

Hands-on SQL lab

Introduction to Database Systems

CS-322



Today: Hands-on SQL

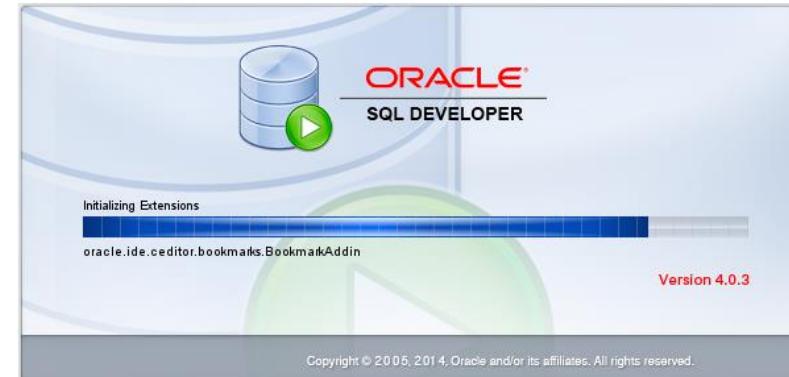
- Using SQL developer (any frontend with JDBC connection works)
- Connecting to the database
- Running a selection query
- Running a join query
- Inserting data
- Deleting data

SQL Developer – SQL IDE

- Java client for the Oracle RDBMS
- Available at:
 - Download the appropriate version, ideally via the download link:
<https://www.oracle.com/tools/downloads/sqldev-downloads.html>
- Most SQL IDEs work (that has JDBC connection – this should be standard):
 - DBeaver (open source): <https://dbeaver.io/>
 - JetBrains DataGrip (free for students): <https://www.jetbrains.com/datagrip/>
 - You may use other software if you prefer so

SQL Developer + Oracle DBMS

- Create a new connection with parameters:
 - **username:** C##DB2024
 - **password:** DB2024
 - **hostname:** cs322-db.epfl.ch
 - **port:** 1521
 - **SID:** ORCLCDB
 - **Make sure you are connected to the EPFL network, or that you are using a VPN!**



The Toy University DB

Example Instances

STUDENT

<u>SNUM</u>	SNAME	MAJOR	SYEAR	AGE
1476	Felipa Castromil	CHE	FR	21
1597	Bree Maksutov	ME	FR	23

FACULTY

<u>FID</u>	FNAME	DEPTID
1087	Alica Caminho	2
1015	Aleksandrov Nemeth	0

ENROLLED

<u>SNUM</u>	<u>CNAME</u>
1476	Organic Chemistry
1597	Strength of materials and solid mechanics

COURSE

<u>CNAME</u>	<u>MEETS_AT</u>	ROOM	<u>FID</u>
Organic Chemistry	01.02.19 12:00:00	R302	1087
Database Systems	01.02.19 13:00:00	R202	1015

Tasks

- List all students
- List all courses
- List all courses in which some of the students were below 18 years of age
- Insert your info into the Students table, use your sciper as SNUM
- Insert yourself into Enrolled table for any class
- Delete your entry from the Enrolled table