

BUSINESS INTELLIGENCE

Module 2

Module 2 program

Goal: create, feed, and query a data warehouse

- Based on TPC-D benchmark

Conceptual and logical design

- Guided example
- Tool: Indyco Builder (DFM design)

Feeding

- Import data from TPC-D to the DW
- Manage incremental feeding and surrogate keys
- Tool: Tableau Prep

Querying

- Setup hierarchies and run OLAP queries
- Tool: Tableau Desktop

Software

All tools are commercial software (i.e., licenses are needed)

- Lab machines are ready
- Tools can be installed on your machines as well
 - [Indyco Builder](#)
 - [Tableau Prep](#)
 - [Tableau Desktop](#)

One-year licenses available in *Virtuale* for education purpose only

- Individual licenses for Tableau products can be requested individually [here](#) as long as you are students

Database connection details

DBMS: PostgreSQL

Host: 137.204.78.85

Port: 5432

Database: bi

Credentials: *check Credentials.pdf file in Virtuale*

Schema: tpcd

Accessibility: 24/7, even outside the Unibo network

Database connection with SQL Developer

(PGAdmin is not installed in laboratory machines)

Download PostgreSQL's latest driver from [here](#)

The image illustrates the steps to configure a PostgreSQL connection in Oracle SQL Developer:

- Oracle SQL Developer Main Window:** The 'Strumenti' (Tools) menu is circled, and 'Preferenze...' (Preferences...) is selected.
- Preferenze (Preferences) Dialog:** The 'Database' section is expanded, and 'Driver JDBC di terze parti' (Third-party JDBC Driver) is circled.
- File Selection Dialog:** The file 'postgresql-42.2.24.jar' is selected from the 'Downloads' folder.
- Database Connection Configuration:** The 'Database' window shows the configuration for a new connection:
 - Name: BI00
 - Tipo di database: PostgreSQL
 - Nome utente: bi00
 - Password: [masked]
 - Nome host: 137.204.78.85/bi?
 - Porta: 5432

Red arrows indicate the flow of the process from the main window to the final configuration. A red box at the bottom right contains the following notes:

- Lower-case username
- Hostname ending with "?"

Exam

The content of this module will be part of the final exam

- A single 30-minutes exercise
- Either about DW feeding (with Tableau Prep) or DW querying (with Tableau Desktop)
 - On a different database, of course
- Right before/after the main written exam
- Evaluation: 6/32 points (probably)