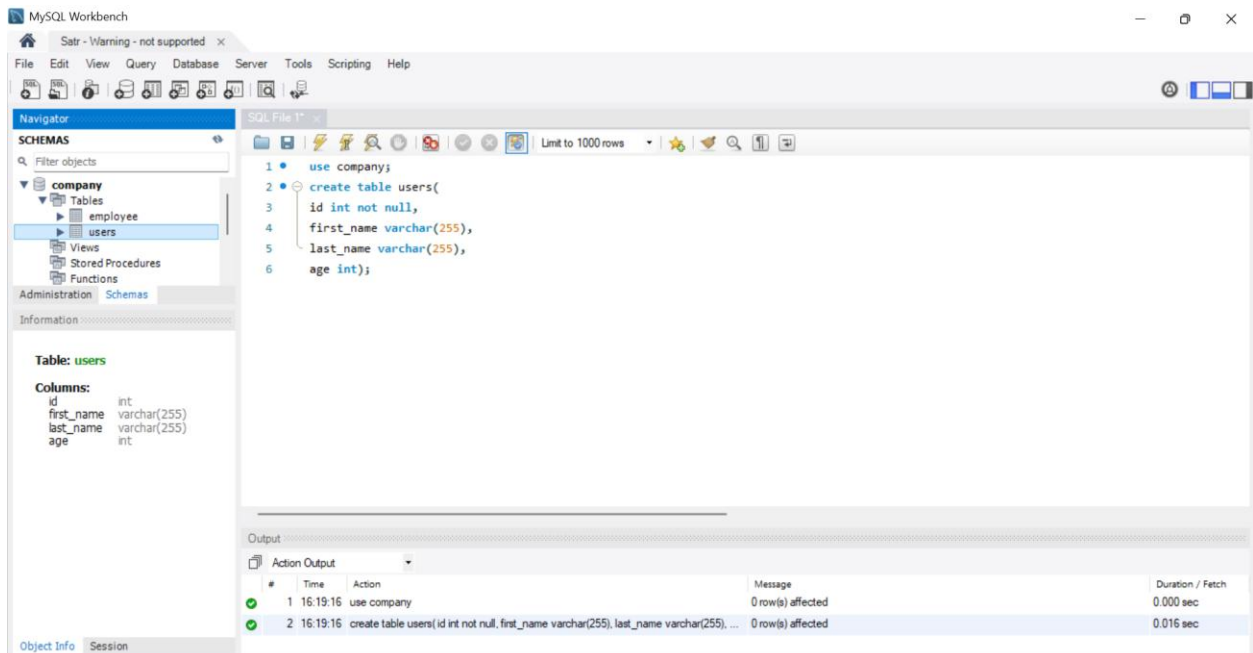


## Course: SQL 102 – Satr

Add primary key to existing table. ✓

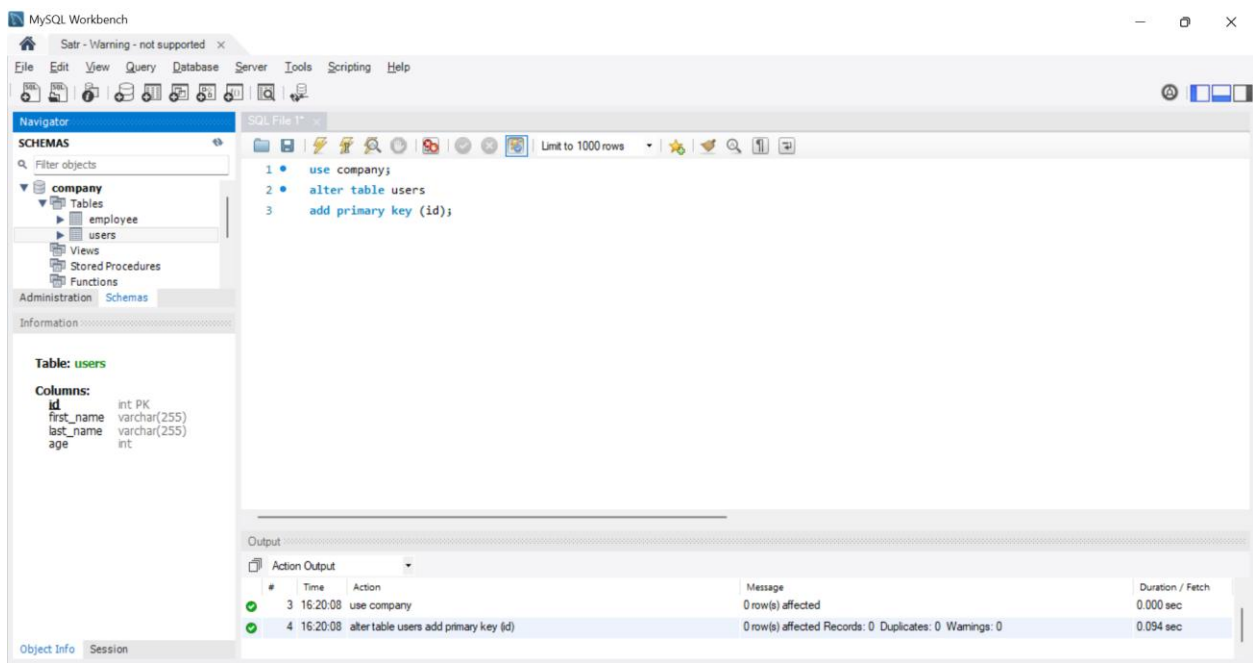


The screenshot shows the MySQL Workbench interface. The Navigator pane on the left displays the 'company' database with tables 'employee' and 'users'. The 'users' table is selected, and its structure is shown in the Information pane: columns are 'id' (int), 'first\_name' (varchar(255)), 'last\_name' (varchar(255)), and 'age' (int). The SQL Editor contains the following SQL code:

```
1 use company;
2 create table users(
3   id int not null,
4   first_name varchar(255),
5   last_name varchar(255),
6   age int);
```

The Output pane shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	16:19:16	use company	0 row(s) affected	0.000 sec
2	16:19:16	create table users (id int not null, first_name varchar(255), last_name varchar(255), ...	0 row(s) affected	0.016 sec



The screenshot shows the MySQL Workbench interface after adding a primary key. The SQL Editor contains the following SQL code:

```
1 use company;
2 alter table users
3 add primary key (id);
```

The Output pane shows the execution results:

#	Time	Action	Message	Duration / Fetch
3	16:20:08	use company	0 row(s) affected	0.000 sec
4	16:20:08	alter table users add primary key (id)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.094 sec

Use like for query. ✓

MySQL Workbench

Satr - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

users

Views

Stored Procedures

Functions

Administration Schemas

Information

Table: employee

Columns:

id char(225)  
Employee\_name PK varchar(225)  
Employee\_salary int  
Employee\_bonus int

SQL File 1\*

```
1 • use company;  
2 • select * from employee  
3 • where Employee_name like 'A%';
```

Result Grid

id	Employee_name	Employee_salary	Employee_bonus
1	Ahmad	5000	1500
7	Ali	5500	1000
8	Asad	6000	2000

employee 3 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
17	16:25:09	use company	0 row(s) affected	0.000 sec
18	16:25:09	select * from employee where Employee_name like 'A%' LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec

MySQL Workbench

Satr - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

users

Views

Stored Procedures

Functions

Administration Schemas

Information

Table: employee

Columns:

id char(225)  
Employee\_name PK varchar(225)  
Employee\_salary int  
Employee\_bonus int

SQL File 1\*

```
1 • use company;  
2 • select * from employee  
3 • where Employee_name like 'N_____';
```

Result Grid

id	Employee_name	Employee_salary	Employee_bonus
5	Nasser	5500	1500

employee 8 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
27	16:27:23	use company	0 row(s) affected	0.000 sec
28	16:27:23	select * from employee where Employee_name like 'N_____' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Use distinct for query. ✓

MySQL Workbench interface showing a query in the SQL Editor:

```
1 • use company;
2 • select distinct Employee_name from employee
```

The left sidebar shows the Schemas pane with the 'company' database selected. The 'employee' table is highlighted under the 'Tables' section. The 'Information' pane shows the table structure:

**Table: employee**

**Columns:**

- id: char(225) PK
- Employee\_name: varchar(225)
- Employee\_salary: int
- Employee\_bonus: int

The 'Result Grid' shows the output of the query:

Employee_name
Ahmad
Sarah
Nora
Nasser
Ali
Asad

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
33	16:29:33	use company	0 row(s) affected	0.015 sec
34	16:29:33	select distinct Employee_name from employee LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec

Use AS to rename columns. ✓

MySQL Workbench interface showing a query in the SQL Editor:

```
1 • use company;
2 • select Employee_name as E_name from employee;
```

The left sidebar shows the Schemas pane with the 'company' database selected. The 'employee' table is highlighted under the 'Tables' section. The 'Information' pane shows the table structure:

**Table: employee**

**Columns:**

- id: char(225) PK
- Employee\_name: varchar(225)
- Employee\_salary: int
- Employee\_bonus: int

The 'Result Grid' shows the output of the query:

E_name
Ahmad
Sarah
Nora
Nasser
Ali
Asad

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
35	16:34:32	use company	0 row(s) affected	0.000 sec
36	16:34:32	select Employee_name as E_name from employee LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec

Operators: Comparison (more than, less than, ...), Logical (And, Or, ...), Arithmetic (+, -, \*, ...). ✓

MySQL Workbench

Satr - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

users

Views

Stored Procedures

Functions

Administration Schemas

Information

Table: **employee**

Columns:

Id char(225) PK

Employee\_name varchar(225)

Employee\_salary int

Employee\_bonus int

SQL File 1\*

Limit to 1000 rows

1 • select 5 > 3;

Result Grid

Filter Rows:

Exports: Wrap Cell Contents

Result 17 x

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
41	16:36:58	select 3 <= 3 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
42	16:37:16	select 5 > 3 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

MySQL Workbench

Satr - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

users

Views

Stored Procedures

Functions

Administration Schemas

Information

Schema: **company**

SQL File 1\*

Limit to 1000 rows

1 • select 1 and 1;

Result Grid

Filter Rows:

Exports: Wrap Cell Contents

Result 23 x

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
50	16:40:25	select A and 1 LIMIT 0, 1000	Error Code: 1054. Unknown column 'A' in 'field list'	0.031 sec
51	16:40:30	select 1 and 1 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

users

Views

Stored Procedures

Functions

Administration Schemas

Information

Schema: company

SQL File 1\*

Limit to 1000 rows

1 • select 3 \* 4;

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

3

4

12

Result 25

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
52	16:40:59	select 3*4 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
53	16:41:07	select 3 * 4 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Copy table to new one. ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

users

Views

Stored Procedures

Functions

Administration Schemas

Information

Schema: company

SQL File 1\*

Limit to 1000 rows

1 • use company;

2 • use company;

3 • create table manager

4 • select \* from employee where Employee\_salary >= 5500;

5

6 • select \* from manager;

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

	id	Employee_name	Employee_salary	Employee_bonus
▶	3	Sarah	5500	2000
	5	Nasser	5500	1500
	7	Ali	5500	1000
	8	Asad	6000	2000

manager 27

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
61	16:46:57	create table manager select * from employee where Employee_salary >= 5500	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0	0.062 sec
62	16:46:57	select * from manager LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use aggregate function (avg). ✓

MySQL Workbench

Satr - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

users

Views

Stored Procedures

Functions

Administration Schemas

Information

Schema: company

SQL File 1\*

```
1 use company;
2 select avg(Employee_salary)
3 from employee;
```

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

avg(Employee\_salary)

5416.6667

Result 28

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
63	13:09:37	use company	0 row(s) affected	0.000 sec
64	13:09:37	select avg(Employee_salary) from employee LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use aggregate function (max). ✓

MySQL Workbench

Satr - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

users

Views

Stored Procedures

Functions

Administration Schemas

Information

Schema: company

SQL File 1\*

```
1 use company;
2 select max(Employee_bonus)
3 from employee;
```

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

max(Employee\_bonus)

2000

Result 30

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
67	13:11:51	use company	0 row(s) affected	0.000 sec
68	13:11:51	select max(Employee_bonus) from employee LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use aggregate function (min). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

```
1 use company;
2 select min(Employee_salary)
3 from employee;
```

Result Grid

min(Employee\_salary)

5000

Result 32

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
71	13:13:05	use company	0 row(s) affected	0.000 sec
72	13:13:05	select min(Employee_salary) from employee LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use aggregate function (sum). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

```
1 use company;
2 select sum(Employee_bonus)
3 from employee;
```

Result Grid

sum(Employee\_bonus)

10000

Result 34

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
75	13:14:06	use company	0 row(s) affected	0.000 sec
76	13:14:06	select sum(Employee_bonus) from employee LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use aggregate function (count). ✓



MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

```
1 use company;
2 select count(id)
3 from employee;
```

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

count(\*)

6

Result 37

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
81	13:15:17	use company	0 row(s) affected	0.000 sec
82	13:15:17	select count(*) from employee LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec

Object Info Session

Use Numeric function (pow). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

```
1 select pow(5,2);
2
```

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

pow(5,2)

25

Result 41

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
89	13:18:54	select pow(2,5) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
90	13:19:00	select pow(5,2) LIMIT 0, 1000	1 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

Use Numeric function (abs). ✓



MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

Limit to 1000 rows

1 • select abs(-7);

2

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

abs(-7)

7

Result 42

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
90	13:19:00	select pow(5,2) LIMIT 0, 1000	1 row(s) returned	0.016 sec / 0.000 sec
91	18:16:46	select abs(-7) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use Numeric function (div). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

Limit to 1000 rows

1 • select 20 div 5;

2

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

20  
div 5

4

Result 43

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
91	18:16:46	select abs(-7) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
92	18:17:30	select 20 div 5 LIMIT 0, 1000	1 row(s) returned	0.047 sec / 0.000 sec

Object Info Session

Use Numeric function (mod). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

Limit to 1000 rows

```
1 • select mod(13,3);
```

2

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

mod(13,3)

1

Result 44

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
92	18:17:30	select 20 div 5 LIMIT 0, 1000	1 row(s) returned	0.047 sec / 0.000 sec
93	18:18:16	select mod(13,3) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use string function (ascii). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

Limit to 1000 rows

```
1 • select ascii('k');
```

2

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

ascii('k')

107

Result 53

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
102	18:21:02	select ascii(kw) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
103	18:21:09	select ascii('k') LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use string function (lower). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

Limit to 1000 rows

```
1 • select lower('DATABASE');
```

2

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

lower('DATABASE')

database

Result 57

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
106	18:22:14	select lower(SQL) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
107	18:22:33	select lower(DATABASE) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Use string function (upper). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

Tables

employee

Columns

id

Employee\_name

Employee\_salary

Administration Schemas

Information

Schema: company

SQL File 1\*

Limit to 1000 rows

```
1 • select upper('important');
```

2

Result Grid

Filter Rows:

Export: Wrap Cell Content: I

upper('important')

IMPORTANT

Result 58

Read Only

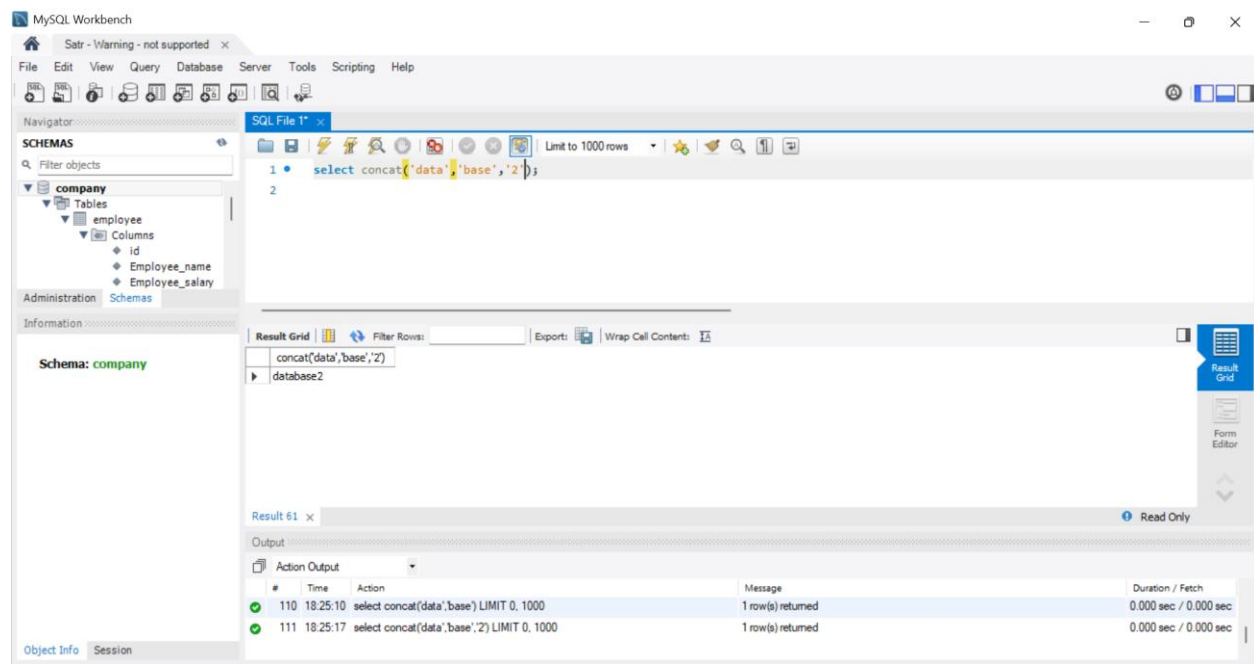
Output

Action Output

#	Time	Action	Message	Duration / Fetch
107	18:22:33	select lower(DATABASE) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
108	18:24:11	select upper(important) LIMIT 0, 1000	1 row(s) returned	0.047 sec / 0.000 sec

Object Info Session

Use string function (concat). ✓



## Project:

باستخدام ما تعلمته خلال هذه الدورة قم بتطبيق المتطلبات التالية، علماً أن هذا المشروع مكتمل لمشروع SQL المستوى الأول.

### المتطلبات:

- إنشاء جدول للطلاب المتفوقين من جدول الطلاب، بحيث يحتوي هذا الجدول على بيانات الطلاب الذي يكون معدلهم التراكمي أعلى من ٩٠.
- إنشاء جدول للطلاب الغير مجتازين من جدول الطلاب، بحيث يحتوي هذا الجدول على بيانات الطلاب الذي يكون معدلهم التراكمي أقل من ٦٠.
- عرض أسماء الطلاب التي تبدأ بحرف A.
- عرض أسماء الطلاب التي تحتوي أسمائهم على أربع خانات.
- تطبيق Aggregate functions (AVG, MAX, MIN) على المعدل التراكمي للطلاب مع إضافة تسمية واضحة للنتائج.
- حصر وعرض أسماء الطلاب المتفوقين في المستوى السادس الحاصلين على معدل تراكمي يساوي 100.
- عرض الطلاب اللذين في المستوى الأول وأعمارهم بين ١٥ و ١٦ سنة.
- عرض عدد الطلاب الموجودين بالمستوى ٢.
- استعراض مسارات الطلاب في المدرسة بدون تكرار.

- عرض أسماء المواد ويتم عرض الكلمات بالأحرف الكبيرة.
- عرض المتوسط الحسابي للمعدل التراكمي وقرب الرقم لأقرب أصغر عدد (باستخدام numeric functions).
- تبديل جميع الصفوف من جدول الطلاب التي تحتوي على الجنس F إلى Female، و M إلى Male (باستخدام string functions).
- تحديث المعدل التراكمي للطلاب الذي معدلهم التراكمي أقل من ٦٠ وزيادة معدلهم بخمس درجات.

Create top student table. ✓

The screenshot shows the MySQL Workbench interface. The SQL Editor contains the following queries:

```

1 use school;
2
3 create table top_student
4 select * from student where gpa >= 90;
5
6 select * from top_student;

```

The left sidebar shows the database schema with the 'student' table selected. The 'Result Grid' displays the data for the 'top\_student' table, showing columns: id, std\_name, dob, gender, join\_date, std\_email, std\_level, track, and gpa. The data includes students like Fahad, Rania, Tariq, Fatimah, Saud, Abdullah, Faisal, and Aisha.

The bottom 'Output' pane shows the execution results:

#	Time	Action	Message	Duration / Fetch
119	13:41:58	create table top_student select * from student where gpa >= 90	9 row(s) affected Records: 9 Duplicates: 0 Warnings: 0	0.047 sec
120	13:41:58	select * from top_student LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec

Create failed student table. ✓

MySQL Workbench

Satir - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- company
- mydb
- newschema
- school
  - Tables
    - student
    - subjects

Administration Schemas

Information

Table: student

Columns:

- id int AI PK
- std\_name varchar(255)
- dob date
- gender varchar(1)
- join\_date date
- std\_email varchar(255)
- std\_level int
- track varchar(255)
- gpa decimal(5,2)

SQL File 1\*

```

1 • use school;
2
3 • create table failed_student
4   select * from student where gpa < 60;
5
6 • select * from failed_student;

```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
31	Hassan	2004-10-05	M	2023-02-01	std31@school.com	1	scientific	58.30
32	Maryam	2003-09-14	F	2022-07-10	std32@school.com	2	humanities	54.60
33	Faisal	2002-12-21	M	2021-09-09	std33@school.com	4	scientific	49.80
34	Lina	2004-03-08	F	2023-03-20	std34@school.com	1	scientific	57.20
35	Othman	2003-01-19	M	2022-06-15	std35@school.com	3	humanities	51.00

failed\_student 65

Output

Action Output

#	Time	Action	Message	Duration / Fetch
122	13:46:11	create table failed_student select * from student where gpa < 60	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.078 sec
123	13:46:11	select * from failed_student LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Select students start with 'A' in their name. ✓

MySQL Workbench

Satir - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- company
- mydb
- newschema
- school
  - Tables
    - student
    - subjects

Administration Schemas

Information

Table: student

Columns:

- id int AI PK
- std\_name varchar(255)
- dob date
- gender varchar(1)
- join\_date date
- std\_email varchar(255)
- std\_level int
- track varchar(255)
- gpa decimal(5,2)

SQL File 1\*

```

1 • use school;
2
3 • select * from student where std_name like 'A%';
4   -- student name start with 'A'

```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
1	Ali	2002-10-29	M	2022-05-25	stdAli@school.com	3	scientific	79.20
8	Amani	2003-02-03	F	2022-09-19	std8@school.com	2	humanities	77.80
15	Abdurahman	2004-05-16	M	2023-01-14	std15@school.com	1	humanities	80.30
20	Abdullah	2003-06-30	M	2022-08-05	std20@school.com	2	scientific	90.90
26	Aisha	2002-02-18	F	2021-05-10	std26@school.com	6	scientific	92.10

student 69

Output

Action Output

#	Time	Action	Message	Duration / Fetch
130	13:49:35	use school	0 row(s) affected	0.000 sec
131	13:49:35	select * from student where std_name like 'A%' LIMIT 0, 1000	5 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

Select only students that have 4 letters in their name. ✓



MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company mydb newschema school

Tables

student subjects

Administration Schemas

Information

Table: student

Columns:

id int AI PK  
std\_name varchar(255)  
dob date  
gender varchar(1)  
join\_date date  
std\_email varchar(255)  
std\_level int  
track varchar(255)  
gpa decimal(5,2)

SQL File 1\*

```

1 use school;
2
3 select * from student where std_name like '____';
4 -- student name with 4 letters

```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
2	Sara	2003-01-12	F	2022-06-10	std2@school.com	2	humanities	88.50
14	Mona	2003-03-22	F	2022-09-10	std14@school.com	2	scientific	85.90
16	Reem	2002-11-11	F	2021-09-04	std16@school.com	4	humanities	89.00
17	Saud	2003-09-17	M	2022-07-22	std17@school.com	3	scientific	94.60
19	Huda	2002-05-07	F	2021-06-11	std19@school.com	5	humanities	83.20
24	Nada	2002-12-02	F	2021-08-09	std24@school.com	4	scientific	85.00
27	Omar	2003-08-27	M	2022-09-06	std27@school.com	2	scientific	74.90
28	Noor	2004-01-04	F	2023-01-28	std28@school.com	1	humanities	88.30

student 70 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
132	13:52:11	use school	0 row(s) affected	0.000 sec
133	13:52:11	select * from student where std_name like '____' LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Apply AVG, MAX, MIN (Aggregate functions) to the student's GPA and add a clear label to the result. ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company mydb newschema school

Tables

student subjects

Administration Schemas

Information

Table: student

Columns:

id int AI PK  
std\_name varchar(255)  
dob date  
gender varchar(1)  
join\_date date  
std\_email varchar(255)  
std\_level int  
track varchar(255)  
gpa decimal(5,2)

SQL File 1\*

```

1 use school;
2
3 select avg(gpa) as average_grade, max(gpa) as max_grade, min(gpa) as min_grade from student;
4
5 -- use avg, max, min

```

Result Grid

average_grade	max_grade	min_grade
80.594286	95.00	49.80

Result 73 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
144	13:59:38	use school	0 row(s) affected	0.000 sec
145	13:59:38	select avg(gpa) as average_grade, max(gpa) as max_grade, min(gpa) as min_grade...	1 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

List and display the names of outstanding students in the sixth level who have a cumulative average equal to 100. ✓



MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

mydb

newschema

school

Tables

student

subjects

Administration Schemas

Information

Table: student

Columns:

id int AI PK

std\_name varchar(255)

dob date

gender varchar(1)

join\_date date

std\_email varchar(255)

std\_level int

track varchar(255)

gpa decimal(5,2)

SQL File 1\*

```

1 use school;
2
3 select *
4 from student
5 where gpa = 100 and std_level = 6;

```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
36	Areej	2002-08-25	F	2021-09-01	std36@school.com	6	scientific	100.00
38	Noorin	2004-02-28	F	2023-02-10	std38@school.com	6	humanities	100.00

student 77

Output

Action Output

#	Time	Action	Message	Duration / Fetch
160	14:11:25	use school	0 row(s) affected	0.000 sec
161	14:11:25	select * from student where gpa = 100 and std_level = 6 LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Show students who are in the first level and are between 15 and 16 years old. ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

mydb

newschema

school

Tables

student

subjects

Administration Schemas

Information

Table: student

Columns:

id int AI PK

std\_name varchar(255)

dob date

gender varchar(1)

join\_date date

std\_email varchar(255)

std\_level int

track varchar(255)

gpa decimal(5,2)

SQL File 1\*

```

1 use school;
2
3 select *
4 from student
5 where dob >= '2009-06-11' and std_level = 1;
6

```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
39	Hadi	2009-11-12	M	2024-09-01	std39@school.com	1	scientific	83.50
40	Lujain	2010-02-05	F	2024-09-01	std40@school.com	1	humanities	91.00
41	Sultan	2009-07-24	M	2024-09-01	std41@school.com	1	scientific	77.80
42	Razan	2010-04-30	F	2024-09-01	std42@school.com	1	humanities	88.20
43	Yara	2009-09-18	F	2024-09-01	std43@school.com	1	humanities	79.40
44	Fahd	2010-01-11	M	2024-09-01	std44@school.com	1	scientific	85.70

student 81

Output

Action Output

#	Time	Action	Message	Duration / Fetch
170	10:12:44	use school	0 row(s) affected	0.000 sec
171	10:12:44	select * from student where dob >= '2009-06-11' and std_level = 1 LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Display the number of students in Level 2. ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

mydb

newschema

school

Tables

student

subjects

Administration Schemas

Information

Table: student

Columns:

id int AI PK

std\_name varchar(255)

dob date

gender varchar(1)

join\_date date

std\_email varchar(255)

std\_level int

track varchar(255)

gpa decimal(5,2)

SQL File 1\*

```
1 use school;
2
3 select *
4 from student
5 where std_level = 2;
```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
2	Sara	2003-01-12	F	2022-06-10	std2@school.com	2	humanities	88.50
5	Hassan	2003-05-14	M	2022-08-22	std5@school.com	2	humanities	73.60
8	Amani	2003-02-03	F	2022-09-19	std8@school.com	2	humanities	77.80
14	Mona	2003-03-22	F	2022-09-10	std14@school.com	2	scientific	85.90
20	Abdullah	2003-06-30	M	2022-08-05	std20@school.com	2	scientific	90.90
27	Omar	2003-08-27	M	2022-09-06	std27@school.com	2	scientific	74.90
29	Latifah	2003-11-13	F	2022-08-02	std29@school.com	2	scientific	81.60
32	Maryam	2003-09-14	F	2022-07-10	std32@school.com	2	humanities	54.60

student 82

Output

Action Output

#	Time	Action	Message	Duration / Fetch
172	10:13:29	use school	0 row(s) affected	0.000 sec
173	10:13:29	select * from student where std_level = 2 LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Review students' paths in school without repetition. ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

mydb

newschema

school

Tables

student

subjects

Administration Schemas

Information

Table: student

Columns:

id int AI PK

std\_name varchar(255)

dob date

gender varchar(1)

join\_date date

std\_email varchar(255)

std\_level int

track varchar(255)

gpa decimal(5,2)

SQL File 1\*

```
1 use school;
2
3 select distinct track
4 from student;
```

Result Grid

track
scientific
humanities

student 83

Output

Action Output

#	Time	Action	Message	Duration / Fetch
174	10:14:22	use school	0 row(s) affected	0.000 sec
175	10:14:22	select distinct track from student LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Subjects names are displayed and words are displayed in capital letters. ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

mydb

newschema

school

Tables

student

subjects

Administration Schemas

Information

Table: student

Columns:

id int AI PK

std\_name varchar(255)

dob date

gender varchar(1)

join\_date date

std\_email varchar(255)

std\_level int

track varchar(255)

gpa decimal(5,2)

SQL File 1\*

Limit to 1000 rows

```
1 use school;
```

```
2
```

```
3 select *, upper(crs_name)
```

```
4 from subjects;
```

Result Grid

Filter Rows:

Export: Wrap Cell Contents

id	crs_name	upper(crs_name)
1	Math	MATH
2	Physics	PHYSICS
3	Chemistry	CHEMISTRY
4	Biology	BIOLOGY
5	History	HISTORY
6	English	ENGLISH

Result 87 x

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
182	10:16:53	use school	0 row(s) affected	0.000 sec
183	10:16:53	select *, upper(crs_name) from subjects LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Display the arithmetic mean of the GPA and round the number to the smallest number (using numeric functions). ✓

MySQL Workbench

Sat - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

company

mydb

newschema

school

Tables

student

subjects

Administration Schemas

Information

Table: student

Columns:

id int AI PK

std\_name varchar(255)

dob date

gender varchar(1)

join\_date date

std\_email varchar(255)

std\_level int

track varchar(255)

gpa decimal(5,2)

SQL File 1\*

Limit to 1000 rows

```
1 use school;
```

```
2
```

```
3 select floor(avg(gpa))
```

```
4 from student;
```

Result Grid

Filter Rows:

Export: Wrap Cell Contents

floor(avg(gpa))
82

Result 95 x

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
200	10:21:11	use school	0 row(s) affected	0.000 sec
201	10:21:11	select floor(avg(gpa)) from student LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec

Object Info Session

Switch all rows from the Students table that have gender F to Female, and M to Male (using string functions). ✓

MySQL Workbench

Satir - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- company
- mydb
- newschema
- school
  - Tables
    - student
    - subjects

Administration Schemas

Information

Table: student

Columns:

- id int AI PK
- std\_name varchar(255)
- dob date
- gender varchar(1)
- join\_date date
- std\_email varchar(255)
- std\_level int
- track varchar(255)
- gpa decimal(5,2)

SQL File 1\*

```

1 • use school;
2
3 • update student
4   set gender = replace(gender, 'F', 'Female')
5   where gender = 'F';
6
7 • select * from student;
  
```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
1	Ali	2002-10-29	M	2022-05-25	stdAli@school.com	3	scientific	79.20
2	Sara	2003-01-12	Female	2022-06-10	std2@school.com	2	humanities	88.50
3	Fahad	2004-03-08	M	2023-02-15	std3@school.com	1	scientific	91.30
4	Noura	2002-09-19	Female	2021-09-01	std4@school.com	4	scientific	82.00
5	Hassan	2003-05-14	M	2022-08-22	std5@school.com	2	humanities	73.60

student 97

Output

Action Output

#	Time	Action	Message	Duration / Fetch
213	10:40:19	update student set gender = replace(gender, 'F', 'Female') where gender = 'F'	23 row(s) affected Rows matched: 23 Changed: 23 Warnings: 0	0.046 sec
214	10:40:19	select * from student LIMIT 0, 1000	44 row(s) returned	0.000 sec / 0.000 sec

MySQL Workbench

Satir - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- company
- mydb
- newschema
- school
  - Tables
    - student
    - subjects

Administration Schemas

Information

Table: student

Columns:

- id int AI PK
- std\_name varchar(255)
- dob date
- gender varchar(1)
- join\_date date
- std\_email varchar(255)
- std\_level int
- track varchar(255)
- gpa decimal(5,2)

SQL File 1\*

```

1 • use school;
2
3 • update student
4   set gender = replace(gender, 'M', 'Male')
5   where gender = 'M';
6
7 • select * from student;
  
```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
1	Ali	2002-10-29	Male	2022-05-25	stdAli@school.com	3	scientific	79.20
2	Sara	2003-01-12	Female	2022-06-10	std2@school.com	2	humanities	88.50
3	Fahad	2004-03-08	Male	2023-02-15	std3@school.com	1	scientific	91.30
4	Noura	2002-09-19	Female	2021-09-01	std4@school.com	4	scientific	82.00
5	Hassan	2003-05-14	Male	2022-08-22	std5@school.com	2	humanities	73.60

student 98

Output

Action Output

#	Time	Action	Message	Duration / Fetch
216	10:40:55	update student set gender = replace(gender, 'M', 'Male') where gender = 'M'	21 row(s) affected Rows matched: 21 Changed: 21 Warnings: 0	0.047 sec
217	10:40:55	select * from student LIMIT 0, 1000	44 row(s) returned	0.000 sec / 0.000 sec

Update the cumulative GPA for students whose cumulative GPA is less than 60 and increase their GPA by five grades. ✓

MySQL Workbench

Satr - Warning - not supported

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- company
- mydb
- newschema
- school
  - Tables
    - student
    - subjects

Administration Schemas

Information

Table: student

Columns:

- id int AI PK
- std\_name varchar(255)
- dob date
- gender varchar(1)
- join\_date date
- std\_email varchar(255)
- std\_level int
- track varchar(255)
- gpa decimal(5,2)

SQL File 1\* x

```

1 • use school;
2
3 • update student
4   set gpa = gpa + 5
5   where gpa < 60;
6   -- increase low students grades by 5
7 • select * from student where gpa < 66;
8   -- show the results

```

Result Grid

id	std_name	dob	gender	join_date	std_email	std_level	track	gpa
31	Hassan	2004-10-05	Male	2023-02-01	std31@school.com	1	scientific	63.30
32	Maryam	2003-09-14	Female	2022-07-10	std32@school.com	2	humanities	59.60
33	Faisal	2002-12-21	Male	2021-09-09	std33@school.com	4	scientific	54.80
34	Lina	2004-03-08	Female	2023-03-20	std34@school.com	1	scientific	62.20
35	Othman	2003-01-19	Male	2022-06-15	std35@school.com	3	humanities	56.00

student 99 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
219	10:46:25	update student set gpa = gpa + 5 where gpa < 60	5 row(s) affected Rows matched: 5 Changed: 5 Warnings: 0	0.047 sec
220	10:46:25	select * from student where gpa < 66 LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Project done. ✓