



The lecture will start soon at
08:30



Aalto University
School of Business

MySQL for Data Analytics

Lecturer: Yong Liu

Contact me at: Yong.liu@aalto.fi

Content

- 1. Basic information of the course**
- 2. MySQL & Jobs**
- 3. MySQL & Business Analytics**
- 4. How to learn MySQL**
- 5. Relevance to company & Basics of MySQL**

Section 1: Basic information of the course



MySQL for Data Analytics

- Credits: 6 cr
- No. of Admitted students: 350 (380 registrations)
- Course homepage:
 - <https://mycourses.aalto.fi/course/view.php?id=36995>
- Course assistants:
 - Turunen Emmi (emmi.a.turunen@aalto.fi)
 - Khanal Shradha (shradha.khanal@aalto.fi)

In-course feedback system:

- <https://premo.aalto.fi/mysql/>

Drop Out of the Course and Vacated Seats

- 40-50 students are waiting for the seats
- If you do not want to continue with the course, please inform our TA immediately and this allows us to give the seats to those who need them. Thank you!

Content and Learning outcome

- **Course Content**

This course provides students with a comprehensive overview of MySQL. MySQL commands and examples of applying MySQL to really-life business analytics are the key content. A number of databases are provided to support you in practicing the database language and skills. Hands-on sessions provide the opportunity to practice MySQL with the assistance of the lecturer.

- **Learning Outcome**

The student taking this course learns about data management using the database language of MySQL. Students are expected to become skillful in manipulating different kinds of business data for different types of business analytics. Data manipulation and data management skills are necessary prerequisites for using business analytics.

Eye and book icon

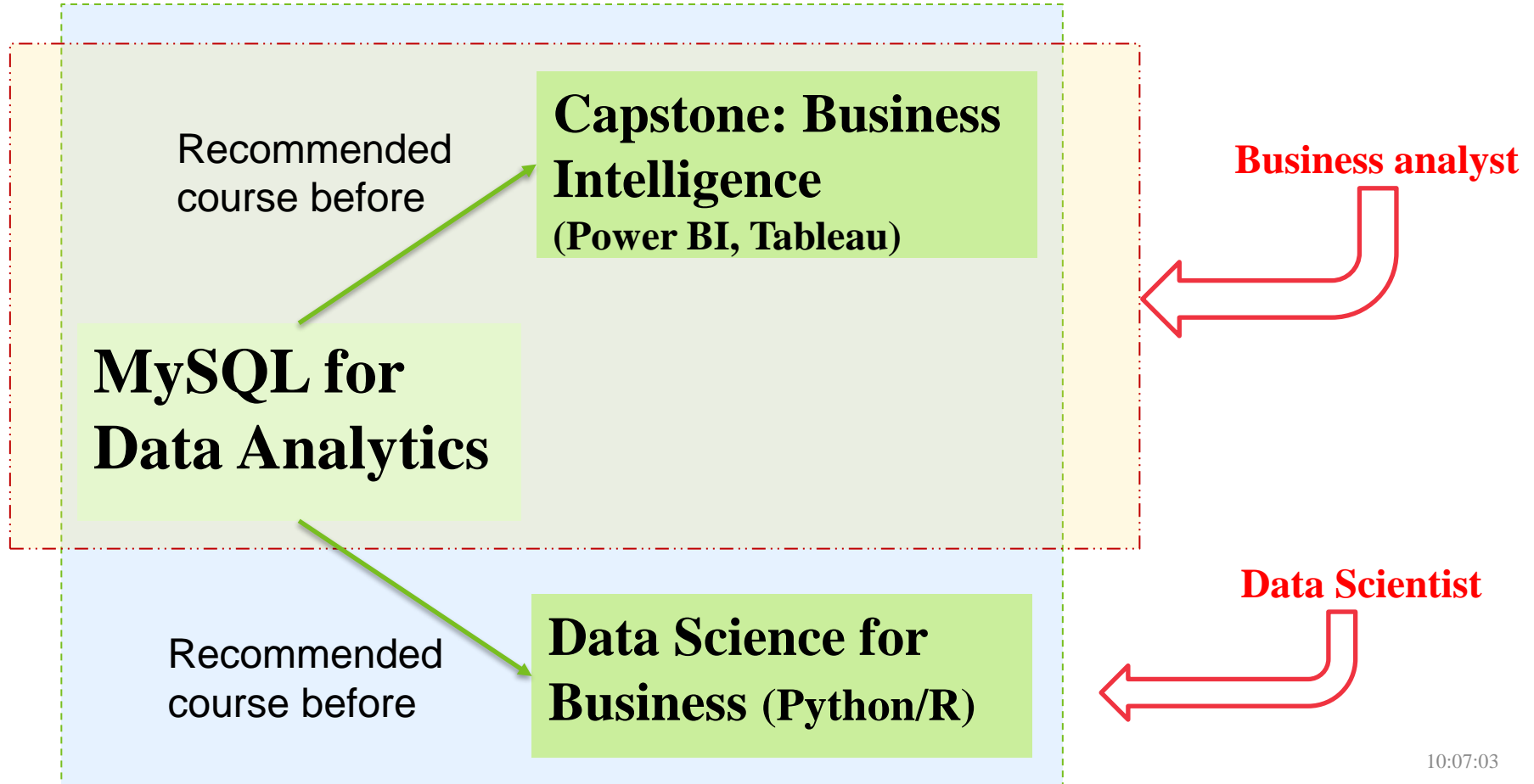


- **Extension of the course content**
- **The materials are not relevant to the big assignment!**



- **Read by yourself.**
- **The materials are useful, which might be relevant to the big assignment!**

Connection to Other Courses/Jobs



MySQL & Career Development

- **MySQL is a basic skill!!!**
- **Basic skills for CIO, CDO (Business School)**
- **You are expected to take an important managerial role, beyond the requirement for a programmer.**

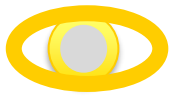
A person wearing a red shirt is holding an open, thick book with both hands. A glowing lightbulb is positioned directly above the center of the open book. The lightbulb is illuminated, casting a warm glow. The background is a plain, light-colored wall.

**In 1990s and 2000s,
we talk about
information literacy!**

**In 2020s, we talk
about data literacy!**

MySQL: A Basis of Data Literacy

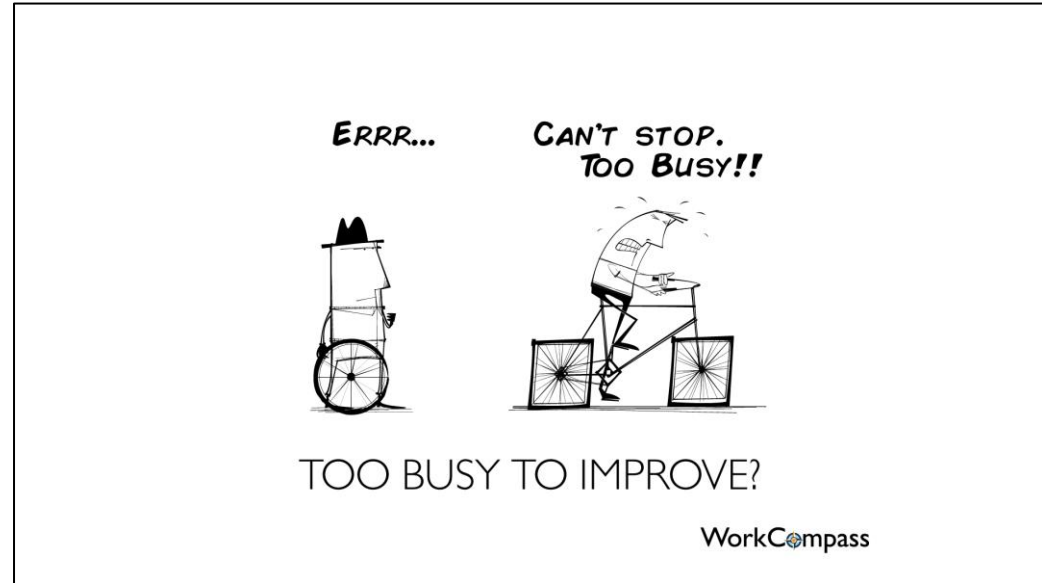
- **Data literacy: A must-have skill for future managers or business leaders**
 - Data literacy is the ability to access, read, understand, create, and communicate data as information and use data as a resource for decision-making.



Data Literacy and Being A Manager

A lack of data literacy among enterprise employees has become a key bottleneck for enterprise making a good use of their data!

“Poor data literacy is ranked as the second-biggest internal roadblock to the success of the CDO’s office, according to the Gartner Annual Chief Data Officer Survey. By 2023, data literacy will become essential in driving business value, demonstrated by its formal inclusion in over 80% of data and analytics strategies and change management programs.”



https://commons.wikimedia.org/wiki/File:Too_Busy_To_Improve_-_Performance_Management_-_Square_Wheels.png

Suggested after-course reading:

A Data and Analytics Leader's Guide to Data Literacy

Link: <https://www.gartner.com/smarterwithgartner/a-data-and-analytics-leaders-guide-to-data-literacy>

Schedule (7 lectures + 5 Exercises)

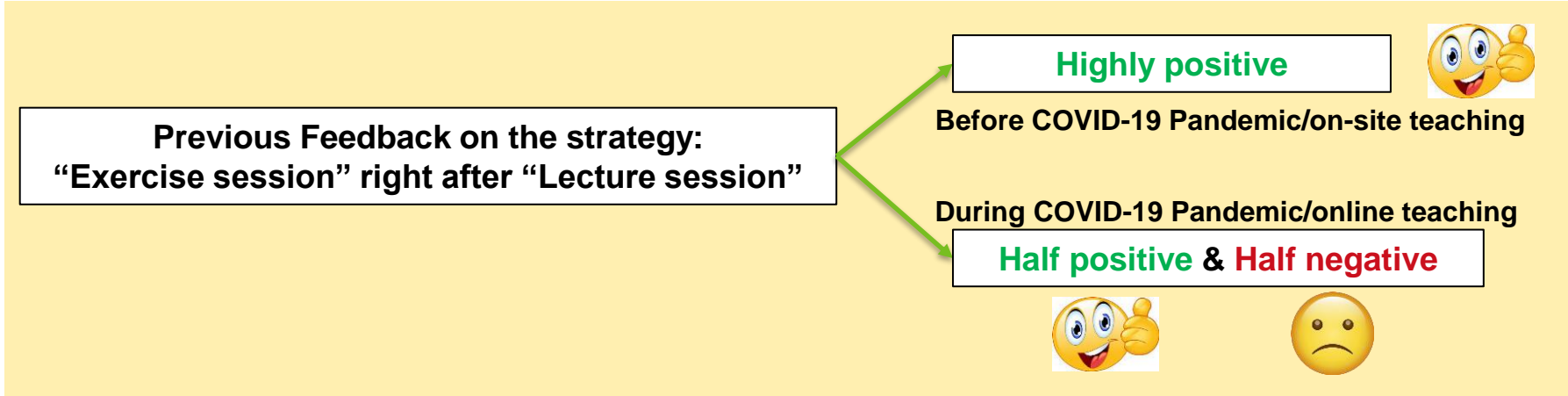
Week	First Sessions	Time	Second Sessions	Time
1	Wed 06.09.2023	08:30-10:00	Wed 06.09.2023	10:15-12:00
2	Wed 13.09.2023	08:30-10:00	Wed 13.09.2023	10:15-12:00
3	Wed 20.09.2023	08:30-10:00	Wed 20.09.2023	10:15-12:00
4	Wed 27.10.2023	08:30-10:00	Wed 27.10.2023	10:15-12:00
5	Wed 04.10.2023	08:30-10:00	Wed 04.10.2023	10:15-12:00
6	Wed 11.10.2023	08:30-10:00	Wed 11.10.2023	10:15-12:00

Blue background: lecture sessions (N = 7)

Yellow background: hands-on sessions (N = 5)

- Course period: September 6 to October 11
- Both lecture and hands-on sessions will be delivered on Zoom.
- **Zoom link:** <https://aalto.zoom.us/j/5138969960>
- Lecture sessions (**Not** hands-on sessions) will be video-recorded.
- **Hands-on Session Materials:** You can immediately work on the hands-on materials after the hands-on session starts – we have NO ‘opening speech’.

Hands-on Session: Feedbacks & Changes



• Reasons for Negative Feedback on the strategy:

1. Need to work, cook or do something else after the lecture. Thus, cannot attend the hands-on session right after the lecture.
2. Uncomfortableness to ask questions/share screen in front of others, or privacy concerns.
3. Cannot participate in the lecture or hands-on session due to e.g. work.

• Changes and Proposed Solutions

1. **Protection of Privacy**
 - Use of breakout room.
 - **Instruction** for the hands-on session in MyCourse.
2. **Hands-on sessions as a service**
 - If you need help, please email the lecturer or teaching assistants. We will reply to you or arrange a Zoom meeting to support you ASAP.

Performance Evaluation / Grading method

- Assignment evaluation (100%)
 - One big assignment for individuals (no teamwork!)
- Grading schema:

Grade (scale:1-100)	Final Grade (scale: 1-5)
> 90 (not including 90)	5
81 - 90 (not including 80)	4
71 - 80 (not including 70)	3
61 - 70 (not including 60)	2
51 - 60 (not including 50)	1
≤ 50	Not pass

Preparation for Big Assignment

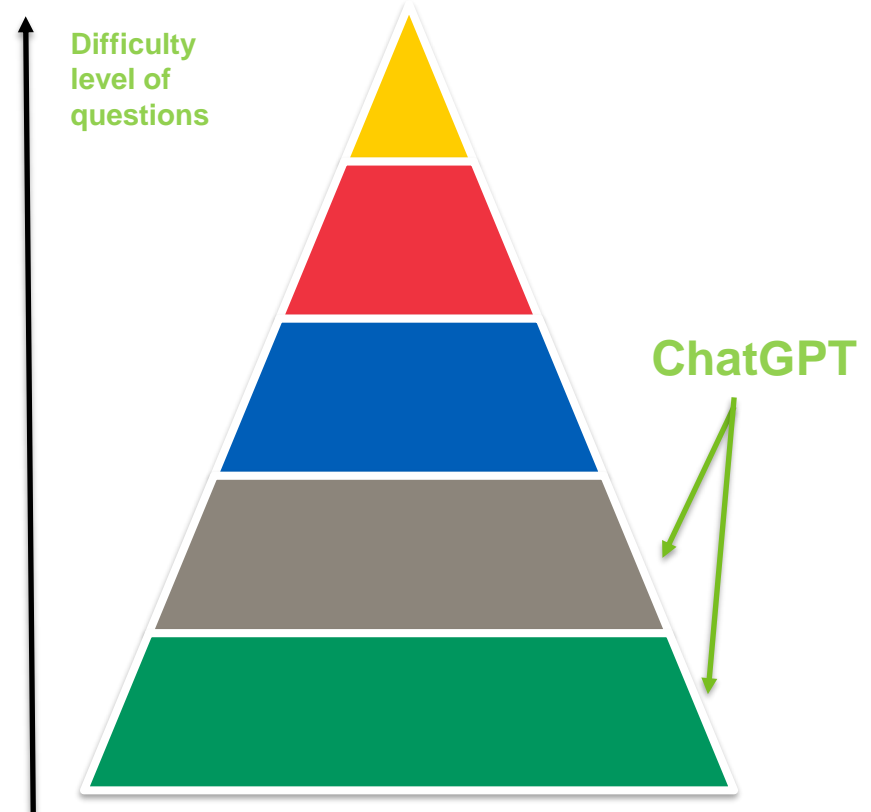
- You will have **one-month time** to do the big assignment after the last lecture of the course.
- Nonetheless, you could do some tasks of the assignment already after a few weeks of study.
- Practice is very important! (like getting a driving license)
- **Deadline:** November 11



ChatGPT, AI & guidelines

- **School Requirement:** “The instructions on using AI and possible restrictions in using it should be given to students at the beginning of the course. If a student uses AI against the given guidelines, the teacher should follow the same procedures as in other violations of ethics and rules of conduct”.
- **Understanding ChatGPT:** It can provide solutions to the most common coding problems when a relatively unified answer to the same problem can be found on the Internet a good number of times.

ChatGPT, AI & guidelines



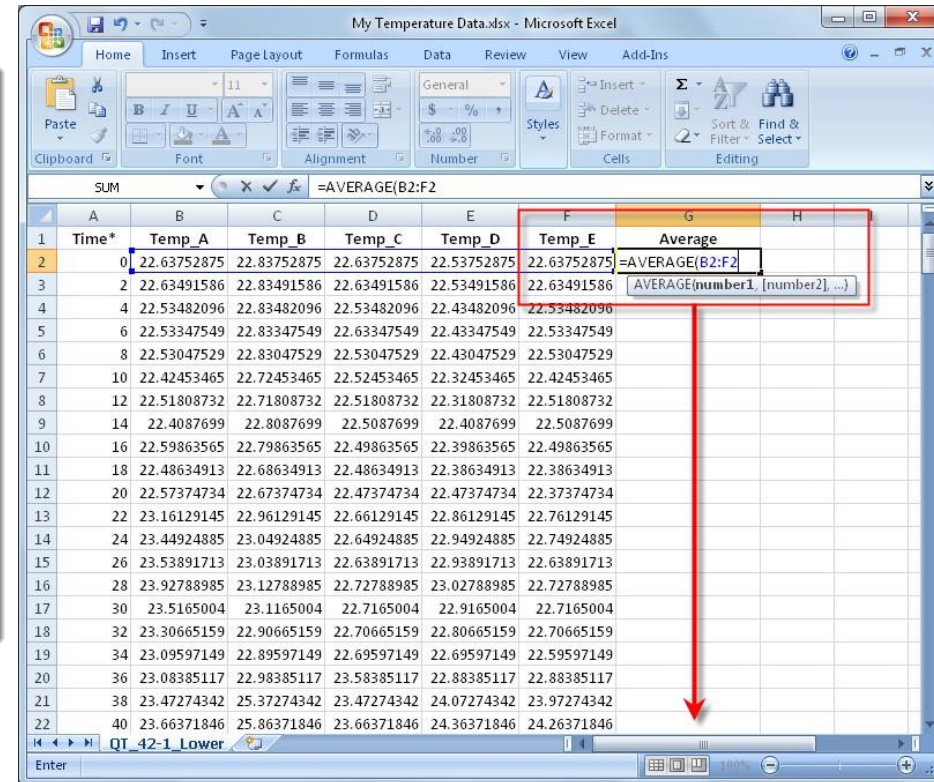
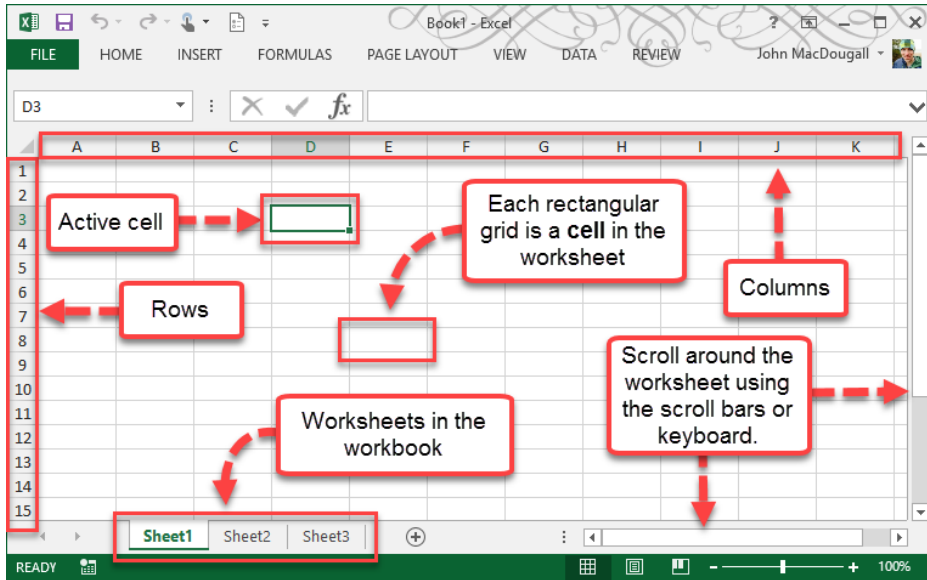
10:07:03

Guidelines of ChatGPT Usage

- **Avoid using it to instantly find answers upon encountering a question.**
- **Instead, utilize it when you've put in substantial effort but cannot arrive at a solution.**
- **If you receive a code solution from ChatGPT, ensure you understand the code afterward.**
- **For big assignments, you should NOT use ChatGPT!**
- **MySQL (likely the easiest programming language) vs. ChatGPT (like a translator). If you always rely on a translator, you cannot say you speak a good language. Note that this translator can only translate the most common sentences.**

Settings of the course

- 1. The course aims at helping **beginners**.
- 2. Students **without** a programming background can attend the course.



Course book

- **Pratt, P.J. and Last, M.Z. (2005). A guide to MySQL, Thomson.**

Online Materials for Learning MySQL

- **MySQL 8.0 Reference Manual**
<http://dev.mysql.com/doc/refman/8.0/en/index.html>
- **Inquiry on how to use MySQL**
<http://stackoverflow.com/>
- **Google is always a friend!**

Section 2. MySQL & Jobs



Database as a useful skill

indeed Find jobs Company reviews log in

What sql Where Finland Find jobs

Publication date Type of job Location Company The language of the workplace

Post your resume- It only takes a few seconds

sql jobs in Finland

Sorting criteria: Correspondence - Date 338 jobs

MS SQL Specialist (Junior) @CIS

THE FUTURE TOGETHER

487 in 2021
416 in 2022

indeed Etsi työpaikkoja Yrityksen arvostelut Kirjaudu sisään Työnantajat / L

What sql analytics Where Finland Find jobs

Julkaisupäivä Työpaikan tyyppi Sijainti Yritys Työpaikan kieli

Post your resume- It only takes a few seconds

sql analytics jobs in Finland

Sorting criteria: Correspondence - Date 73 jobs

Business Analyst

Partnering for Success

83 in 2021
84 in 2022

Senior Data Analyst, Product Analytics

[Smartly.io Job Board](#)

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Hae nyt



- Work closely with our Product Management and Product Design teams to build and optimize our customer experience with data.
- Build, develop and maintain reporting of key product adoption metrics (we use dbt)
- Develop an understanding of our product data and help develop our tracking of key features (we use Segment)
- Have end-to-end ownership of data: define data requirements and dive deep into data to provide actionable insights
- Develop an in-depth understanding of what drives the success of Smartly.io
- Be an important part of our higher level data-driven decision-making process as well as day-to-day product operations

What we are looking for:

- Fluent SQL skills (we use Snowflake)
- Proficiency in one or more BI and visualization tools like Looker, Tableau or Power BI (we use Tableau and Redash)
- Strong communication and presentation skills, you can turn data into stories and actionable insights
- Experience with product analytics or a strong interest in the field
- Experience with data modeling
- Understanding of typical key product KPIs for Social Media Advertising companies
- Experience with Python is a plus

Game Data Analyst

[Supercell](#)

Helsinki

Sinun on luotava Indeed-tili ennen kuin voit hakea työpaikkaa yrityksen sivustolla.

Hae työpaikkaa yhtiön sivuilla



If you are the curious mind we are looking for, the one who is always on the lookout for interesting and impactful information, a wizard at prioritization and pragmatism, then send us your application!

Responsibilities

- Help make our games even better!
- Use quantitative analysis to understand how the game is played and identify impact and growth opportunities
- Support the game team in their day-to-day needs: facts, ideas, monitoring and assessing impact of design decisions
- Proactively come up with actionable analyses across game design, monetization strategies, marketing strategies
- Use sound analytics to improve our business from marketing to in-game events and offers
- Collaborate with other scientists and engineers to expand the ways we are using our data to improve our games

Requirements

- Years of experience in working as a product scientist or similar role
- Coding skills with R or python, and SQL at a proficient level
- Fluent in the data science workflow, applying statistics, understanding biases
- Great communication skills, both written and spoken, especially for non-technical audience
- Skills to work with a team but also work autonomously
- Proactive drive to improve our games and yourself, too

Nice-to-haves:

Section 3. MySQL & Business Analytics



A day in the life of Consultant

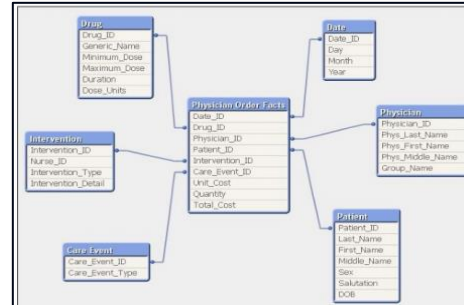


Tuukka Pesonen



Jesse Rajala

Data transformation and modelling ~ 70 %



Front end development ~ 20 %



Meetings ~ 10 %



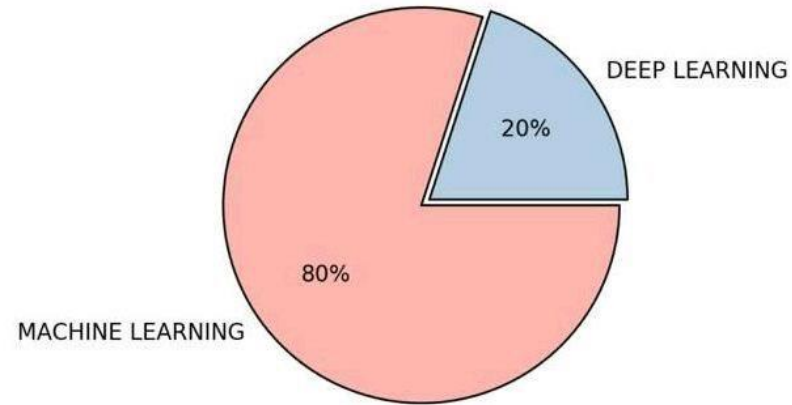
Breakdown of working hours

A day in the life of a data scientist

https://twitter.com/michael_warren/status/1346281975594721280

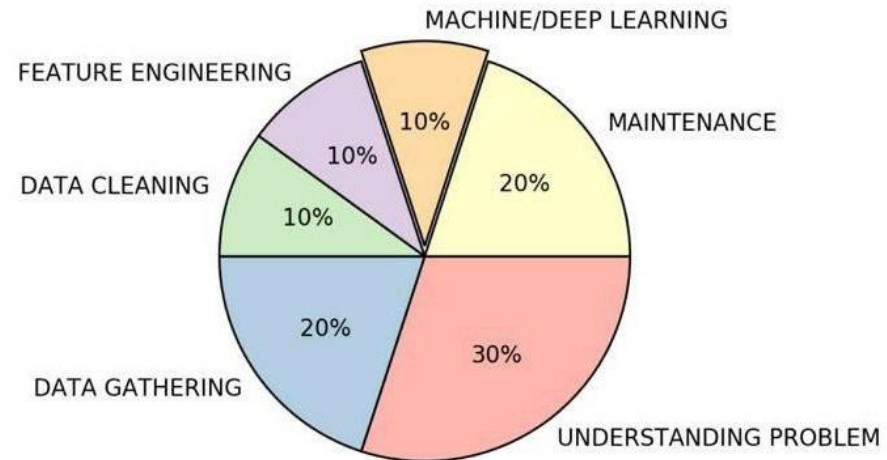
DATA SCIENTIST JOB - EXPECTATION

@drangshu

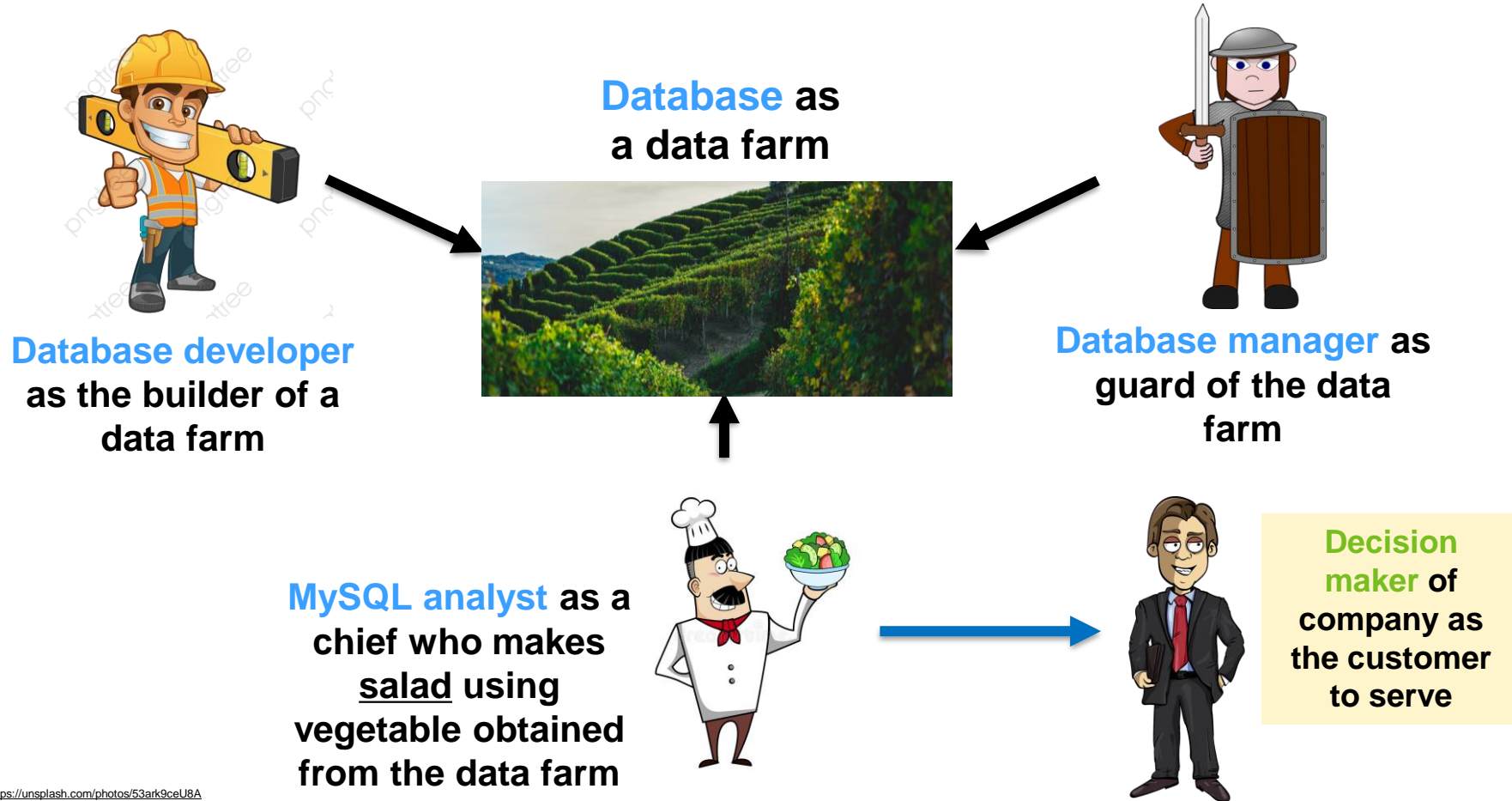


Follow: Dr. Angshuman Ghosh

DATA SCIENTIST JOB - REALITY



People Working with Database



An Analytical Mind/Data Literacy?

- **Why it is important?**
- **How to obtain an analytic mind?**
 - You will understand what is an analytic mind via doing the *big assignment*.



Data

SQL

SQL + analytic mind



More organized data



Business insights

Section 4.

How to learn

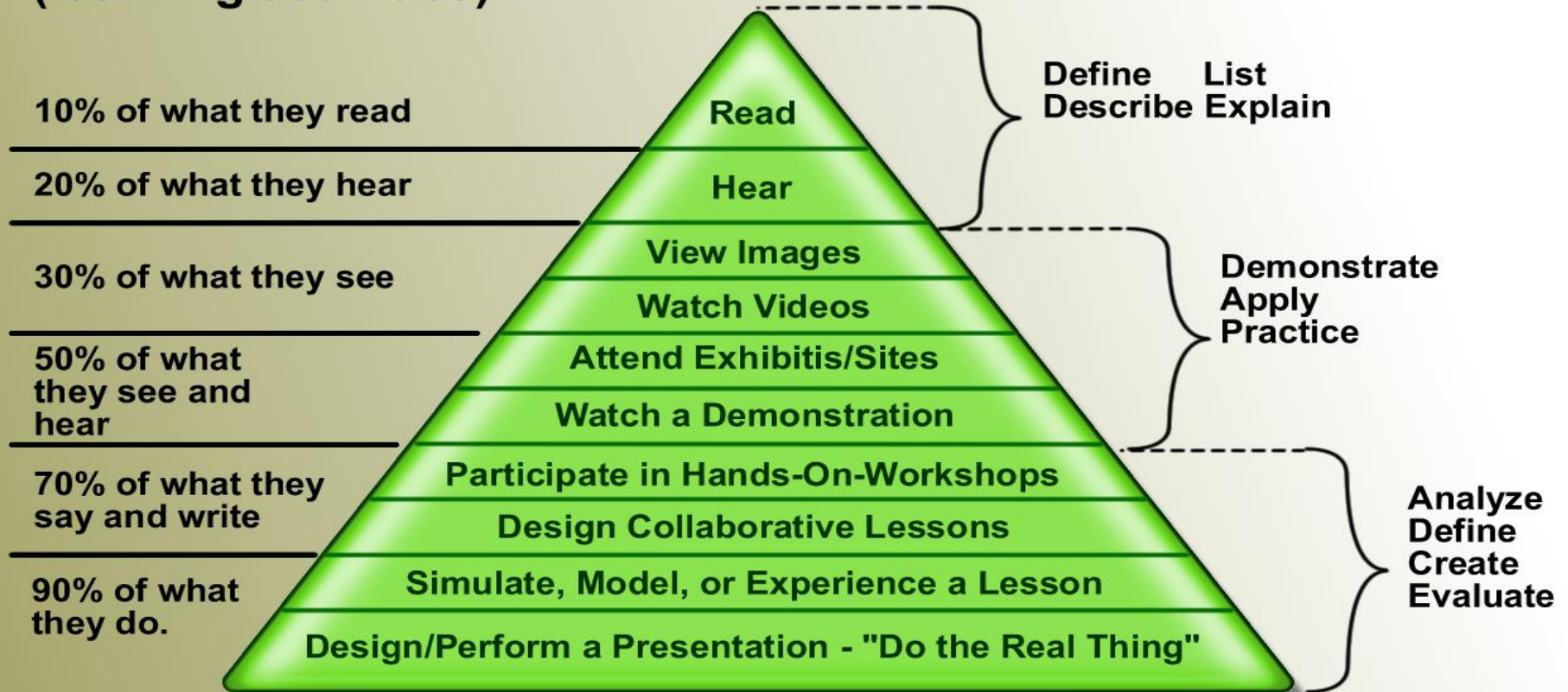
MySQL



Edgar Dale's Cone of Experience

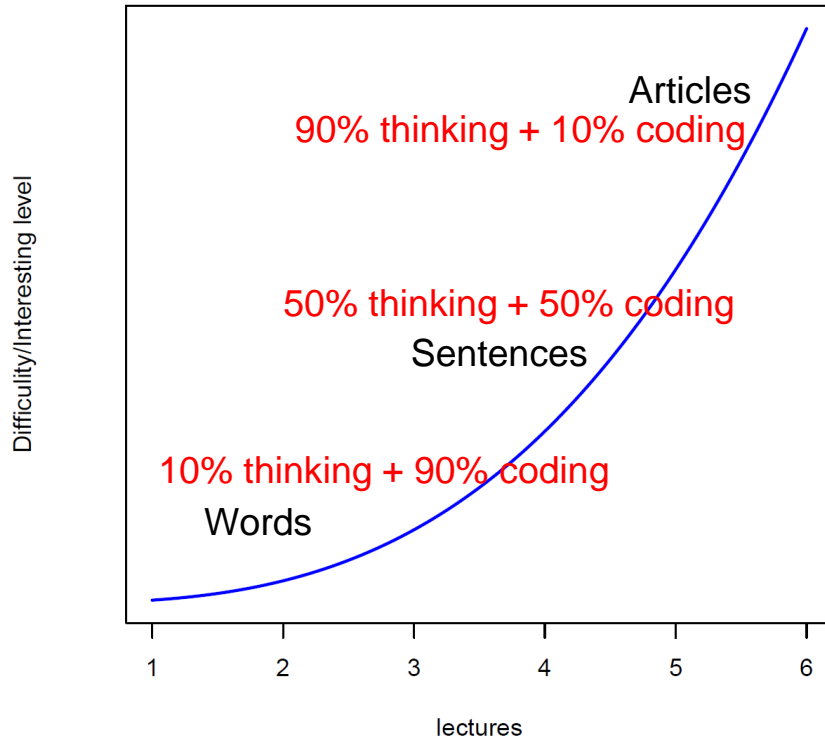
**People generally remember...
(learning activities)**

**People are able to...
(learning outcomes)**



10:07:03

MySQL as a language



- The first few lectures demand more memorization work, and very few critical thinking.
- The last few lectures demand more critical thinking, in addition to some memorization work.

Advices:

- **Keep pace with the lectures.** Otherwise, you will find the last few lectures tremendously difficult, if you are unfamiliar with basic MySQL vocabulary.

MySQL as a language: Words → Sentences → Articles

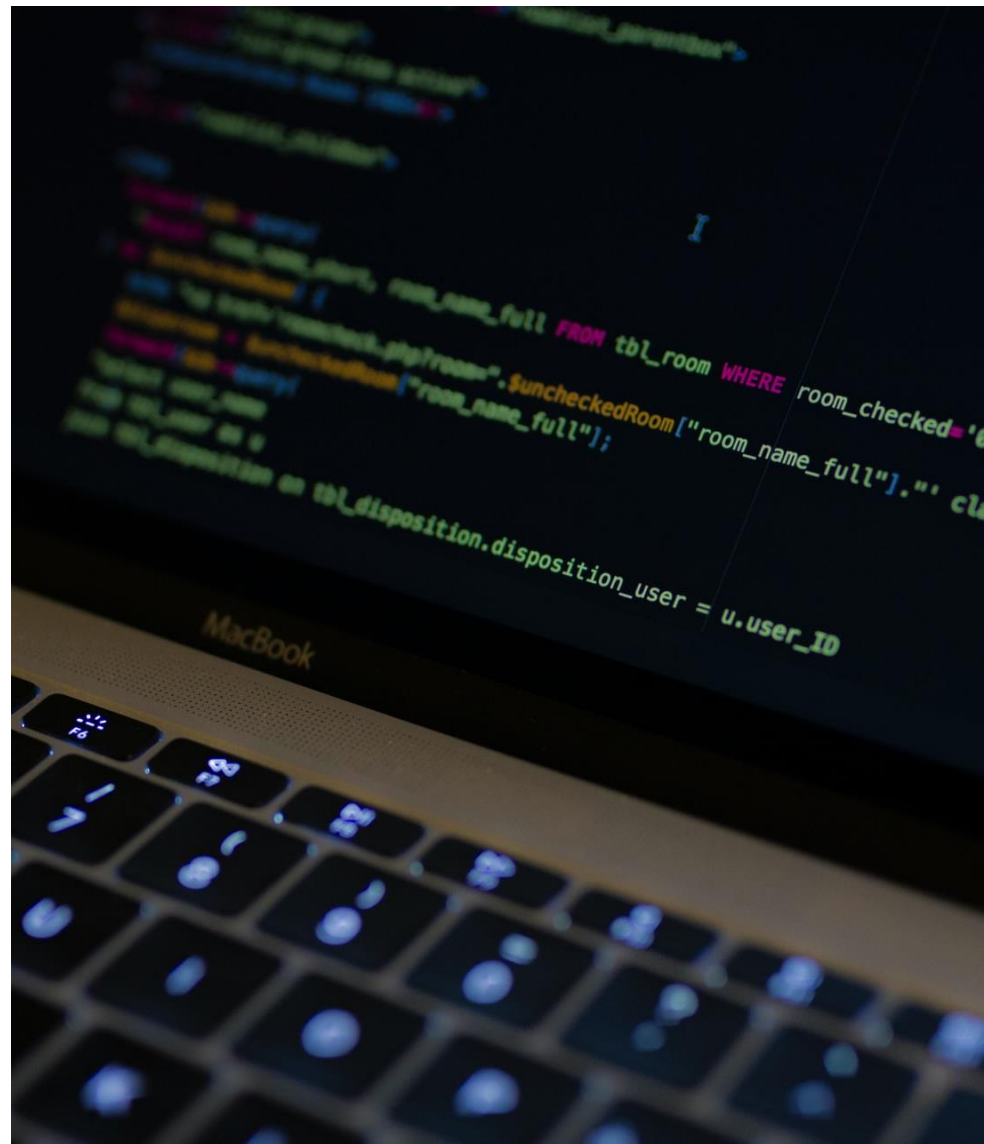
In order to be benefited!

- **Practicing the software** is the only way to gain the skills!
- Using MySQL as your main working station to host and manipulate dataset! **Make it to be your own habit!**
- You need to spend **sufficient time** together with MySQL so that the software becomes **a friend of** you in your future career development!

Programming is not necessary a difficult thing, but I need your confidence plus some efforts of ‘hard working’!

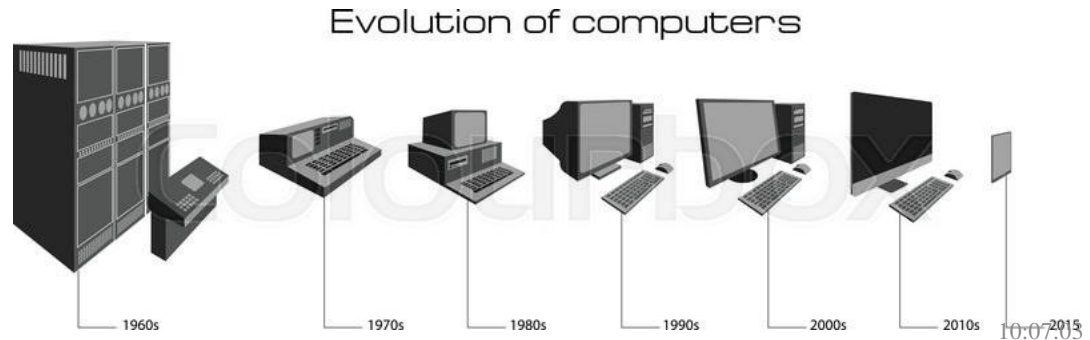


Section 5. Relevance & Basics of MySQL



Relevance of DB to company (1)

- 1. Nowadays, (electronic) data can be easily collected and stored, to form a **big data**!
- 2. For companies, they do not lack data—they lack employees who can use the data (or **analyzing the data**)!
- 3. Top business schools are gambling the future on business analytics!



Relevance of DB to company (2)

- **Make unorganized raw data to be organized so that it is ready for analysis.**
 - Most time, raw data cannot be used directly.

It can only be used after being 'cleaned' or summarized.
 - Most time, raw data is too big to be used (e.g., too many unnecessary variables, data are scattered and saved in different tables or places)

Thinking about this example

- 1. You have access to the database of a retailing company who operates tens of supermarkets across many cities.
- 2. You want to investigate the relationship between **revenues of individual supermarkets** and **populations of the residential areas** where the supermarkets are located.

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PIES	1.50	
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SPRING ROLLS	1.00	
PIZZA	1.75	
YORKIE BAR *	0.56	
CRUNCHY STICKS *	0.85	
PREGNANCY TEST *	3.57	
TOTAL	12.58	
Visa Debit SALE	12.58	
AID : A0000000031010		
NUMBER : *****8042	ICC	
PAN SEQ NO : 01		
AUTH CODE : 091040		
MERCHANT : 46200802		
START : 03/08 EXPIRY : 02/11		
Cardholder PIN Verified		
CHANGE DUE	0.00	

CLUBCARD STATEMENT

CLUBCARD NUMBER 63400402404076806*

POINTS THIS VISIT	24
INCLUDES :	
DOUBLE POINTS	12
TOTAL UP TO 06/12/10	54
TOTAL INCLUDES :	
GREEN CLUBCARD POINTS	0

10:07:03

7/12/10 17:52 2008 074 9074 7113

A simple comparison between SQL and Excel

	Excel	SQL
Avoid accidental changes to data		👍
Complexity of vocabulary		👍
Capability to replicate previous analysis		👍
General speed of data manipulation		👍
Access to high computing power		👍
Manipulation of large data files		👍
Calculation capability	👍	

Relevance of DB to your career (1)

“The Finnish national curriculum takes coding farther than any other European country. In Finland, **starting fall 2016**, coding is a **mandatory**, cross curricular activity that starts from first year of school”.

Finnish schoolchildren develop coding for curriculum

SOCIETY · EDUCATION

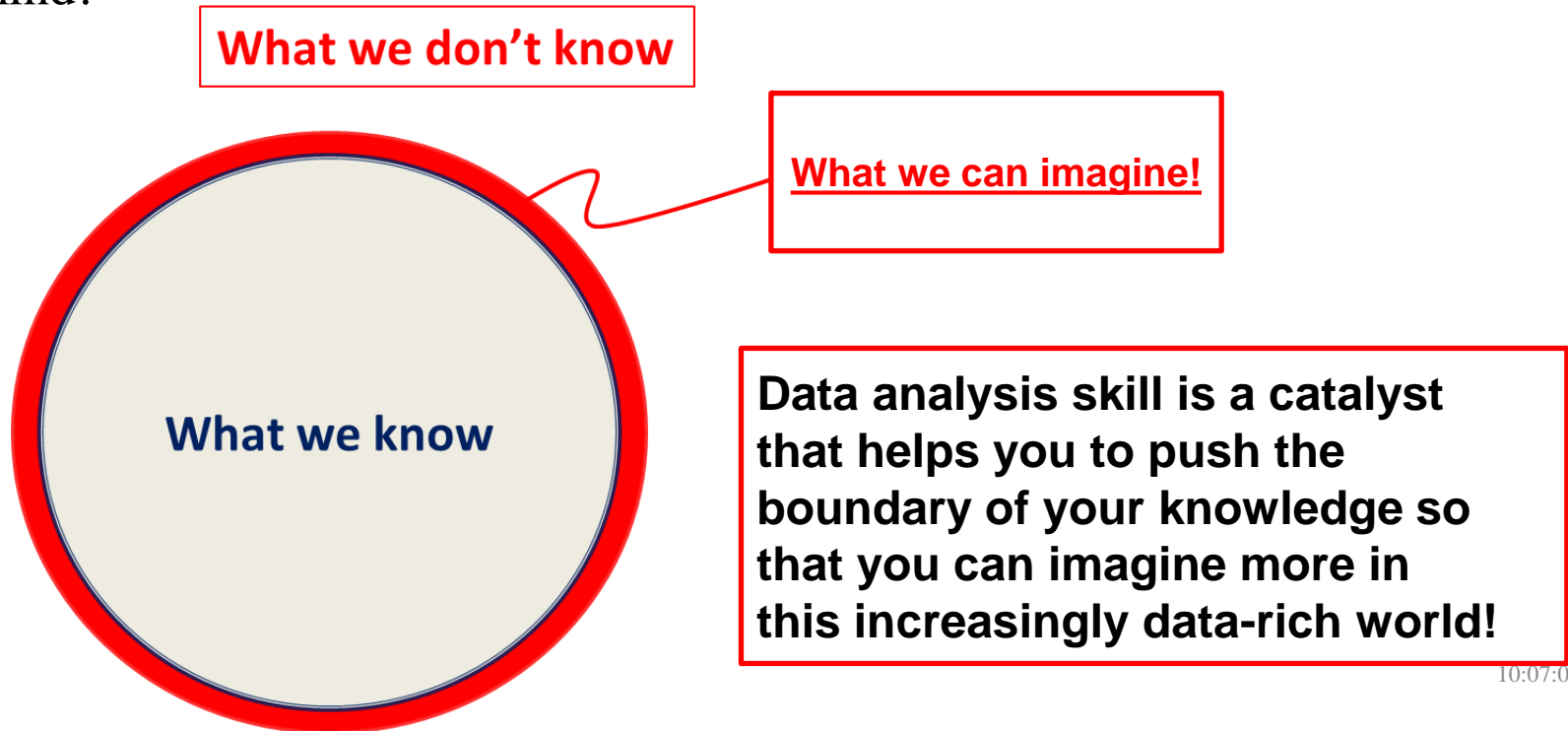


Technology is already widely utilised in the Finnish classroom. Learning coding is the latest step towards an innovative future.

© MARKKU ULANDER / OULUPOSTI

Relevance of DB to your career (2)

- An important skill to understand the future business practice.
- You will start to see the beauty of programming and to cultivate an analytic mind!



**Finally, it is nice to be capable of
exploring this world via data!**



First Impression on MySQL

Statistic analysis capability



SPSS[®]



Excel



Data manipulation/management
capability

*Mainly operated
through clicking
on menu*

*Mainly operated
through writing
code*

What is database? (e.g., Youtube)

A database is a structured collection of data.



On average, how many 'likes' on the videos upload by a user – *John*, have received?

What is an unstructured collection of data?

User(author)	Gender	Video title	Time of uploading	User(reviewer)	Comments
UserA	Male	MySQL tutorial 1	05/05/2022 18:56	UserB	First comment
UserA	Male	MySQL tutorial 1	05/05/2022 18:56	UserB	Second comment
UserA	Male	MySQL tutorial 1	05/05/2022 18:56	UserC	Third comment
UserA	Male	MySQL tutorial 1	05/05/2022 18:56	UserD	Forth comment
UserA	Male	MySQL tutorial 1	05/05/2022 18:56	UserF	Fifth comment



Importance of database knowledge (an example of Youtube)

Whether females receive more comments/feedbacks on their videos than males do on average?

- To answer the above question, you need to:
 - Find **the list of** videos uploaded by the users (**ID**) who specified their gender as female. — **table User and Videos**
 - Count the number of **comments on the videos that appear in the above list.** — **table User and Videos and Comments**
 - Count the number of the users (**ID**) who specified their gender as females — **table User**
 - Get the average value for female users
(number of comments / number of females)
 - Repeat the analysis for males.

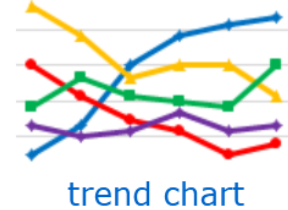
Market share



DB-Engines Ranking

The DB-Engines Ranking ranks database management systems according to their popularity. The ranking is updated monthly.

Read more about the [method](#) of calculating the scores.



422 systems in ranking, September 2023

Rank			DBMS	Database Model	Score		
Sep 2023	Aug 2023	Sep 2022			Sep 2023	Aug 2023	Sep 2022
1.	1.	1.	Oracle +	Relational, Multi-model i	1240.88	-1.22	+2.62
2.	2.	2.	MySQL +	Relational, Multi-model i	1111.49	-18.97	-100.98
3.	3.	3.	Microsoft SQL Server +	Relational, Multi-model i	902.22	-18.60	-24.08
4.	4.	4.	PostgreSQL +	Relational, Multi-model i	620.75	+0.37	+0.29
5.	5.	5.	MongoDB +	Document, Multi-model i	439.42	+4.93	-50.21
6.	6.	6.	Redis +	Key-value, Multi-model i	163.68	+0.72	-17.79
7.	7.	7.	Elasticsearch	Search engine, Multi-model i	138.98	-0.94	-12.46

10:07:03

MySQL and Oracle are similar

Create a customer database in MySQL:

```
CREATE DATABASE customers;
```

Create a customer database in Oracle:

```
CREATE DATABASE customers;
```

Selecting records from the customer table

In MySQL:

```
SELECT * FROM customer;
```

In Oracle:

```
SELECT * FROM customer;
```

Updating records in the customer table

In MySQL:

```
UPDATE customer SET branch="main" WHERE custage > 2;
```

In Oracle:

```
UPDATE customer SET branch="main" WHERE custage > 2;
```

Database Languages (Oracle vs. MySQL)

- **Oracle is designed for enterprise customers with a big enough budget and more complex business needs.**
- **MySQL is a lower-cost database that is most used for database-driven websites and non-mission critical applications.**

History of MySQL



- **MySQL was created by a Swedish company, MySQL AB and the first version of MySQL appeared on 23 May 1995.**
- **In January 2008, Sun Microsystems bought MySQL for \$1 billion.**
- **In April 2009, Oracle Corporation entered into an agreement to purchase Sun Microsystems, then owners of MySQL copyright and trademark.**
- **Two different editions: the open source MySQL Community Server and the proprietary Enterprise Server.**

Key features of MySQL

1. MySQL is a database management system (DBMS).

- To add, access and process data stored in a computer database, we need a database management system such as MySQL server.
- The SQL part of “MySQL” stands for “Structured query language”.

2. MySQL databases are relational.

- A relational database stores data in **separate tables** rather than putting all the data in one big storeroom. The database structures are organized into physical files optimized for speed.
- You set up rules governing the **relationships** between different data fields, such as one-to-one, one-to-many, unique between different tables.

Key component of relational database

- **Relational database consists of tables.**
- **Table consist of row (records, or observations, samples) and column (attributes, or variables)**
- **Tables are ‘connected’ via foreign key.**
 - Example: Table 1 records user ID, users’ names, age, gender. Table 2 records user ID and users’ videos. Both tables are ‘connected’ by user ID (unique for each user).
- **Records in a table can have unique identifier—
Primary key.**

Characteristics of a table

- A two-dimensional structure with rows and columns.
- Each table must have an attribute to uniquely identify each row **[Primary key]**.
 - There are no duplicate rows.
- Column values all have the same data type.
- Order of the rows and columns is immaterial to the DBMS.

🔑 employeeNumber	lastName	firstName	extension	email	🌿 officeCode	🌿 reportsTo	jobTitle
1 002	Murphy	Diane	x5800	dmurphy@classicmodelcars.com	1	(NULL)	President
1 056	Patterson	Mary	x4611	mpatterso@classicmodelcars.com	1	1 002	VP Sales
1 076	Firrelli	Jeff	x9273	jfirrelli@classicmodelcars.com	1	1 002	VP Marketing
1 088	Patterson	William	x4871	wpatterson@classicmodelcars.com	6	1 056	Sales Manager (APAC)

Key features of MySQL

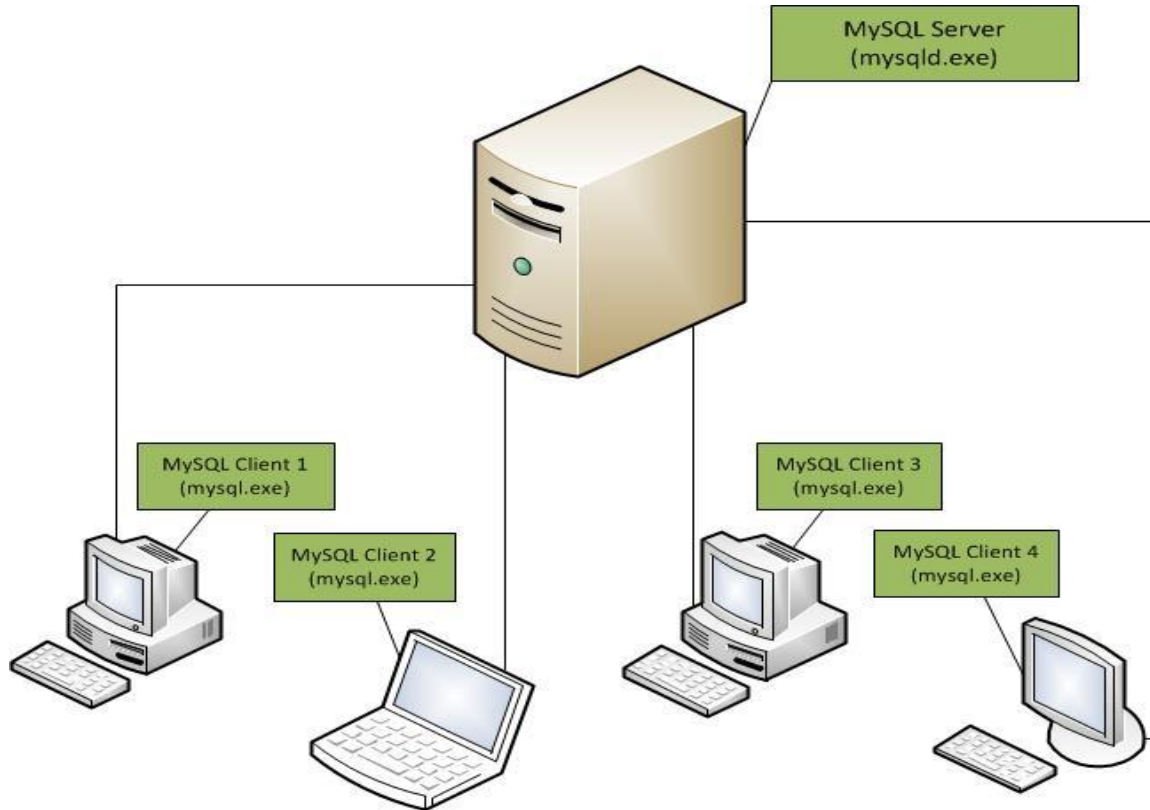
3. MySQL software is Open Source.

- **Open source: anyone can use and modify the software**
- **Free (community version)**
- **You may change the source code to suit your need.**

4. The MySQL Database Server is very fast, reliable, and easy to use.

5. MySQL Server works in client/server or embedded systems.

MySQL client/server



- Enabling you to take advantages of high-performance computers or servers.
- You can also set up a local server in your personal PC.

MySQL client/server - Kill a process



1. A worker sends a command to a MySQL server to do a time-consuming task via his/her **office** computer on Thursday afternoon.



2. S/he checked the command status at home via her/his personal computer in the evening, which is still not completed.



3. The command is still not completed on Friday morning, so s/he decides to cancel the command to free the server.



- Very often that a command takes hours to operate when using big data. MySQL server will operate the command [e.g., create a new table] from you, irrespective of whether you closed HeidiSQL (or MySQL) from your own computer or not.
- A very useful function to free your server from a resource-consuming command sent by you or by other users (if you are an administrator). You can “tell” a server to cancel the command through any computer via your MySQL account.

MySQL licensing

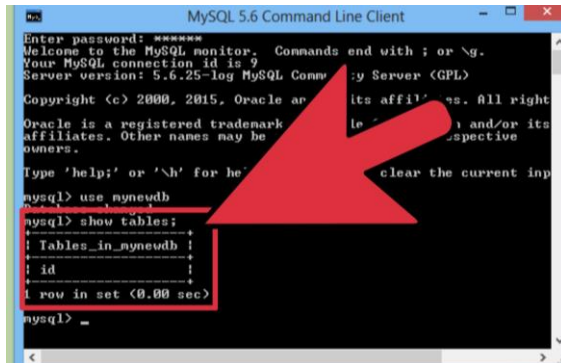
- **Open source license (MySQL Community Edition):**
MySQL is available via the GNU Public License (GPL) for no charge.
 - For instance, if you are using MySQL as a database on a website, MySQL is free for you, even if you are making money with your website.
- **Commercial license (MySQL Enterprise Edition):**
 - If you use MySQL as a part of a new software product and wants to sell the new product, you needs to purchase a commercial license.

The 'nature' of MySQL (personal feeling)

- **Learning MySQL is like learning a language with 30-50 most common-used vocabulary and a few simple grammars.**

Prerequisites to use MySQL

- **MySQL**
 - MySQL is available on computers in many of the school's computer labs and VDI.
- **MySQL GUI** (graphical user interface)
- **An account to access a MySQL server**
 - An account to access a **remote** server
 - A root account: Setup your own computer as a **local** server



```
MySQL 5.6 Command Line Client
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 5.6.25-log MySQL Community Server (GPL)

Copyright (c) 2000, 2015, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective owners.

Type 'help;' or '\h' for help; Type '\c' to clear the current input statement.

mysql> use mynewdb
mysql> show tables;
+-----+
| Tables_in_mynewdb |
+-----+
| id                 |
+-----+
1 row in set (0.00 sec)

mysql> _
```

10:07:03

MySQL Graphical User Interface (GUI) tools

1. Workbench (Free)
2. Navicat (US\$ 149 for Standard edition)
3. Sequel Pro (Free, Mac OS)
4. phpMyAdmin (A browser-based tool)
5. **HeidiSQL** (This tool is free, which will be used in our course)
6. A+ (Aalto) ? (cannot change value, add/remove column or build key – not good for beginner)

We have prepared for you...

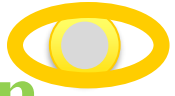
- *MySQL has been installed on the computers in several labs.*
- **MySQL database accounts** to the remote server have been created for you.
- MySQL server can also be **used at home via VDI**
 - Instruction on how to use VDI (Virtual Desktop Infrastructure) is available at MyCourse.
 - *MySQL & HeidiSQL has already been installed to your VDI.*
 - You can set up a root account by installing MySQL on your own computer! However, this is actually NOT encouraged.

If you want to install MySQL at your personal computer, it will be your own responsibility to handle the installation errors, because of a lack of labor to deal with these errors.

Reasons: It may take 1 – 3 hours to find the solution to an error (e.g., forgotten password) if lucky.

Facts: MySQL updates every few months while solutions to reset a root password are different for different operating systems.

Installation of MySQL community version



- **Go to:**
<https://dev.mysql.com/download/mysql/>
- **How to install:** please check more recent Youtube video about how to install MySQL.


[General Availability \(GA\) Releases](#) [Archives](#) [i](#)

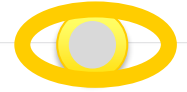
MySQL Community Server 8.1.0 Innovation

Select Version:
8.1.0 Innovation ▼

Select Operating System:
Microsoft Windows ▼

Windows (x86, 64-bit), MSI Installer (mysql-8.1.0-winx64.msi)	8.1.0	146.9M	Download
		MD5: 453d729afa2697a7a79d067830e071a6 Signature	
Windows (x86, 64-bit), ZIP Archive (mysql-8.1.0-winx64.zip)	8.1.0	236.9M	Download
		MD5: 40a977d01e565b1d751ca068c823ba16 Signature	
Windows (x86, 64-bit), ZIP Archive Debug Binaries & Test Suite (mysql-8.1.0-winx64-debug-test.zip)	8.1.0	676.3M	Download
		MD5: ec71c02d9e6094e17dd764a2ee654fe0 Signature	

 We suggest that you use the [MD5 checksums](#) and [GnuPG signatures](#) to verify the integrity of the packages you download.



Download HeidiSQL 12.5, released on 08 May 2023



Installer, 32/64 bit combined



Portable version (zipped): 32 bit ≈ 64 bit ≈



Sourcecode



Previous releases

Donate

Support making HeidiSQL better and better

Compatibility notes

- HeidiSQL runs fine on Windows 10 and 11 (and on Windows 7 + 8 with some minor issues)
- Running HeidiSQL on Wine can have various issues, depending on the version of Wine and HeidiSQL.

Nightly Builds of heidisql.exe

Latest automatically compiled main executable and installers for HeidiSQL. Just download and overwrite your existing `C:\Program Files\HeidiSQL\heidisql.exe`. Be aware that these builds are not official releases and therefore probably have more bugs, possibly serious ones.

Revision
12.5.0.6687

Issue #872: fix crash when opening a table with columns defined as INVISIBLE, and ensure such columns are selected and visible in the data grid

committed: 29 Aug 2023 13:42

compiled: 29 Aug 2023 14:25

64bit build 22.8 MB ≈

Revision
12.5.0.6686

Update SQLite libraries to v3.43.0

committed: 25 Aug 2023 09:09

compiled: 25 Aug 2023 09:26

32bit build: 16.6 MB ≈

64bit build 22.8 MB ≈

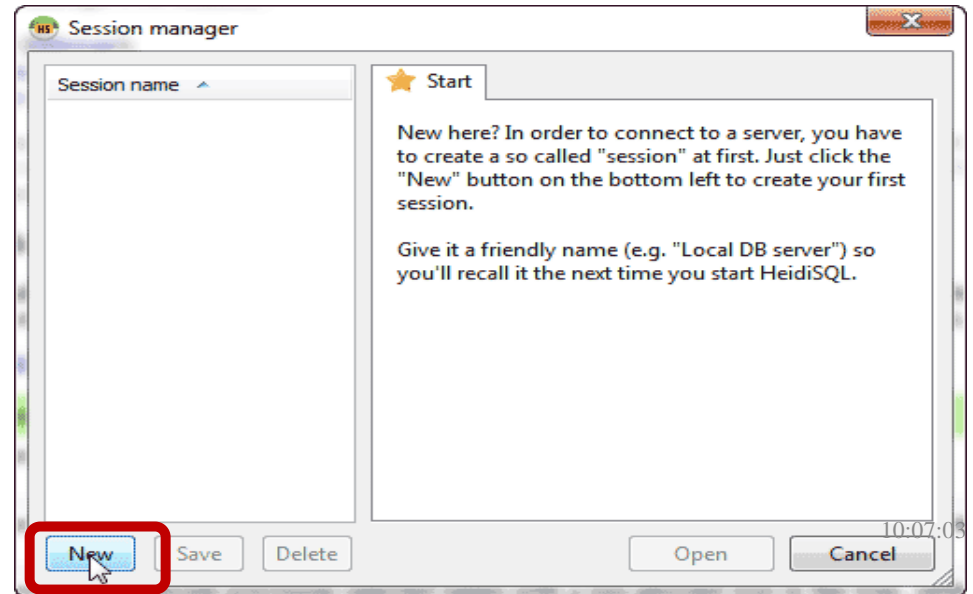
32+64bit installer 40.5 MB ≈

10:07:03

<https://www.heidisql.com/download.php>

Connecting MySQL server with HeidiSQL

- Icon for HeidiSQL
- Step 1: Open Heidi SQL.
- Step 2: Click New.

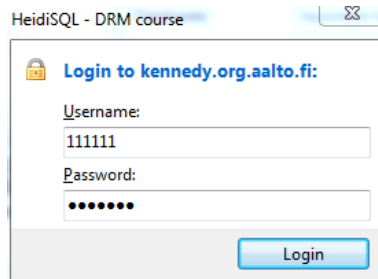


Setup a remote connection

- Network type: **MySQL (TCP/IP)**.
Hostname / IP: **johnson.org.aalto.fi**
- User ID: **studentnumber**
- Password: **P + studentnumber**
- Port: **3306**
- Databases: Leave as
“Separated by Semicolon”
- Comment: Leave it blank

You can access this server via a university computer OR via VDI

Such as: P123456



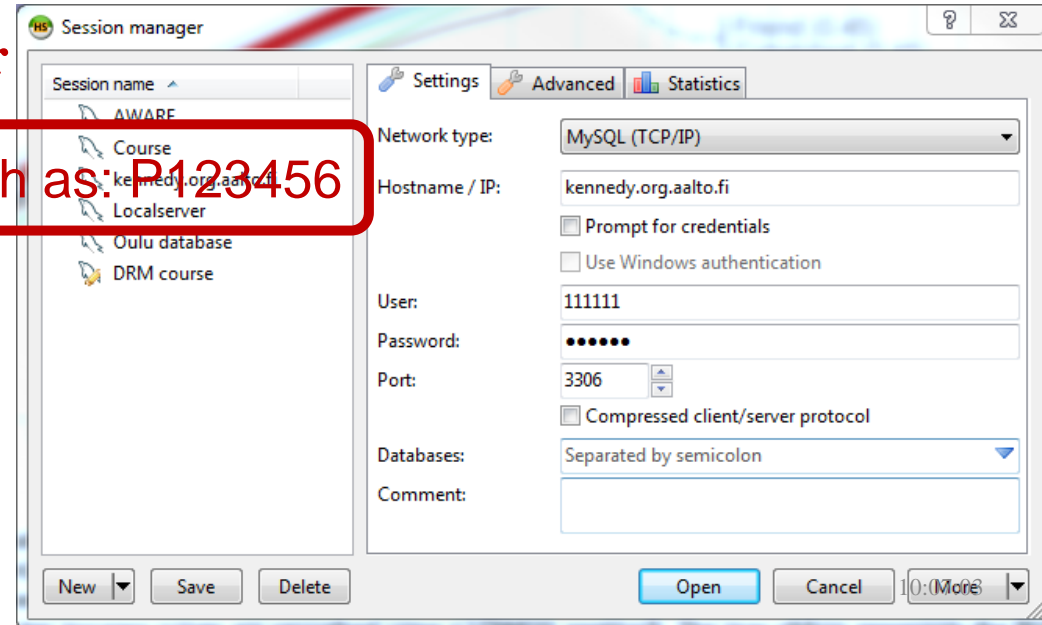
HeidiSQL - DRM course

Login to kennedy.org.aalto.fi:

Username:
111111

Password:
.....

Login



Session manager

Session name: AWARE, Course, kennedy.org.aalto.fi, Localserver, Oulu database, DRM course

Settings | Advanced | Statistics

Network type: MySQL (TCP/IP)

Hostname / IP: kennedy.org.aalto.fi

☐ Prompt for credentials

☐ Use Windows authentication

User: 111111

Password:

Port: 3306

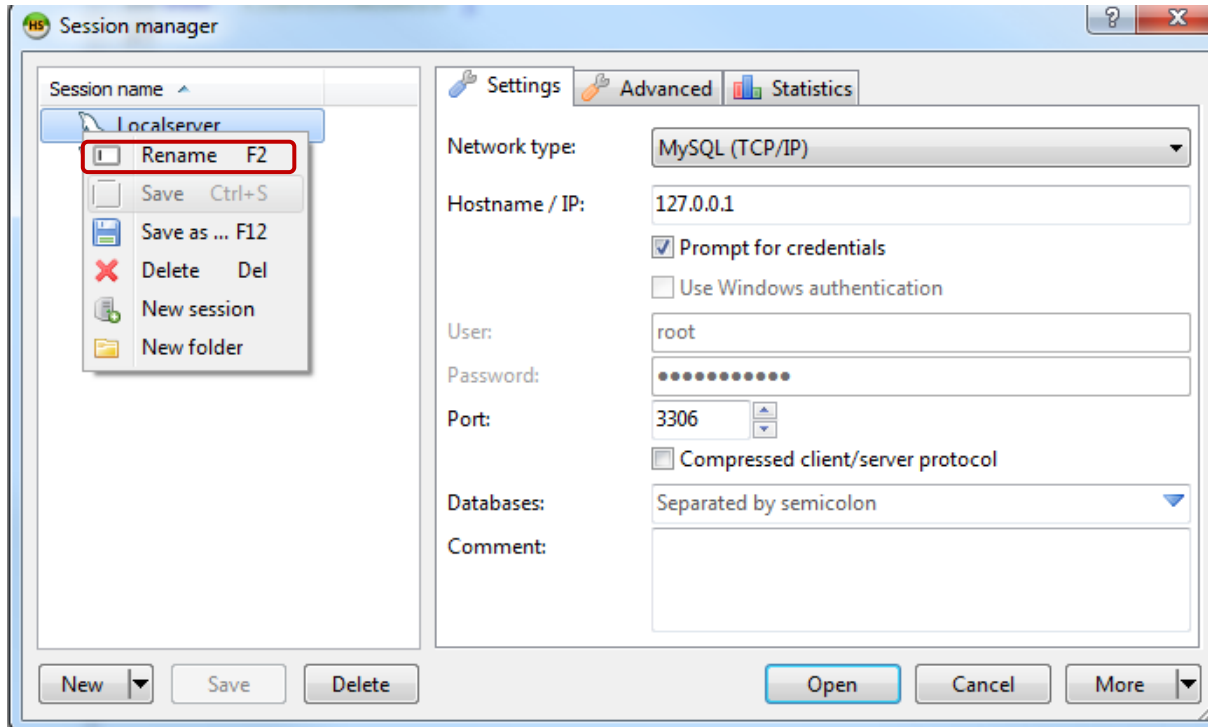
☐ Compressed client/server protocol

Databases: Separated by semicolon

Comment:

New Save Delete Open Cancel 10: (More)

Rename database session

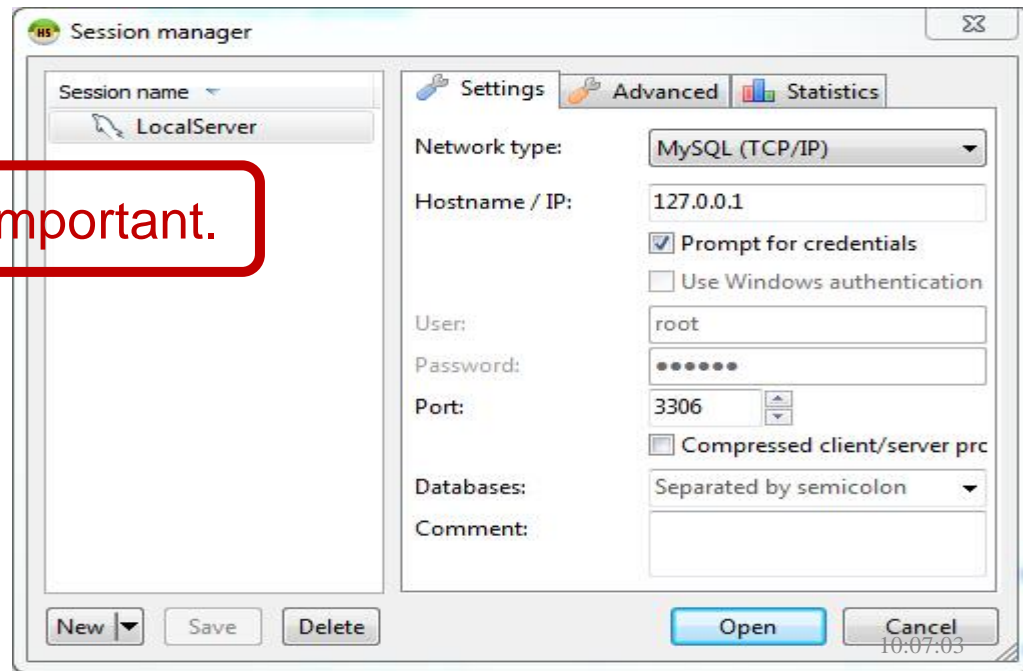
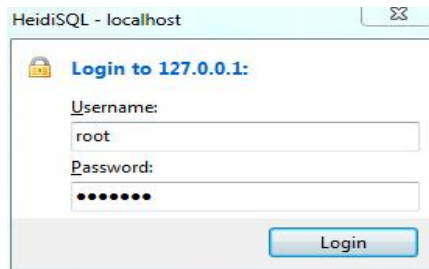


Setup a local server

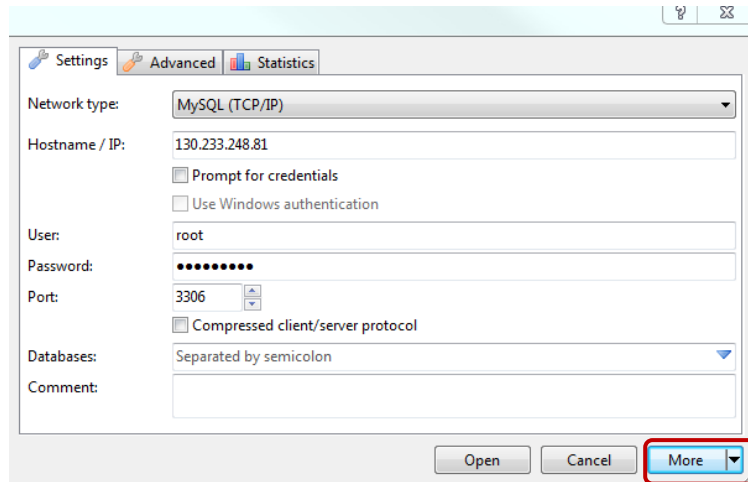
- Network type: MySQL (TCP/IP).
Hostname / IP: **127.0.0.1**
- User: **root**
- Password:
- Port: **3306**
- Databases: Leave as
“Separated by Semicolon”
- Comment: Leave it blank

Local server works, if you have actually installed MySQL to your own computer.

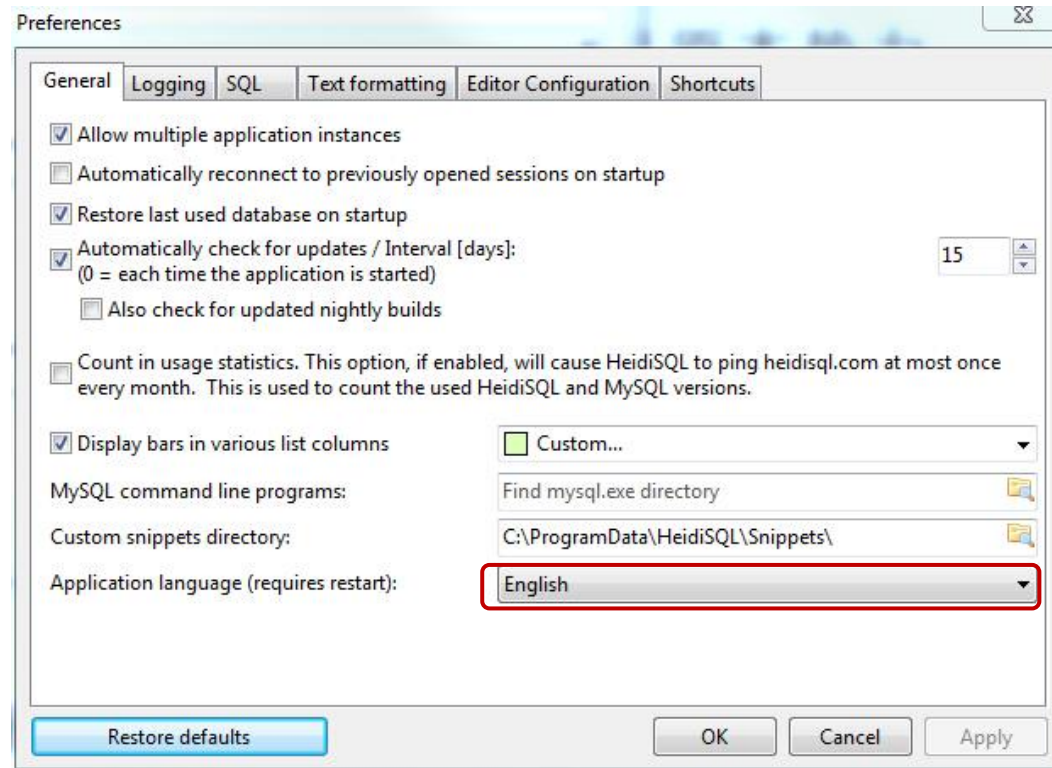
This is important.



Change interface language



More → Preference

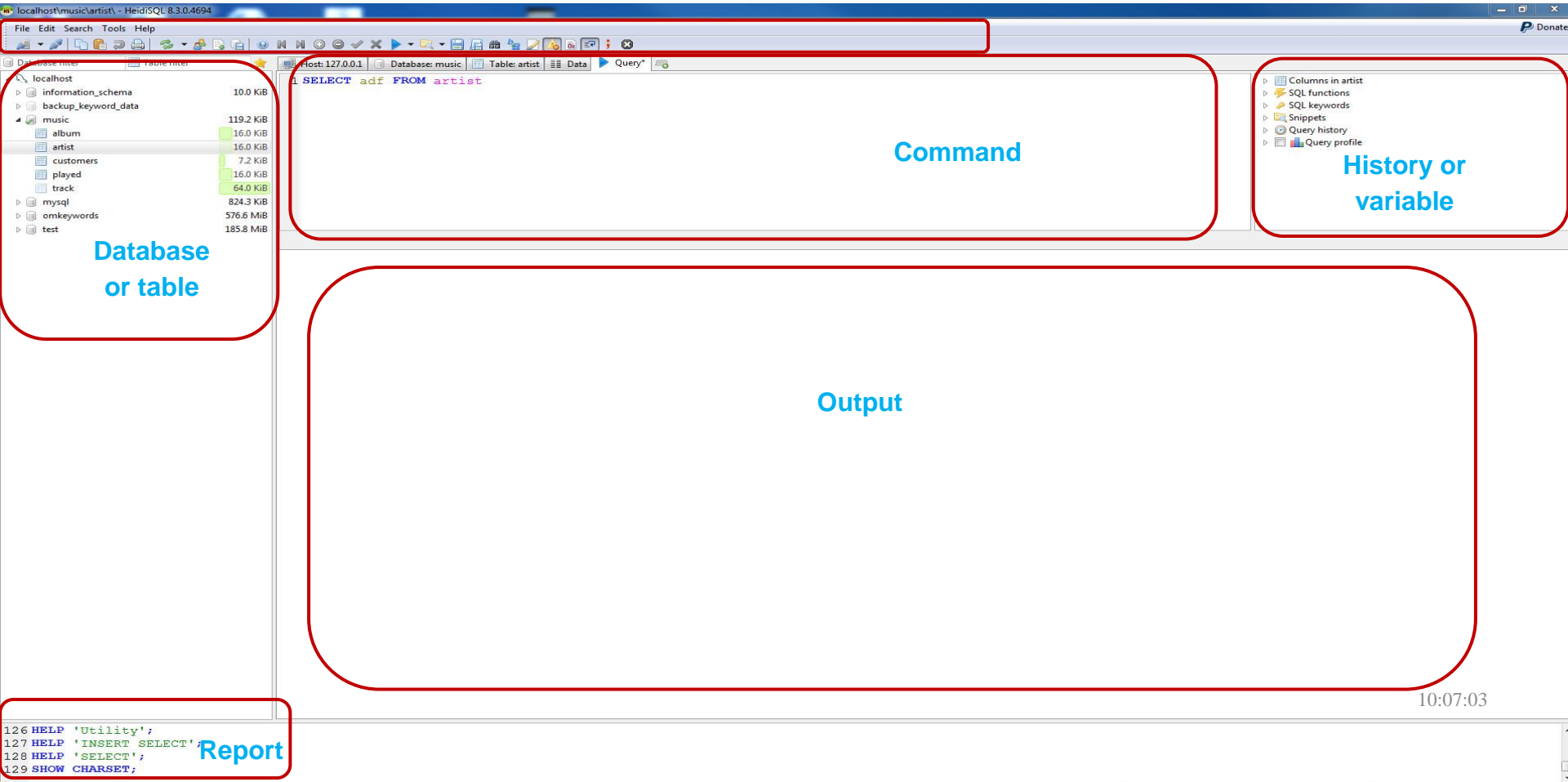


The screenshot shows the HeidiSQL 9.3.0.4984 interface. The title bar indicates the path 'DRM course\d111111\'. The menu bar includes File, Edit, Search, Tools, and Help. The toolbar contains various icons for file operations and database management. The 'Database filter' and 'Table filter' fields are visible. The left sidebar shows a tree view of the database structure: 'DRM course' (8.0 KiB), 'information_schema' (8.0 KiB), and 'd111111' (0 B). The 'd111111' database is selected and highlighted. The main pane shows a single table named '1'. Two red arrows point from the 'information_schema' and 'd111111' entries in the sidebar to a text box. Another red arrow points from the 'd111111' entry to a second text box.

Information_schema is a system database, recording system information. You **cannot** use this database.

The database named with your student ID is the one that you should use. Left click on the database to activate it so that it becomes a default database for your future operation

Basic interface of HeidiSQL



One big advantage of using HeidiSQL.

The screenshot shows the HeidiSQL 8.3.0.4694 interface. The title bar indicates the connection is to 'localhost\music\album'. The menu bar includes File, Edit, Search, Tools, and Help. The toolbar contains various icons for file operations and database actions. Below the toolbar, there are filters for 'Database filter' and 'Table filter'. The left sidebar shows a tree view of the database structure, with 'localhost' expanded to show 'music' (119.2 KiB) and its tables: 'album' (16.0 KiB), 'artist' (16.0 KiB), 'customers' (7.2 KiB), 'played' (16.0 KiB), and 'track' (64.0 KiB). The 'album' table is selected. The right pane shows the 'Basic' tab for the 'album' table. The 'Name' field is 'album' and the 'Comment' field is empty. Below this, the 'Columns' section shows a table with 3 columns: 'artist_id' (SMALLINT, 5), 'album_id' (SMALLINT, 4), and 'album_name' (CHAR, 128). The 'Unsigned' checkbox is checked for 'album_id' and 'album_name'. The 'All' checkbox is checked for 'album_id' and 'album_name'.

localhost\music\album\ - HeidiSQL 8.3.0.4694

File Edit Search Tools Help

Database filter Table filter

Host: 127.0.0.1 Database: music Table: album Data Query*

Basic Options Indexes Foreign keys CREATE code ALTER code

Name: album

Comment:

Columns: Add Remove Up Down

#	Name	Datatype	Length/Set	Unsigned	All
1	artist_id	SMALLINT	5	<input type="checkbox"/>	<input type="checkbox"/>
2	album_id	SMALLINT	4	<input type="checkbox"/>	<input type="checkbox"/>
3	album_name	CHAR	128	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- It will be a good habit to save the command that you used to create tables here.

For the hands-on session

- **Please read two instructions for hands-on sessions that are available at:**
<https://mycourses.aalto.fi/course/view.php?id=40788>
 - Method to access course database server via VDI.docx
 - Instructions on hands-on session.pdf
- **Please watch the video on how to import the ‘classicmodels’ database**
 - You can find the **database file** at: Mycourse → Exercises and database files → Data and database files → classicmodels (using PCs in the lab or at home).sql
 - **Link to the video:** <https://mycourses.aalto.fi/course/view.php?id=36995§ion=3>
 - **Please install VDI** to your computer and access the MySQL server via VDI (see course homepage for tutorial).
- **Hands-on learning materials are available on MyCourse**
- **After watching the video, please follow the hands-on learning materials to do the exercise.**
- **Hands-on sessions are simply a venue to offer (question-answering) assistance to support your practice with MySQL.**

Denied Access & Late registration

- If your access to the MySQL server is denied, please contact the lecturer to create an account for you by sending your student ID to the lecturer.