SQL and XQuery training with ODPS

This system supports hands-on SQL training. It allows to run SQL and XQuery queries on a DB2 database. Furthermore, it provides a tutorial on SQL. A short introduction is given below.

How to start?

Use the following link to start a new session: https://odps.informatik.uni-stuttgart.de

Select the *Register* tab to create a new account. The system provides two types of accounts:

- Internal accounts for all students of Universität Stuttgart having an account at the Institutes of Computer Science that is linked to an email address @studi.informatik.uni-stuttgart.de. Please use the option for external accounts if your email address follows the pattern abc12345@stud.uni-stuttgart.de!
Select *internal* as user type in order to create such an ODPS account. Provide the username of your account at the University, select the course you want to be assigned to, and provide the corresponding course password. As soon as you click *Register*, you will receive an email that contains the password for your ODPS account.

- External accounts for all others.
Select *external* as user type in order to create such an ODPS account. Provide your email address, select the course you want to be assigned to, and provide the corresponding course password. As soon as you click *Register*, you will receive an email that contains the username and the password for your ODPS account.

Now, use the information received by email to access the system. Select the *Login* tab to do so. In case you forgot your password select *Forgot your password?* on the *Login* tab.

Main workspaces

The view that is presented to you depends on the course you are assigned to as well as on previous sessions. At the top right of the window you may select one of the available workspaces. Here is an overview of the most common ones. Remark that not all workspaces are accessible for all courses.

Overview

This tab provides an overview on the objects available in the database. Each database object (table, view, index, trigger, type) is assigned to a schema. Select one schema from the list of accessible schemas. This list contains at least one schema ODPS_xyz where xyz corresponds to your username.

Data

ODPS provides two types of SQL exercise data:

- Common data: Each of these collections of exercise data exists only once in the system, i.e., all users have read access to the same copy of data.

- Individual data: These collections of exercise data can be created and deleted individually in your schema. Click the corresponding *create* or *delete* button. You may alter or even delete this kind of exercise data in your schema.

ODPS also provides several types of XML exercise data:

- Common XML data: Each of these collections of exercise data exists only once in the system, i.e., all users have read access to the same copy of data.

- Script XML data: You may load such a pre-defined collection of XML data into your schema.

- Individual XML data: This section allows you to load your own XML data sets into your schema.

SQL

This tab allows you to run queries. Type in the query, select the schema you want to access and press the *Execute* button. A set of previous queries is shown on the left. You may delete these entries from the history (*delete*), run queries again (*execute*) or store them as a bookmark (*bookmark*). Bookmarks are available in subsequent sessions whereas the history is reset in each session. You may also load and run a script (*file*) that contains a series of SQL queries.

XML

This tab allows you to run XQuery expressions. Type in the query, select the exercise data set you want to access and press the *Execute* button. You may access XML data sets using the doc function: fn:doc('*f*'). Replace *f* by the name of an XML file in your schema (Script XML data or individual XML data). There are two options to access common XML data:

- Use the doc function: fn:doc('*d/f* ') where *d* is replaced by the name of the data set and *f* is replaced by the name of a file in this data set.

- Select the name of the data set from the list and use the doc function: fn:doc('*f*').

You may expand or collapse the elements of the expression result.

Tutorials

This tab allows you to start various tutorials on SQL and XQuery. Typically, at least one tutorial on SQL is available for you. Each tutorial consists of various parts containing some explanations and a set of exercises. For each exercise you may first try to solve it on your own and look at one or several correct solutions in a second step. For some tutorials you will need a specific collection of exercise data:

- Tutorial *Simple Queries in SQL*: Create individual SQL data *Parts and Suppliers* before you start the tutorial.

Settings

This tab allows you to change your password and to adjust other settings to your needs. The most important ones are:

- password

- visible workspaces

- default number of result rows

Misc

- For any further questions contact odps@ipvs.uni-stuttgart.de

- This introduction is valid for version 1.4.8 of ODPS