

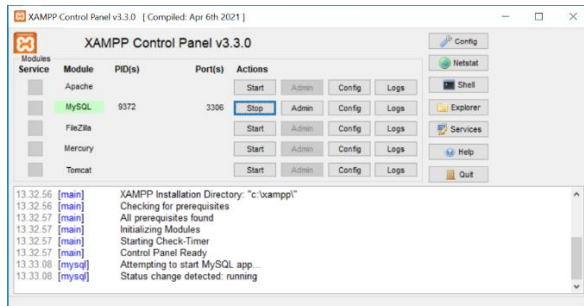
Web-julkaisujärjestelmät: Harjoitukset 1

Yhteensä 16/16 pistettä:

Task- 1 8/8 pistettä

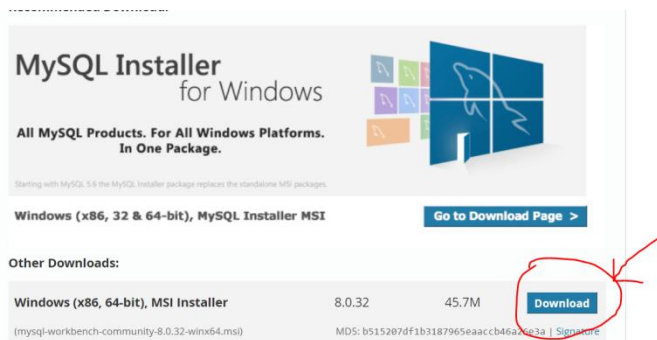
1) XAMPP installation

According to the course instruction I downloaded and installed XAMPP, everything event smooth and running smooth with port 3306

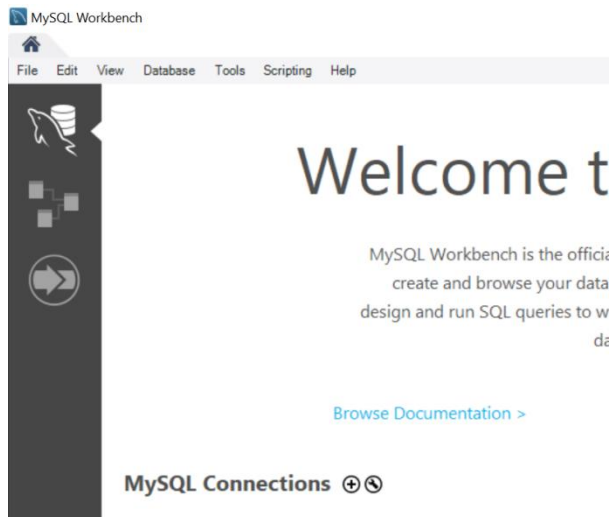


2) MY SQL Workbench INSTALLATION

- Downloaded the latest version of workbench using this(link: <https://dev.mysql.com/downloads/workbench/>) click the marked in the image.



- After installation MySQL Workbench tool is shown like below



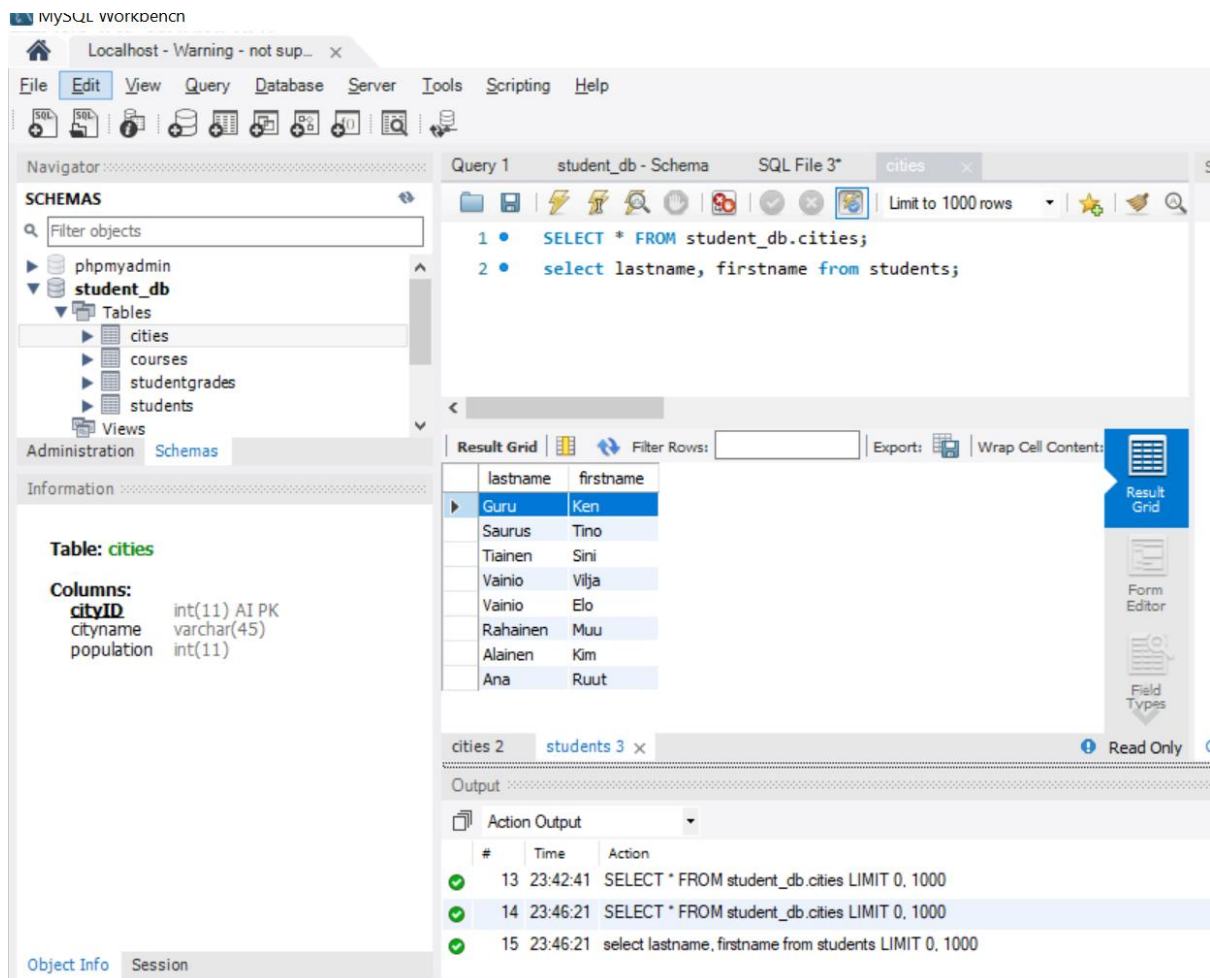
In the MYSQL workbench I created a new connection with the username root and then created a new Database student_db according to the instruction in the course.

Selected the desired database (student_db) as a default schema and created a new SQL tab for executing queries. The results are shown below image.

The image shows the MySQL Workbench interface with a query executed. The left sidebar shows the 'SCHEMAS' tree with 'student_db' selected. The 'Tables' list under 'student_db' includes 'cities', 'courses', 'studentgrades', and 'students'. The 'Views' section is also visible. The 'Administration' and 'Schemas' tabs are at the bottom. The main area shows a query editor with the query: `SELECT * FROM student_db.cities;`. Below the query editor is the 'Result Grid' showing the results of the query. The 'Result Grid' has columns 'cityID', 'cityname', and 'population'. The results are as follows:

cityID	cityname	population
1	Turku	190000
2	Tampere	230000
3	Lahti	120000
* NULL	NULL	NULL

Below the 'Result Grid' is the 'Information' section showing the table 'cities' and its columns: 'cityID' (int(11) AI PK).



Task- 2 8/8 scores

1. VPN connection -Labranet database

- using Labranet's databases, we can avoid having to set up our own database server and our databases are available everywhere. For this VPN connection is done using the instruction mentioned in the <https://student.labranet.jamk.fi/>
- Added the VPN connection and followed the procedure given in the instruction, some of the images provided below are few steps observed

```

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\Users\Rakesh> Get-NetIPInterface | Select InterfaceAlias, InterfaceMetric | Sort InterfaceMetric

InterfaceAlias      InterfaceMetric
-----
Ethernet            5
Ethernet            5
Local Area Connection* 10 25
Local Area Connection* 1 25
Local Area Connection* 10 25
Local Area Connection* 1 25
Wi-Fi               35
Wi-Fi               35
Bluetooth Network Connection 65
Bluetooth Network Connection 65
Loopback Pseudo-Interface 1 75
Loopback Pseudo-Interface 1 75
Cellular            85
Cellular            85

PS C:\Users\Rakesh>

```

- LabraNet VPN is the first connection listed with the lowest InterfaceMetric value thus having the highest priority this is observed. It is the mandatory requirement for the VPN connection

```

Windows PowerShell

Loopback Pseudo-Interface 1      4300
Cellular                        4310

PS C:\Users\Rakesh> Get-NetIPInterface | Select InterfaceAlias, InterfaceMetric | Sort InterfaceMetric

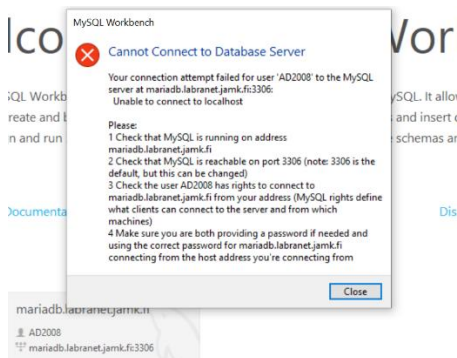
InterfaceAlias      InterfaceMetric
-----
LabraNet VPN        2
Ethernet            5
Local Area Connection* 10 25
Local Area Connection* 1 25
Wi-Fi               35
Loopback Pseudo-Interface 1 75
Ethernet            4230
Local Area Connection* 10 4250
Local Area Connection* 1 4250
Wi-Fi               4260
Loopback Pseudo-Interface 1 4300

PS C:\Users\Rakesh>

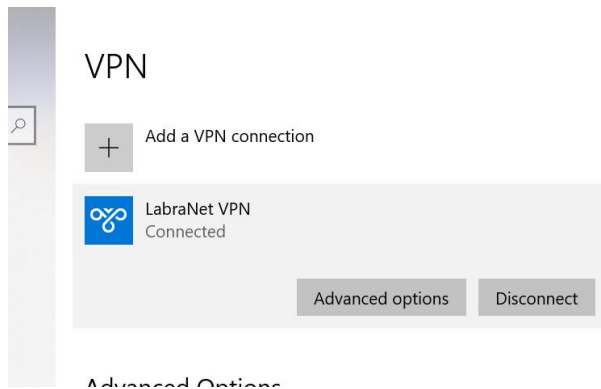
```

1. Creation of MariaDB

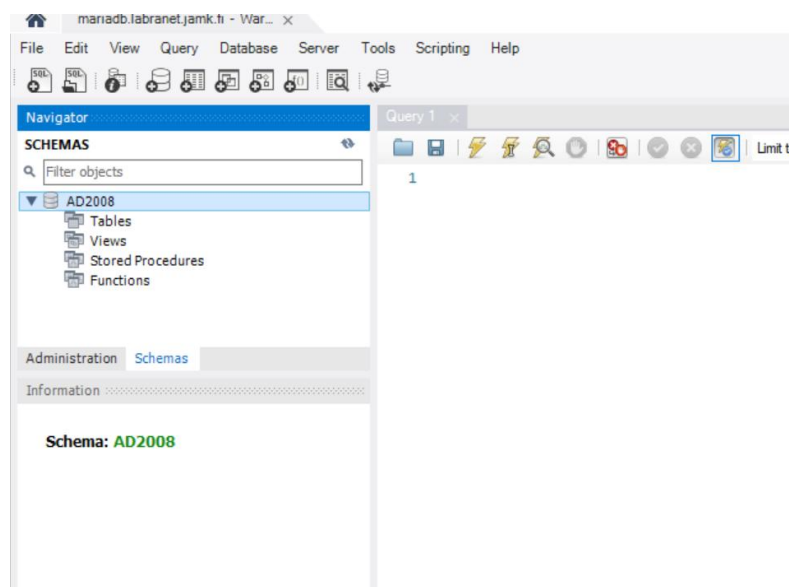
To create a MariaDB ID and password followed the given instruction in the course material and created a new connection in the MYSQL workbench. I observed cannot connect to Database server as shown below.



So I checked the VPN Connection (In windows search bar selected the VPN settings) when I click the connect VPN then the error was solved.



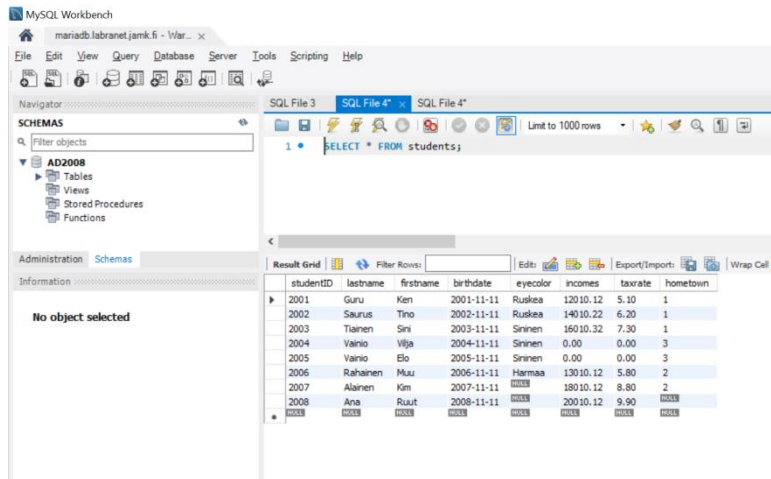
This below image shows the new connection created with the new database



- The following SQL queries run in MariaDB(MYSQL workbench)

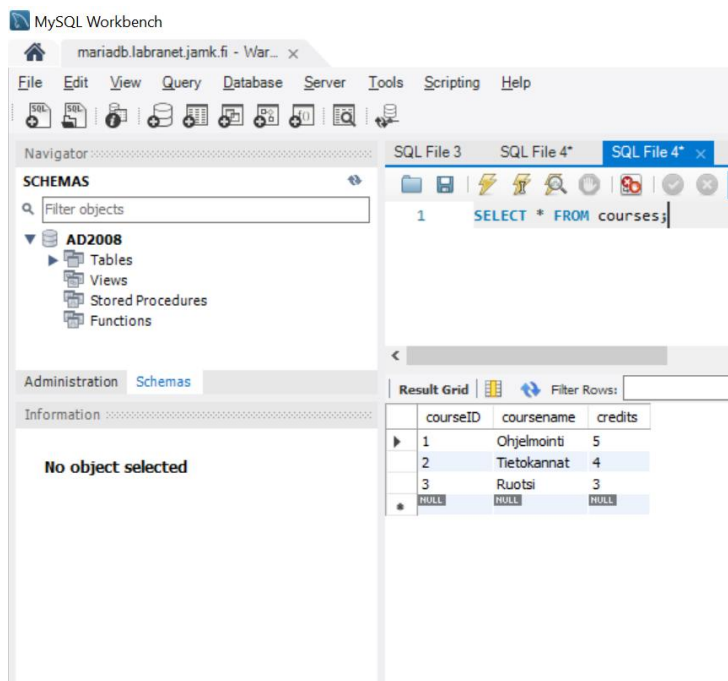
```
SELECT * FROM students;  
SELECT * FROM courses;
```

Results



The screenshot shows the MySQL Workbench interface. The 'Navigator' pane on the left shows the 'AD2008' database with 'Tables', 'Views', 'Stored Procedures', and 'Functions'. The 'SQL File 4*' pane shows the query 'SELECT * FROM students;'. The 'Result Grid' pane displays the results of the query, which is a table with 8 columns: studentID, lastname, firstname, birthdate, eyecolor, incomes, taxrate, and hometown. The results are as follows:

studentID	lastname	firstname	birthdate	eyecolor	incomes	taxrate	hometown
2001	Guru	Ken	2001-11-11	Ruskea	120 10.12	5.10	1
2002	Saurus	Tino	2002-11-11	Ruskea	140 10.22	6.20	1
2003	Tainen	Sini	2003-11-11	Sininen	160 10.32	7.30	1
2004	Vainio	Vilja	2004-11-11	Sininen	0.00	0.00	3
2005	Vainio	Elo	2005-11-11	Sininen	0.00	0.00	3
2006	Rahainen	Muu	2006-11-11	Harmaa	130 10.12	5.80	2
2007	Alainen	Kim	2007-11-11	Harmaa	180 10.12	8.80	2
2008	Ana	Ruut	2008-11-11	Harmaa	200 10.12	9.90	2



The screenshot shows the MySQL Workbench interface. The 'Navigator' pane on the left shows the 'AD2008' database with 'Tables', 'Views', 'Stored Procedures', and 'Functions'. The 'SQL File 4*' pane shows the query 'SELECT * FROM courses;'. The 'Result Grid' pane displays the results of the query, which is a table with 3 columns: courseID, coursename, and credits. The results are as follows:

courseID	coursename	credits
1	Ohjelmointi	5
2	Tietokannat	4
3	Ruotsi	3
NULL	NULL	NULL

MySQL command line tool for Windows

Changed working directory in the powershell and connected to student_db database

Windows PowerShell

```
PS C:\Users\Rakesh> cd C:\XAMPP\mysql\bin\  
PS C:\XAMPP\mysql\bin> .\mysql.exe -u root -p student_db  
Enter password:  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 8  
Server version: 10.4.27-MariaDB mariadb.org binary distribution  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [student_db]>
```

Windows PowerShell

```
PS C:\Users\Rakesh> cd C:\XAMPP\mysql\bin\  
PS C:\XAMPP\mysql\bin> .\mysql.exe -u root -p student_db  
Enter password:  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 8  
Server version: 10.4.27-MariaDB mariadb.org binary distribution  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [student_db]> show tables;  
+-----+  
| Tables_in_student_db |  
+-----+  
| cities                |  
| courses               |  
| studentgrades         |  
| students              |  
+-----+  
4 rows in set (0.002 sec)  
  
MariaDB [student_db]> select * from cities;  
+-----+-----+-----+  
| cityID | cityname | population |  
+-----+-----+-----+  
| 1 | Turku | 190000 |  
| 2 | Tampere | 230000 |  
| 3 | Lahti | 120000 |  
+-----+-----+-----+  
3 rows in set (0.015 sec)  
  
MariaDB [student_db]>
```

With same above queries run in the powershell and the the results are in the following screen shot.

```
Database changed
MariaDB [AD2008]> SELECT * FROM STUDENTS;
ERROR 1146 (42S02): Table 'AD2008.STUDENTS' doesn't exist
MariaDB [AD2008]> select * from students;
```

studentID	lastname	firstname	birthdate	eyecolor	incomes	taxrate	hometown
2001	Guru	Ken	2001-11-11	Ruskea	12010.12	5.10	1
2002	Saurus	Tino	2002-11-11	Ruskea	14010.22	6.20	1
2003	Tiainen	Sini	2003-11-11	Sininen	16010.32	7.30	1
2004	Vainio	Vilja	2004-11-11	Sininen	0.00	0.00	3
2005	Vainio	Elo	2005-11-11	Sininen	0.00	0.00	3
2006	Rahainen	Muu	2006-11-11	Harmaa	13010.12	5.80	2
2007	Alainen	Kim	2007-11-11	NULL	18010.12	8.80	2
2008	Ana	Ruut	2008-11-11	NULL	20010.12	9.90	NULL

```
8 rows in set (0.001 sec)

MariaDB [AD2008]> select * from courses;
```

courseID	coursename	credits
1	Ohjelmointi	5
2	Tietokannat	4
3	Ruotsi	3

```
3 rows in set (0.002 sec)
```