

## MySQL for programmers (code: MySQL-PROG)

### Overview

The course provides students with knowledge and skills to create, manage and programmatically control database on MySQL platform. Basing on relational database theory students get to know SQL language. They learn to create complex queries, design well structured databases, use indexes to improve performance. Students practice every subject in hands-on lab.

The course outline is similar to course BD 101 (Databases for programmers). This course is designed to MySQL platform. Great value of dedicated courses is that students get used to dedicated tools and learn specific SQL dialect.

### Duration

3 days

### Agenda

1. Introduction to relational databases
  - Understanding relations
  - Table, row, column
  - Key, primary key
  - Foreign key, references between tables
2. Getting familiar with MySQL tools
  - mysql
  - phpMyAdmin
3. SQL language syntax
  - Writing simple query - SELECT closure
  - Using functions and operators
  - Narrowing results - WHERE closure
  - Sorting results - ORDER BY closure
  - Hitting extremes - LIMIT and OFFSET statements
  - Using multiple tables - JOIN statement
  - Working with set of data - GROUP BY closure
  - Adding aggregates
  - Choosing sets - HAVING closure
  - Using sub-queries
  - Combining multi-query results - UNION
4. Relational database theory
  - Dealing with anomalies
  - Understanding normal forms
5. Designing database structure
  - How-to: designing techniques
  - Using database design notation
  - Best practices: design patterns for typical issues
6. Creating database schema (DDL)
  - Understanding data types
  - Creating tables - CREATE TABLE
  - Understanding constraints
  - Using sequences
7. Inserting, modifying and deleting data (DML)
  - Adding data - INSERT

### Ask for details

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- Editing data - UPDATE
  - Removing data - DELETE
  - Using views
  - Creating views - CREATE VIEW
8. Using procedural languages
- Introduction to programming databases
  - Using triggers and stored procedures

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## Target audience and prerequisites

The course is intended for novice and experienced MySQL users, who want to learn SQL language and touch some programming and performance issues. Especially we invite programmers and analysts having programming concerns.

Before attending this course, students must have:

- Basic computer knowledge, such as keyboard and mouse skills.
- Basic file-management skills. The student should know how to navigate to folders and files on a computer running Windows Vista / Windows 7.

No prior database experience is required.

## Certificates

Course participants receive completion certificates signed by ALX.

## Locations

- Warsaw (English) – Jasna 14/16A
- Online (English) – your home, office or wherever you want
- any other location (London, UK, EU) on request

## Price

990 EUR

The price includes:

- course materials,
- snacks, coffee, tea and soft drinks,
- course completion certificate,
- one-time consultation with the instructor after course completion.