

Activity 2: Writing SQL Syntax

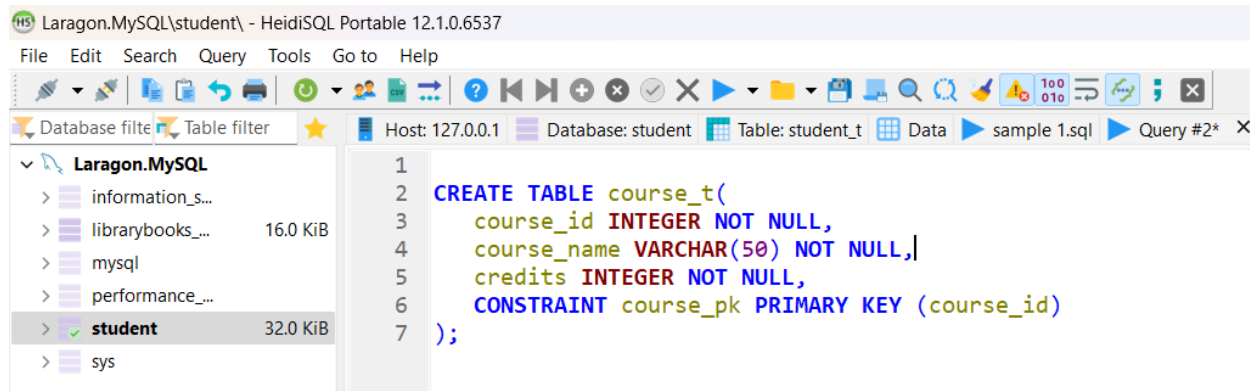
Instructions:

Write the appropriate SQL syntax for the following tasks. Use the examples provided in the lesson as a guide.

1. Create a table named `course_t` with the following columns:

- `course_id` (INTEGER, primary key, not null)
- `course_name` (VARCHAR(50), not null)
- `credits` (INTEGER, not null)

QUERY

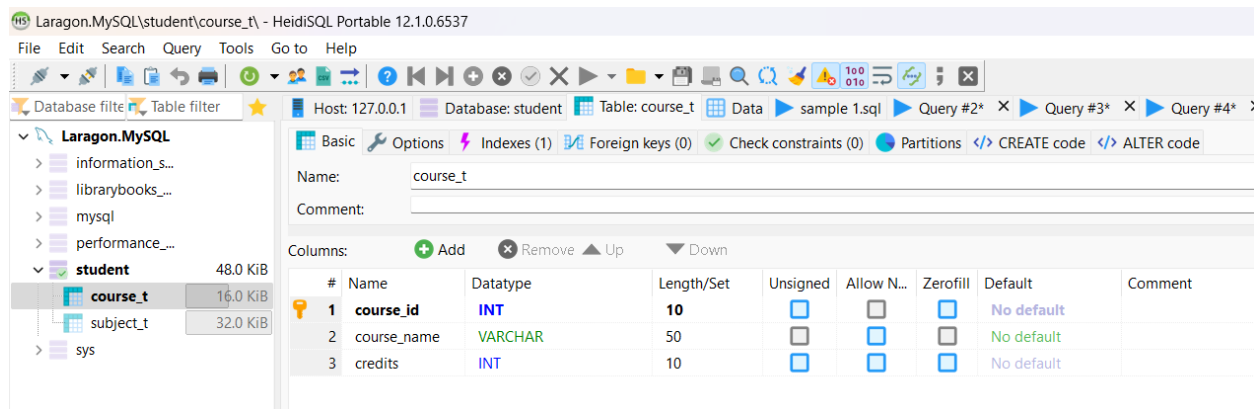


The screenshot shows the HeidiSQL interface with the following SQL query entered in the query editor:

```
1 CREATE TABLE course_t(
2   course_id INTEGER NOT NULL,
3   course_name VARCHAR(50) NOT NULL,
4   credits INTEGER NOT NULL,
5   CONSTRAINT course_pk PRIMARY KEY (course_id)
6 );
7
```

The left sidebar shows the database structure with 'student' selected, and the right sidebar shows the query results.

OUTPUT



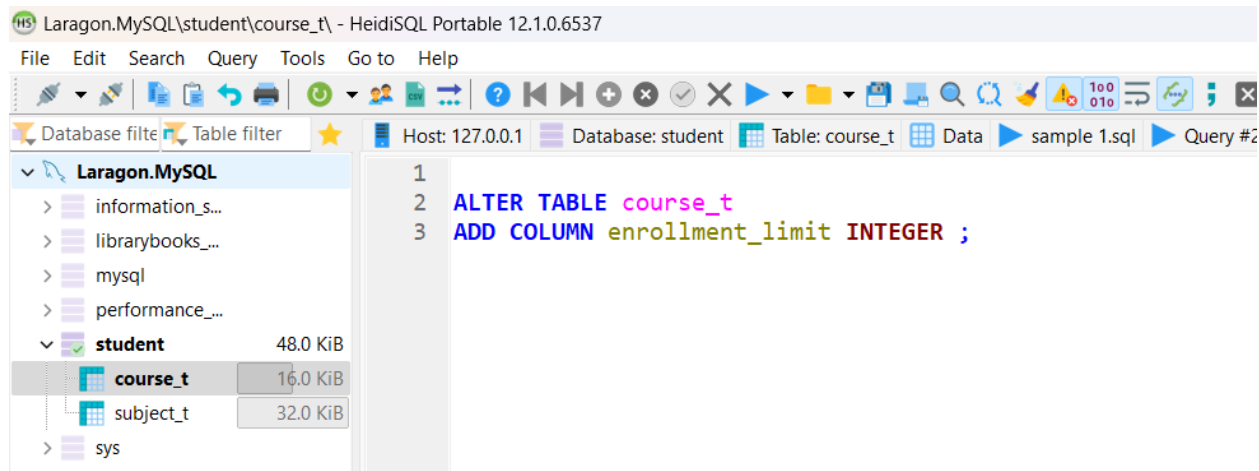
The screenshot shows the HeidiSQL interface with the 'course_t' table selected in the 'student' database. The 'Columns' tab is active, displaying the following table structure:

#	Name	Datatype	Length/Set	Unsigned	Allow N...	Zerofill	Default	Comment
1	course_id	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
2	course_name	VARCHAR	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
3	credits	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	

The left sidebar shows the database structure with 'student' selected, and the right sidebar shows the query results.

2. Add a column `enrollment_limit` (INTEGER) to the `course_t` table.

QUERY



The screenshot shows the HeidiSQL interface with the following SQL query entered in the query editor:

```
1
2 ALTER TABLE course_t
3 ADD COLUMN enrollment_limit INTEGER ;
```

The left sidebar shows the database structure with 'student' selected, and the right sidebar shows the query results.

OUTPUT

HeidiSQL Portable 12.1.0.6537

Host: 127.0.0.1 Database: student Table: course_t

Columns:

#	Name	Datatype	Length/Set	Unsigned	Allow N...	Zerofill	Default	Comment	Collation
1	course_id	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
2	course_name	VARCHAR	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_0900_ai_ci
3	credits	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
4	enrollment_li...	INT	10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		

3. Insert the following data into the course_t table:

- course_id: 101
- course_name: "Introduction to Databases"
- credits: 3

QUERY

HeidiSQL Portable 12.1.0.6537

Host: 127.0.0.1 Database: student Table: course_t

```

1
2 INSERT INTO course_t (course_id, course_name, credits)
3 VALUES ( 101, 'Introduction to Databases', 3 )
    
```

OUTPUT

HeidiSQL Portable 12.1.0.6537

Host: 127.0.0.1 Database: student Table: course_t

student.course_t: 1 rows total (approximately)

course_id	course_name	credits	enrollment_limit
101	Introduction to Databases	3	(NULL)

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- Update the credits column for the course with course_id 101 to 4.

QUERY

Laragon.MySQL\student\course_t\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: student Table: course_t Data sample 1.sql

Laragon.MySQL

- information_sc...
- librarybooks_m...
- mysql
- performance_s...
- student** 48.0 KiB
 - course_t** 16.0 KiB
 - subject_t 32.0 KiB
- sys

```
1
2 UPDATE course_t
3 SET credits = 4
4 WHERE course_id = 101
5 ;
6
```

OUTPUT

Laragon.MySQL\student\course_t\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: student Table: course_t Data sample 1.sql

Laragon.MySQL

- information_sc...
- librarybooks_m...
- mysql
- performance_s...
- student** 48.0 KiB
 - course_t** 16.0 KiB
 - subject_t 32.0 KiB
- sys

student.course_t: 1 rows total (approximately)

course_id	course_name	credits	enrollment_limit
101	Introduction to Databases	4	(NULL)

- Revoke permission for a user to query the course_t table.

QUERY

Laragon.MySQL\student\course_t\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: student Table: course_t Data sample 1.sql Query #2*

Laragon.MySQL

- information_sc...
- librarybooks_m...
- mysql
- performance_s...
- student** 48.0 KiB
 - course_t** 16.0 KiB
 - subject_t 32.0 KiB
- sys

```
1
2 REVOKE ALL GRANT OPTION FROM 'username'@'host';
3
```

Instructions: Write the appropriate SQL syntax for the following tasks.

1. Create a table `student_t` with the following columns:

- `stud_id` (INTEGER, Primary Key, NOT NULL)
- `stud_name` (VARCHAR(50), NOT NULL)
- `stud_sec` (VARCHAR(30))
- `stud_prog` (VARCHAR(20))
- `stud_yr` (VARCHAR(5))

QUERY

Laragon.MySQL\student\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: student sample 1.sql Query #2* Query #3* Query #

Laragon.MySQL

- information_s...
- librarybooks_...
- mysql
- performance_...
- student** 48.0 KiB
 - course_t 16.0 KiB
 - subject_t 32.0 KiB
 - sys

```

1
2 CREATE TABLE student_t(
3     stud_id INTEGER NOT NULL,
4     stud_name VARCHAR(50) NOT NULL,
5     stud_sec VARCHAR(30),
6     stud_prog VARCHAR(20),
7     stud_yr VARCHAR(5),
8     CONSTRAINT student_pk PRIMARY KEY (stud_id)
9 );
10

```

OUTPUT

Laragon.MySQL\student\student_t\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: student Table: student_t Data sample 1.sql Query #2* Query #3* Query #4* Query #5* Query #

Basic Options Indexes (1) Foreign keys (0) Check constraints (0) Partitions CREATE code ALTER code

Name: student_t

Comment:

Columns: Add Remove Up Down

#	Name	Datatype	Length/Set	Unsigned	Allow N...	Zerofill	Default	Comment	Collation
1	stud_id	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
2	stud_name	VARCHAR	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_0900_ai_ci
3	stud_sec	VARCHAR	30	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		utf8mb4_0900_ai_ci
4	stud_prog	VARCHAR	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		utf8mb4_0900_ai_ci
5	stud_yr	VARCHAR	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		utf8mb4_0900_ai_ci

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2. Add a column email (VARCHAR(100)) to the student_t table.

QUERY

HeidiSQL Portable 12.1.0.6537 interface. The left sidebar shows the database structure: Laragon.MySQL > student > student_t (16.0 KiB). The main query editor contains the following SQL code:

```
1  
2 ALTER TABLE student_t  
3 ADD COLUMN email VARCHAR(100);  
4
```

OUTPUT

HeidiSQL Portable 12.1.0.6537 interface. The left sidebar shows the database structure: Laragon.MySQL > student > student_t (16.0 KiB). The main window shows the table structure for 'student_t'.

#	Name	Datatype	Length/Set	Unsigned	Allow N...	Zerofill	Default	Comment	Collation
1	stud_id	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
2	stud_name	VARCHAR	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_0900_ai_ci
3	stud_sec	VARCHAR	30	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		utf8mb4_0900_ai_ci
4	stud_prog	VARCHAR	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		utf8mb4_0900_ai_ci
5	stud_yr	VARCHAR	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		utf8mb4_0900_ai_ci
6	email	VARCHAR	100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		utf8mb4_0900_ai_ci

3. Insert the following record into the student_t table:

- o stud_id: 101, stud_name: "Alice", stud_sec: "A", stud_prog: "CS", stud_yr: "1"

QUERY

HeidiSQL Portable 12.1.0.6537 interface. The left sidebar shows the database structure: Laragon.MySQL > student > student_t (16.0 KiB). The main query editor contains the following SQL code:

```
1  
2 INSERT INTO student_t ( stud_id, stud_name, stud_sec, stud_prog, stud_yr)  
3 VALUES ( 101, 'Alice', 'A', 'CS', 1 )  
4
```

OUTPUT

Laragon.MySQL\student\student_t\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: student Table: student_t Data sample 1.sql Query #2*

student.student_t: 1 rows total (approximately)

stud_id	stud_name	stud_sec	stud_prog	stud_yr	email
101	Alice	A	CS	1	(NULL)

Database structure:

- information_s...
- librarybooks_...
- mysql
- performance_...
- student (64.0 KiB)
 - course_t (16.0 KiB)
 - student_t (16.0 KiB)
 - subject_t (32.0 KiB)
- sys

4. Write a query to retrieve all records from the student_t table where stud_sec is "A".

Laragon.MySQL\student\student_t\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: student Table: student_t Data sample 1.sql Query #2* Query #3*

```

1
2 SELECT * FROM student_t
3 WHERE stud_sec = 'A';
4

```

student_t (1r x 6c)

stud_id	stud_name	stud_sec	stud_prog	stud_yr	email
101	Alice	A	CS	1	(NULL)

Database structure:

- information_s...
- librarybooks_...
- mysql
- performance_...
- student (64.0 KiB)
 - course_t (16.0 KiB)
 - student_t (16.0 KiB)
 - subject_t (32.0 KiB)
- sys

5. Delete all records from the student_t table but retain the table structure.

QUERY

Laragon.MySQL\student\student_t\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: student Table: student_t Data sample 1.sql Query #2*

```

1
2 DELETE FROM student_t;
3

```

Database structure:

- information_s...
- librarybooks_...
- mysql
- performance_...
- student (64.0 KiB)
 - course_t (16.0 KiB)
 - student_t (16.0 KiB)
 - subject_t (32.0 KiB)
- sys

OUTPUT

student.student_t: 0 rows total (approximately)

stud_id	stud_name	stud_sec	stud_prog	stud_yr	email
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6. Create a table grades_t with the following constraints:

- grade_id as the Primary Key
- stud_id as a Foreign Key referencing student_t

QUERY

```

1 USE student;
2
3 CREATE TABLE grades_t (
4     grade_id INTEGER NOT NULL,
5     stud_id INTEGER,
6     CONSTRAINT grades_pk PRIMARY KEY (grade_id),
7     CONSTRAINT grades_fk FOREIGN KEY (stud_id)
8     REFERENCES student_t(stud_id)
9 );
    
```

OUTPUT

grades_t

#	Name	Datatype	Length/Set	Unsigned	Allow N...	Zerofill	Default
1	grade_id	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default
2	stud_id	INT	10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL

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7. Update the stud_yr of the student with stud_id 101 to "2".

QUERY

The screenshot shows the HeidiSQL interface with the following details:

- Database: student
- Table: student_t
- Query Editor content:

```
1
2 UPDATE student_t
3 SET stud_id = 2
4 WHERE stud_id = 101
5 ;
```
- Left sidebar shows the database structure with 'student' selected and 'student_t' highlighted.

OUTPUT

The screenshot shows the HeidiSQL interface displaying the output of the query:

- Database: student
- Table: student_t
- Output text: student.student_t: 1 rows total (approximately)
- Output table:

stud_id	stud_name	stud_sec	stud_prog	stud_yr	email
2	Alice	A	CS	1	(NULL)

The left sidebar shows the database structure with 'student' selected and 'student_t' highlighted.

8. Write the syntax to remove the email column from the student_t table.

QUERY

The screenshot shows the HeidiSQL interface with the following details:

- Database: student
- Table: student_t
- Query Editor content:

```
1
2 ALTER TABLE student_t
3 DROP COLUMN email;
```
- Left sidebar shows the database structure with 'student' selected and 'student_t' highlighted.

OUTPUT

The screenshot shows the HeidiSQL interface with the 'student' database selected. The 'student_t' table is highlighted in the left sidebar. The main window displays the table's data, showing 1 row total (approximately).

stud_id	stud_name	stud_sec	stud_prog	stud_yr
2	Alice	A	CS	1

9. Grant permission to a user to query the student_t table.

QUERY

The screenshot shows the HeidiSQL interface with the 'student' database selected. The 'student_t' table is highlighted in the left sidebar. The main window displays the SQL query:

```
1
2 GRANT ALL PRIVILEGES ON student_t TO 'username'@'host';
```

10. Revoke permission for a user to delete records from the student_t table.

The screenshot shows the HeidiSQL interface with the 'student' database selected. The 'student_t' table is highlighted in the left sidebar. The main window displays the SQL query:

```
1
2 REVOKE DELETE student_t TO 'username'@'host';
```

