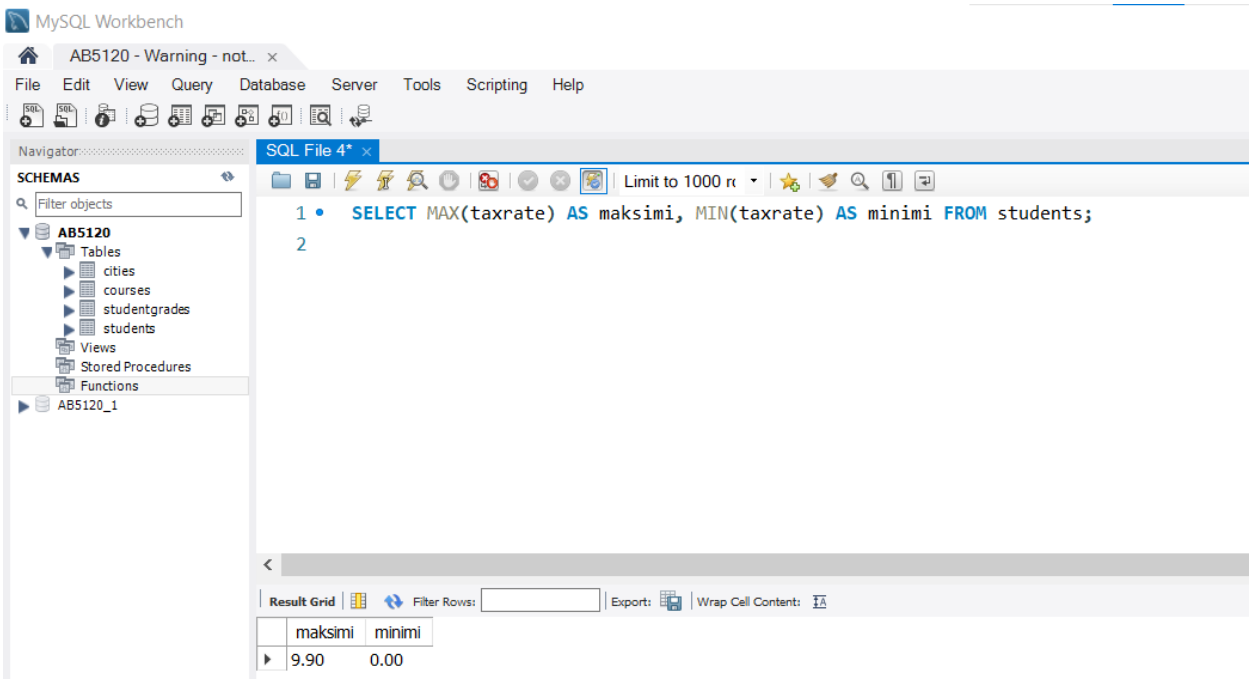
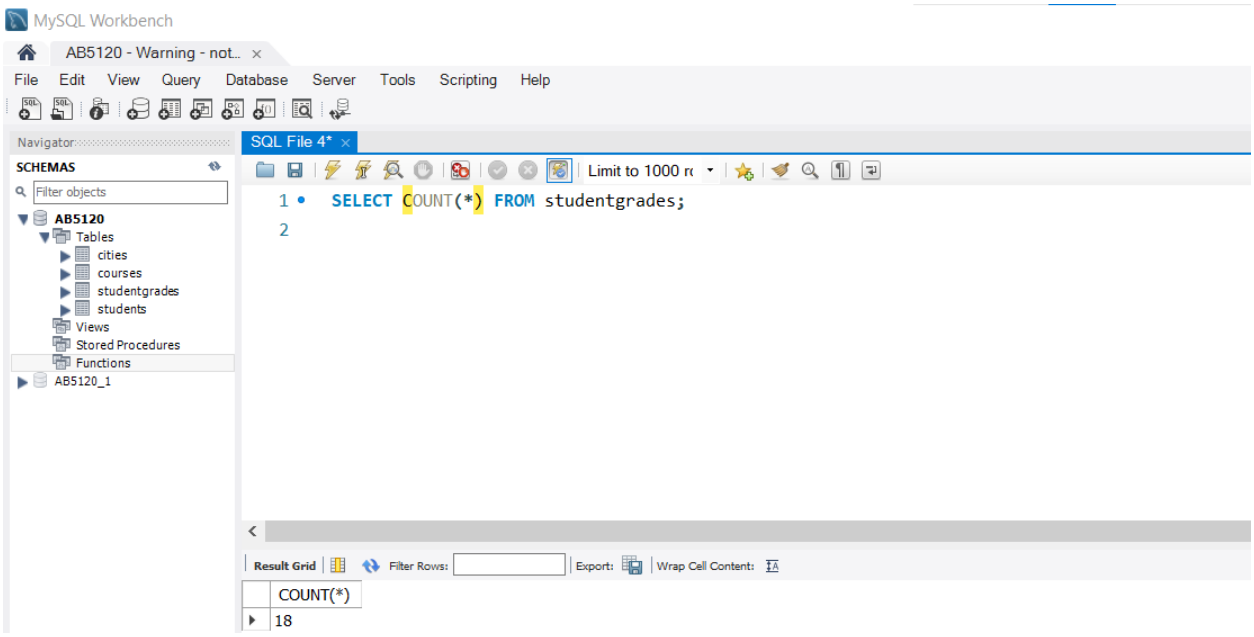
Tietokannat HARJOITUS 5

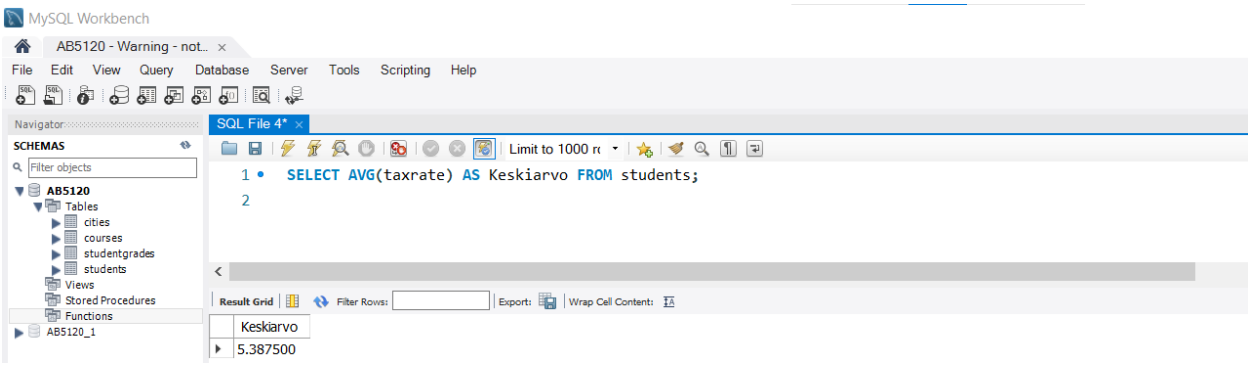
5.1.A



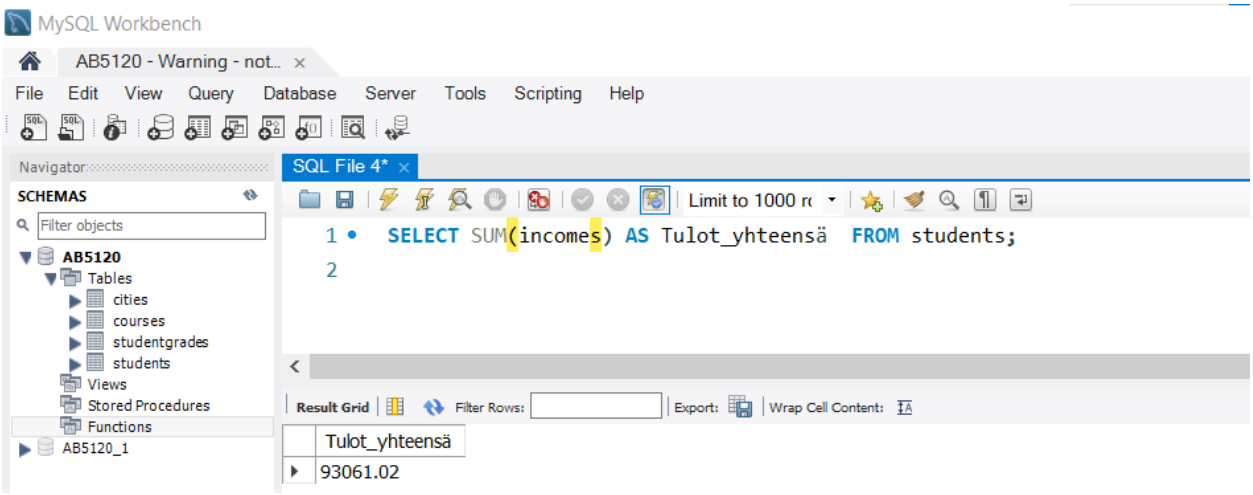
5.1.B



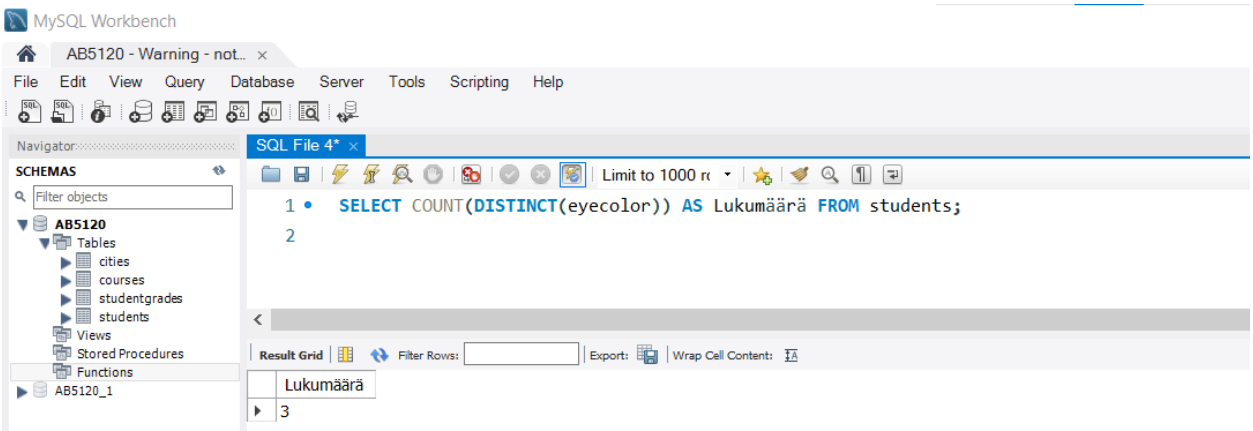
5.1.C


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator:
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT AVG(taxrate) AS Keskiarvo FROM students;
2
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Keskiarvo
5.387500

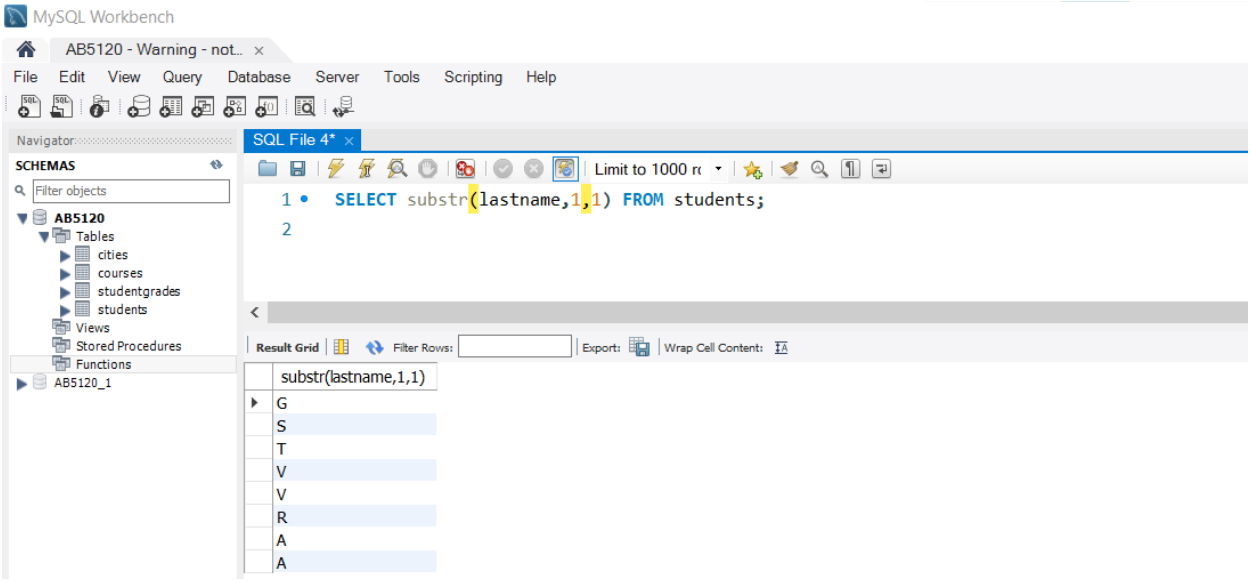
5.1.D


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator:
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT SUM(incomes) AS Tulot_yhteensä FROM students;
2
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Tulot_yhteensä
93061.02

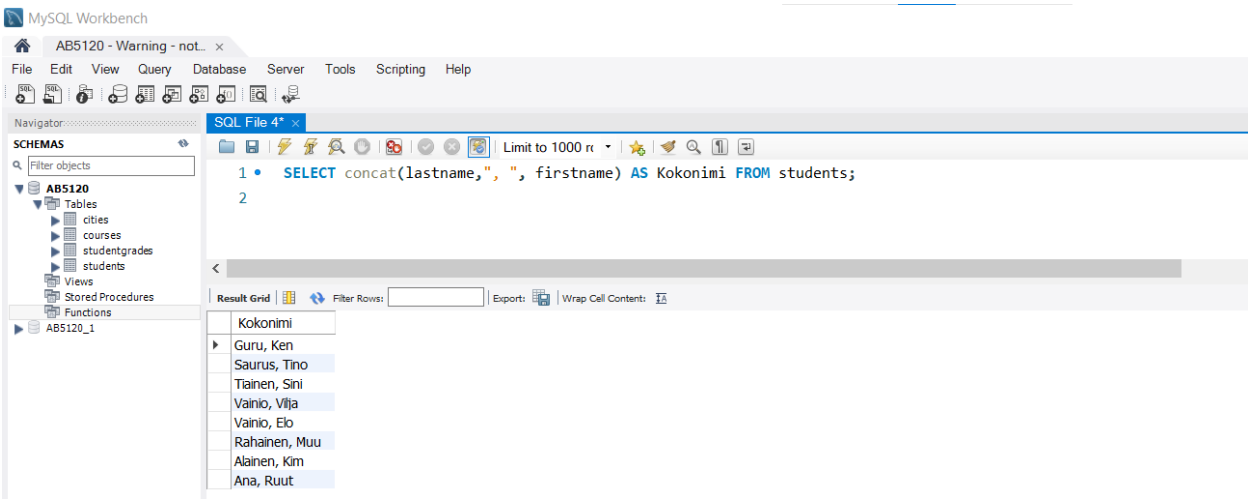
5.1.E


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator:
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT COUNT(DISTINCT(eyecolor)) AS Lukumäärä FROM students;
2
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Lukumäärä
3

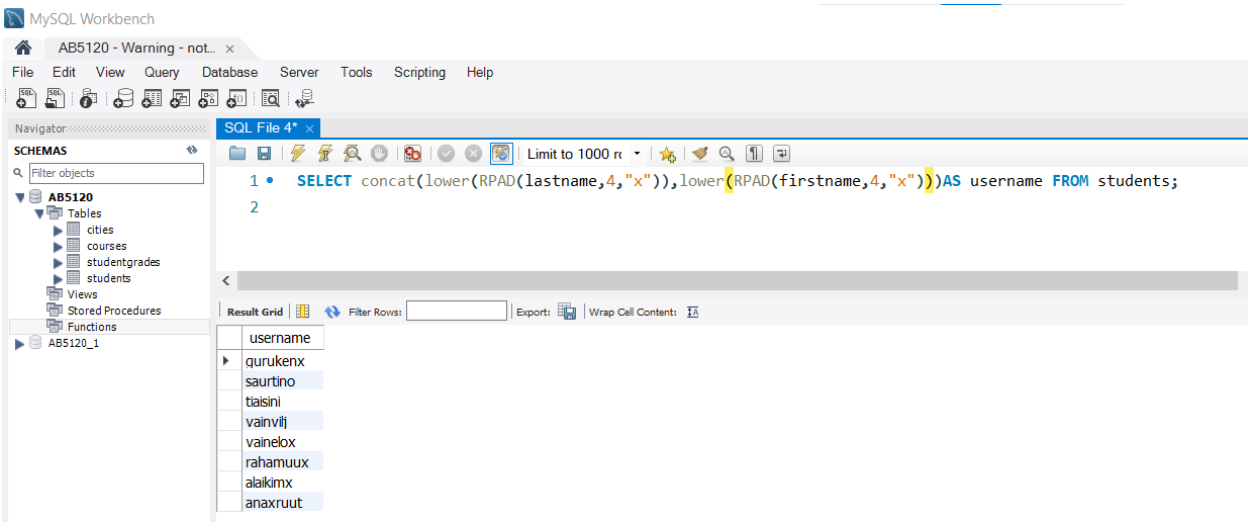
5.2.A


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT substr(lastname,1,1) FROM students;
2
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
substr(lastname,1,1)
G
S
T
V
V
R
A
A

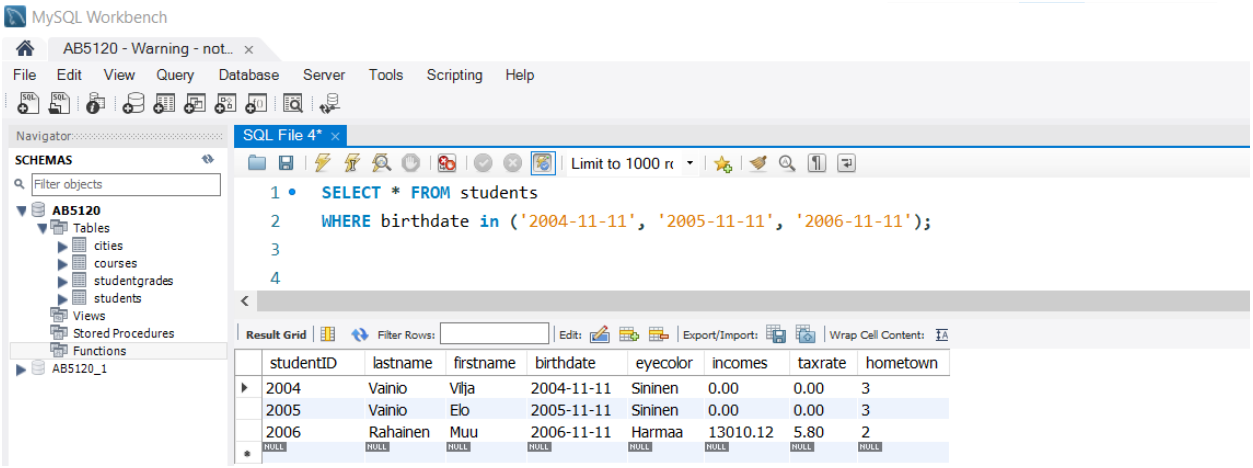
5.2.B


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT concat(lastname,", ", firstname) AS Kokonimi FROM students;
2
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Kokonimi
Guru, Ken
Saurus, Tino
Tiainen, Sini
Vainio, Vilja
Vainio, Elo
Rahainen, Muu
Alainen, Kim
Ana, Ruut

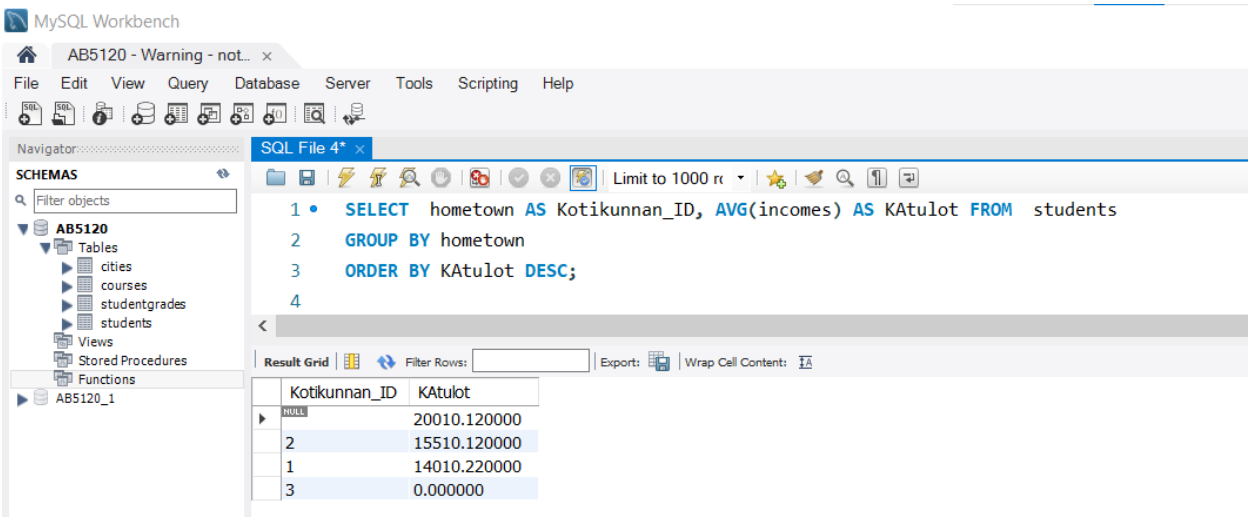
5.2.C


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT concat(lower(RPAD(lastname,4,"x")),lower(RPAD(firstname,4,"x")))AS username FROM students;
2
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
username
qurukenx
saurtino
tiaisini
vainvilj
vainelox
rahamuux
alaikimx
anaxruut

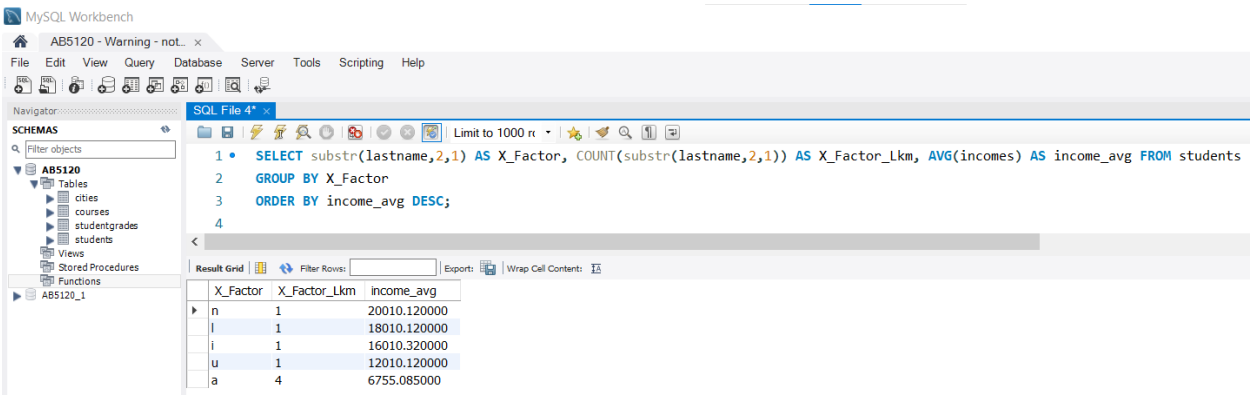
5.2.D


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT * FROM students
2 WHERE birthdate in ('2004-11-11', '2005-11-11', '2006-11-11');
3
4
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
studentID lastname firstname birthdate eyecolor incomes taxrate hometown
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

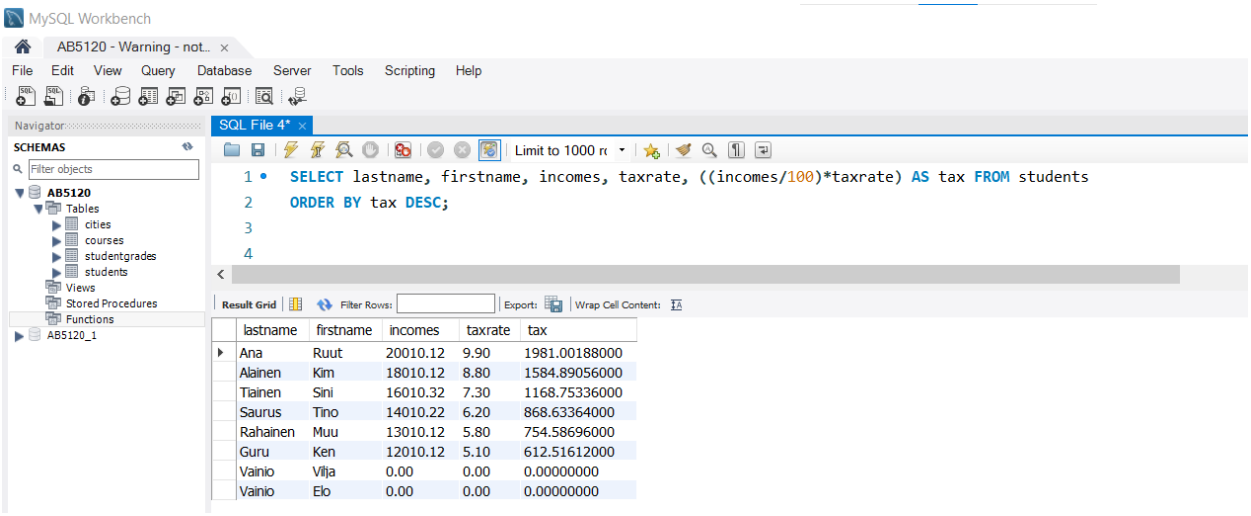
5.3.A


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator:
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT hometown AS Kotikunnan_ID, AVG(incomes) AS KAtulot FROM students
2 GROUP BY hometown
3 ORDER BY KAtulot DESC;
4
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Kotikunnan_ID KAtulot
NULL 20010.120000
2 15510.120000
1 14010.220000
3 0.000000

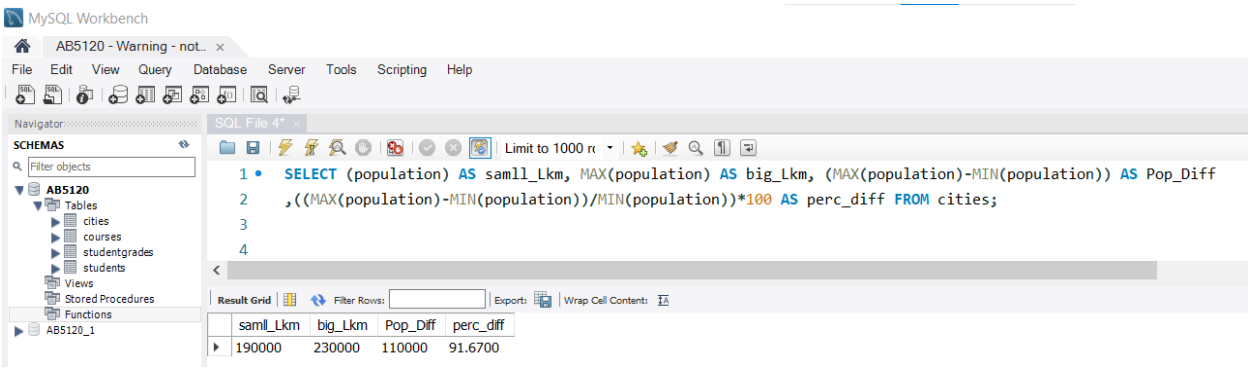
5.3.B


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator:
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT substr(lastname,2,1) AS X_Factor, COUNT(substr(lastname,2,1)) AS X_Factor_Lkm, AVG(incomes) AS income_avg FROM students
2 GROUP BY X_Factor
3 ORDER BY income_avg DESC;
4
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
X_Factor X_Factor_Lkm income_avg
n 1 20010.120000
l 1 18010.120000
i 1 16010.320000
u 1 12010.120000
a 4 6755.085000

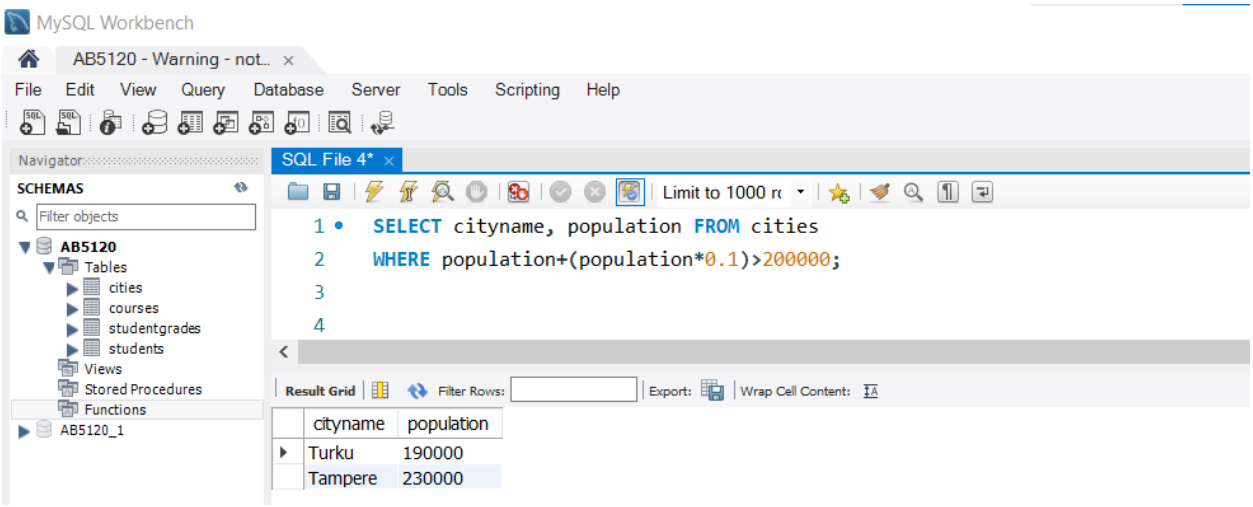
5.3.C


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000
1 • SELECT lastname, firstname, incomes, taxrate, ((incomes/100)*taxrate) AS tax FROM students
2 ORDER BY tax DESC;
3
4
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
lastname firstname incomes taxrate tax
Ana Ruut 20010.12 9.90 1981.00188000
Alainen Kim 18010.12 8.80 1584.89056000
Tiainen Sini 16010.32 7.30 1168.75336000
Saurus Tino 14010.22 6.20 868.63364000
Rahainen Muu 13010.12 5.80 754.58696000
Guru Ken 12010.12 5.10 612.51612000
Vainio Vilja 0.00 0.00 0.00000000
Vainio Elo 0.00 0.00 0.00000000

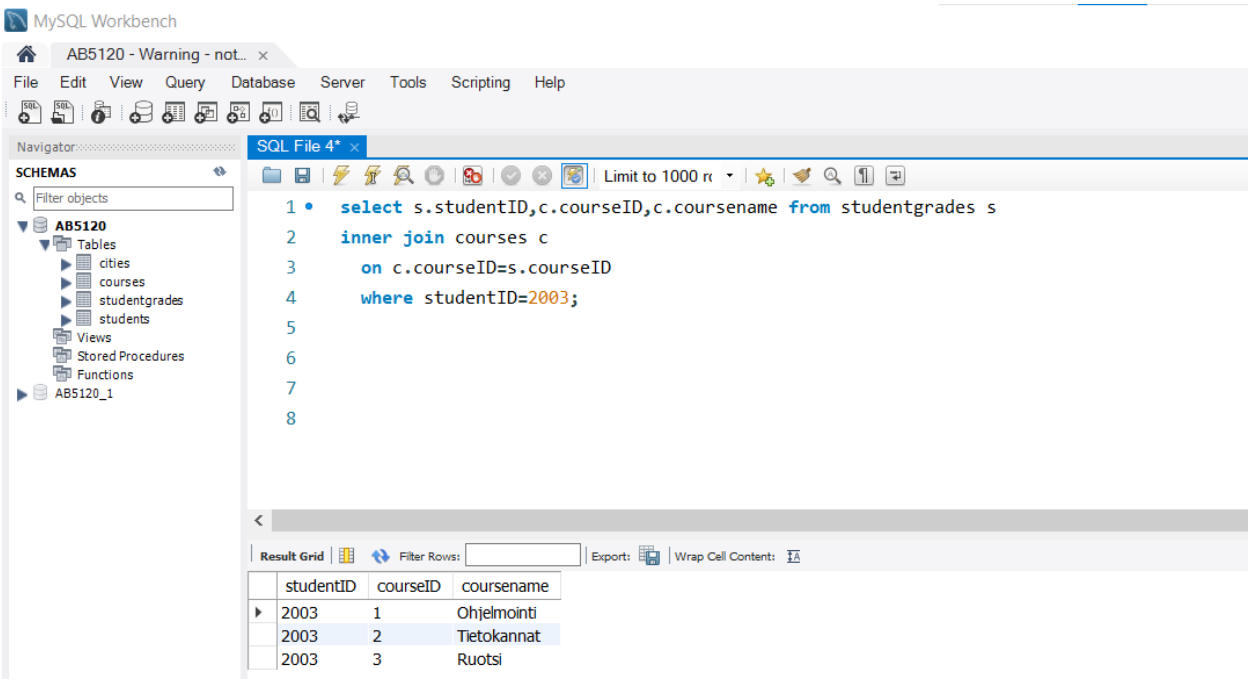
5.3.D


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000
1 • SELECT (population) AS samll_Lkm, MAX(population) AS big_Lkm, (MAX(population)-MIN(population)) AS Pop_Diff
2 ,((MAX(population)-MIN(population))/MIN(population))*100 AS perc_diff FROM cities;
3
4
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
samll_Lkm big_Lkm Pop_Diff perc_diff
190000 230000 110000 91.6700

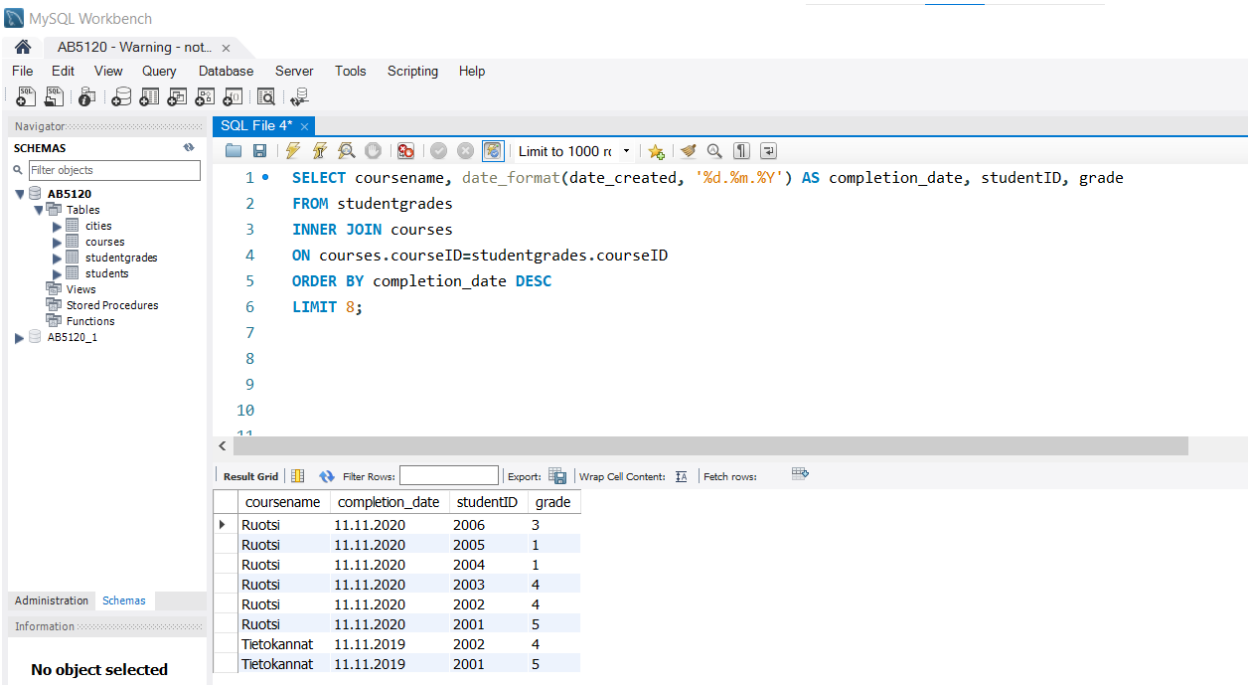
5.3.E


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT cityname, population FROM cities
2 WHERE population+(population*0.1)>200000;
3
4
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
cityname population
Turku 190000
Tampere 230000

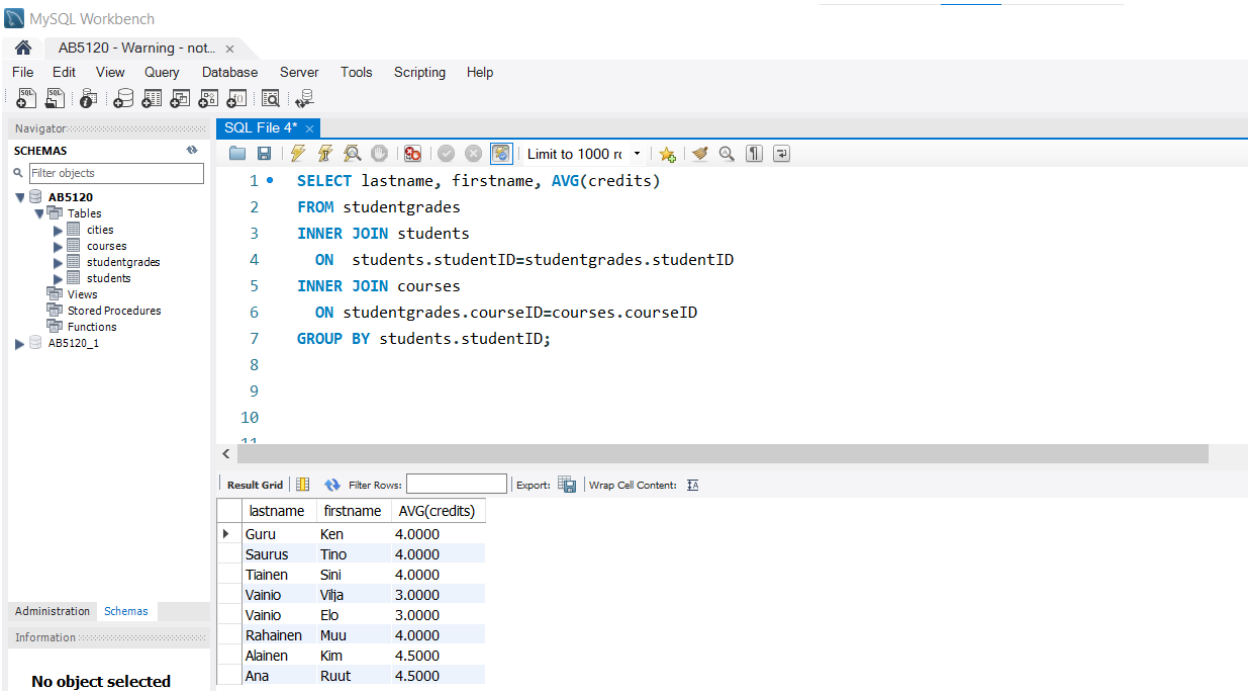
5.4.A


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • select s.studentID,c.courseID,c.coursename from studentgrades s
2 inner join courses c
3 on c.courseID=s.courseID
4 where studentID=2003;
5
6
7
8
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
studentID courseID coursename
2003 1 Ohjelmointi
2003 2 Tietokannat
2003 3 Ruotsi

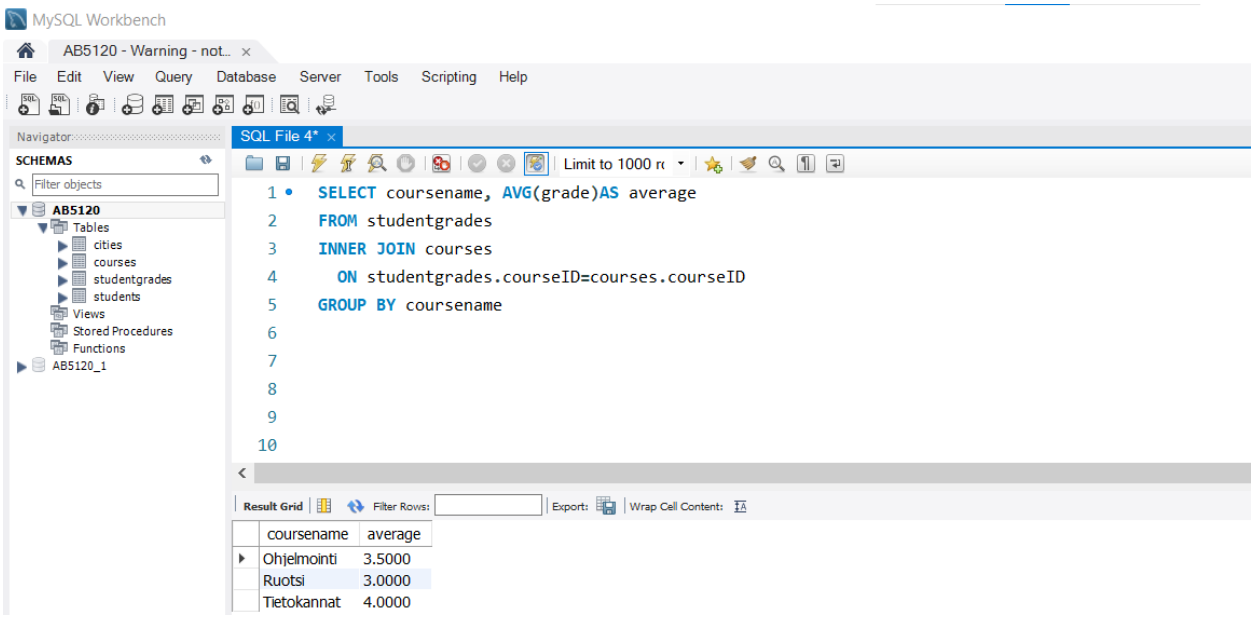
5.4.B


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
Administration Schemas
Information
No object selected
SQL File 4*
Limit to 1000 r
1 • SELECT coursename, date_format(date_created, '%d.%m.%Y') AS completion_date, studentID, grade
2 FROM studentgrades
3 INNER JOIN courses
4 ON courses.courseID=studentgrades.courseID
5 ORDER BY completion_date DESC
6 LIMIT 8;
Result Grid Filter Rows: Export: Wrap Cell Content: Fetch rows:
coursename completion_date studentID grade
Ruotsi 11.11.2020 2006 3
Ruotsi 11.11.2020 2005 1
Ruotsi 11.11.2020 2004 1
Ruotsi 11.11.2020 2003 4
Ruotsi 11.11.2020 2002 4
Ruotsi 11.11.2020 2001 5
Tietokannat 11.11.2019 2002 4
Tietokannat 11.11.2019 2001 5

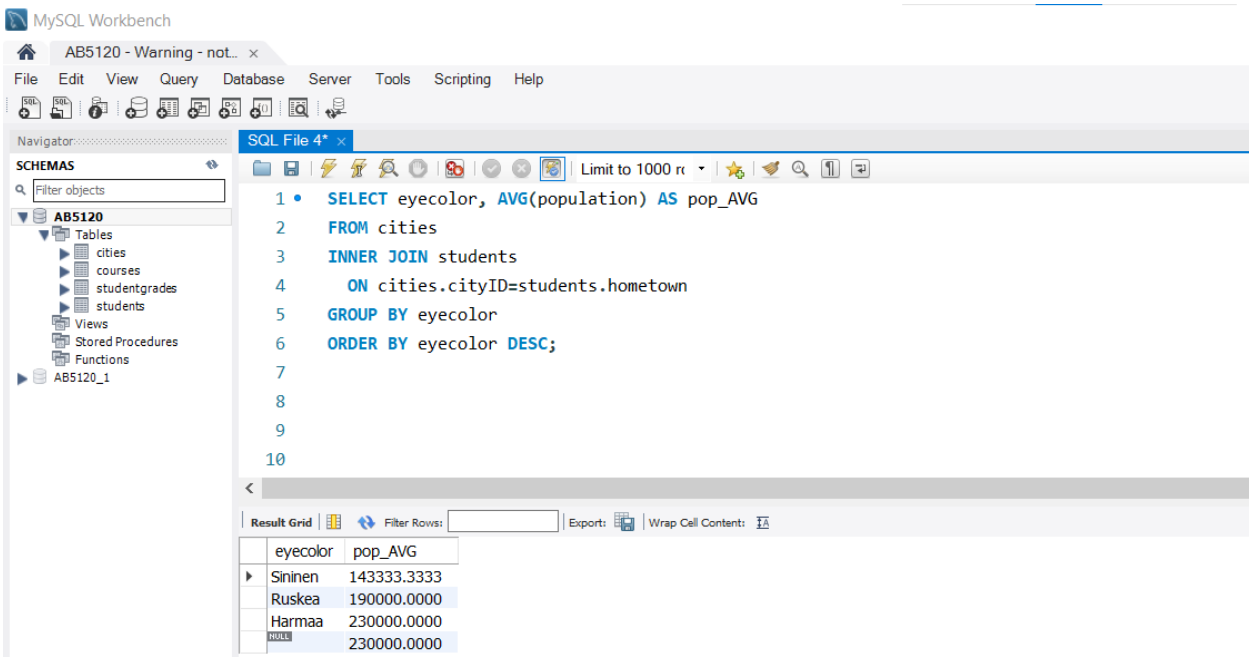
5.4.C


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
Administration Schemas
Information
No object selected
SQL File 4*
Limit to 1000 r
1 • SELECT lastname, firstname, AVG(credits)
2 FROM studentgrades
3 INNER JOIN students
4 ON students.studentID=studentgrades.studentID
5 INNER JOIN courses
6 ON studentgrades.courseID=courses.courseID
7 GROUP BY students.studentID;
Result Grid Filter Rows: Export: Wrap Cell Content:
lastname firstname AVG(credits)
Guru Ken 4.0000
Saurus Tino 4.0000
Tiainen Sini 4.0000
Vainio Vilja 3.0000
Vainio Elo 3.0000
Rahainen Muu 4.0000
Alainen Kim 4.5000
Ana Ruut 4.5000

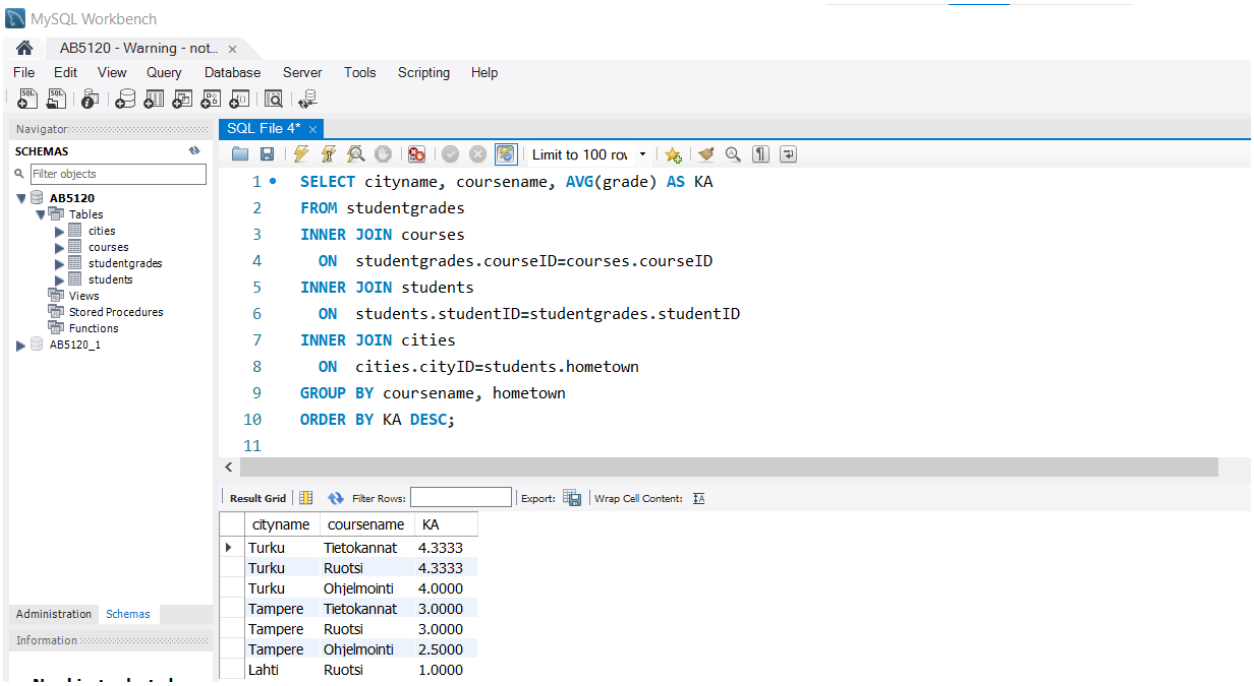
5.4.D


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator:
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT coursename, AVG(grade)AS average
2 FROM studentgrades
3 INNER JOIN courses
4 ON studentgrades.courseID=courses.courseID
5 GROUP BY coursename
6
7
8
9
10
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
coursename average
Ohjelmointi 3.5000
Ruotsi 3.0000
Tietokannat 4.0000

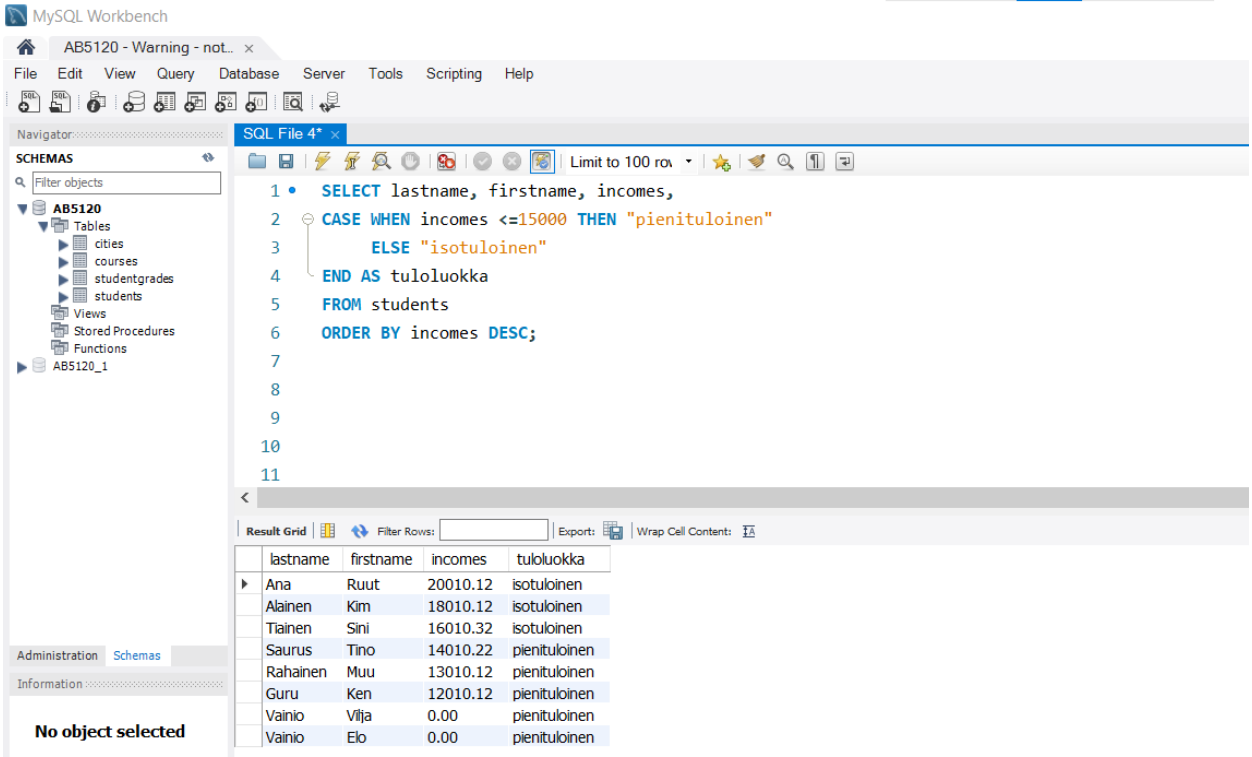
5.5.A


MySQL Workbench
AB5120 - Warning - not...
File Edit View Query Database Server Tools Scripting Help
Navigator:
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
SQL File 4*
Limit to 1000 r
1 • SELECT eyecolor, AVG(population) AS pop_AVG
2 FROM cities
3 INNER JOIN students
4 ON cities.cityID=students.hometown
5 GROUP BY eyecolor
6 ORDER BY eyecolor DESC;
7
8
9
10
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
eyecolor pop_AVG
Sininen 143333.3333
Ruskea 190000.0000
Harmaa 230000.0000
NULL 230000.0000

5.5.B


MySQL Workbench
AB5120 - Warning - not..
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
Administration Schemas
Information
SQL File 4*
Limit to 100 rov
1 • SELECT cityname, coursename, AVG(grade) AS KA
2 FROM studentgrades
3 INNER JOIN courses
4 ON studentgrades.courseID=courses.courseID
5 INNER JOIN students
6 ON students.studentID=studentgrades.studentID
7 INNER JOIN cities
8 ON cities.cityID=students.hometown
9 GROUP BY coursename, hometown
10 ORDER BY KA DESC;
11
Result Grid Filter Rows: Export: Wrap Cell Content:
cityname coursename KA
Turku Tietokannat 4.3333
Turku Ruotsi 4.3333
Turku Ohjelmointi 4.0000
Tampere Tietokannat 3.0000
Tampere Ruotsi 3.0000
Tampere Ohjelmointi 2.5000
Lahti Ruotsi 1.0000

5.5.c


MySQL Workbench
AB5120 - Warning - not..
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
AB5120
Tables
cities
courses
studentgrades
students
Views
Stored Procedures
Functions
AB5120_1
Administration Schemas
Information
No object selected
SQL File 4*
Limit to 100 rov
1 • SELECT lastname, firstname, incomes,
2 CASE WHEN incomes <=15000 THEN "pienituloinen"
3 ELSE "isotuloinen"
4 END AS tuloluokka
5 FROM students
6 ORDER BY incomes DESC;
7
8
9
10
11
Result Grid Filter Rows: Export: Wrap Cell Content:
lastname firstname incomes tuloluokka
Ana Ruut 20010.12 isotuloinen
Alainen Kim 18010.12 isotuloinen
Tiainen Sini 16010.32 isotuloinen
Saurus Tino 14010.22 pienituloinen
Rahainen Muu 13010.12 pienituloinen
Guru Ken 12010.12 pienituloinen
Vainio Vilja 0.00 pienituloinen
Vainio Elo 0.00 pienituloinen