Study Unit 5,6: MySQL Queries

Outline

- Overview of phpMyAdmin
- MySQL – Insert Query
- MySQL – Select Query
- MySQL – Update Query
- MySQL – Delete Query

Learning Outcomes of Study Unit 5,6

Upon completion of this study unit, you should be able to

1.1 Overview of phpMyAdmin

1.2 phpMyAdmin – Insert Query Statement with SQL console and GUI

1.3 phpMyAdmin – Select Query Statement with SQL console and GUI

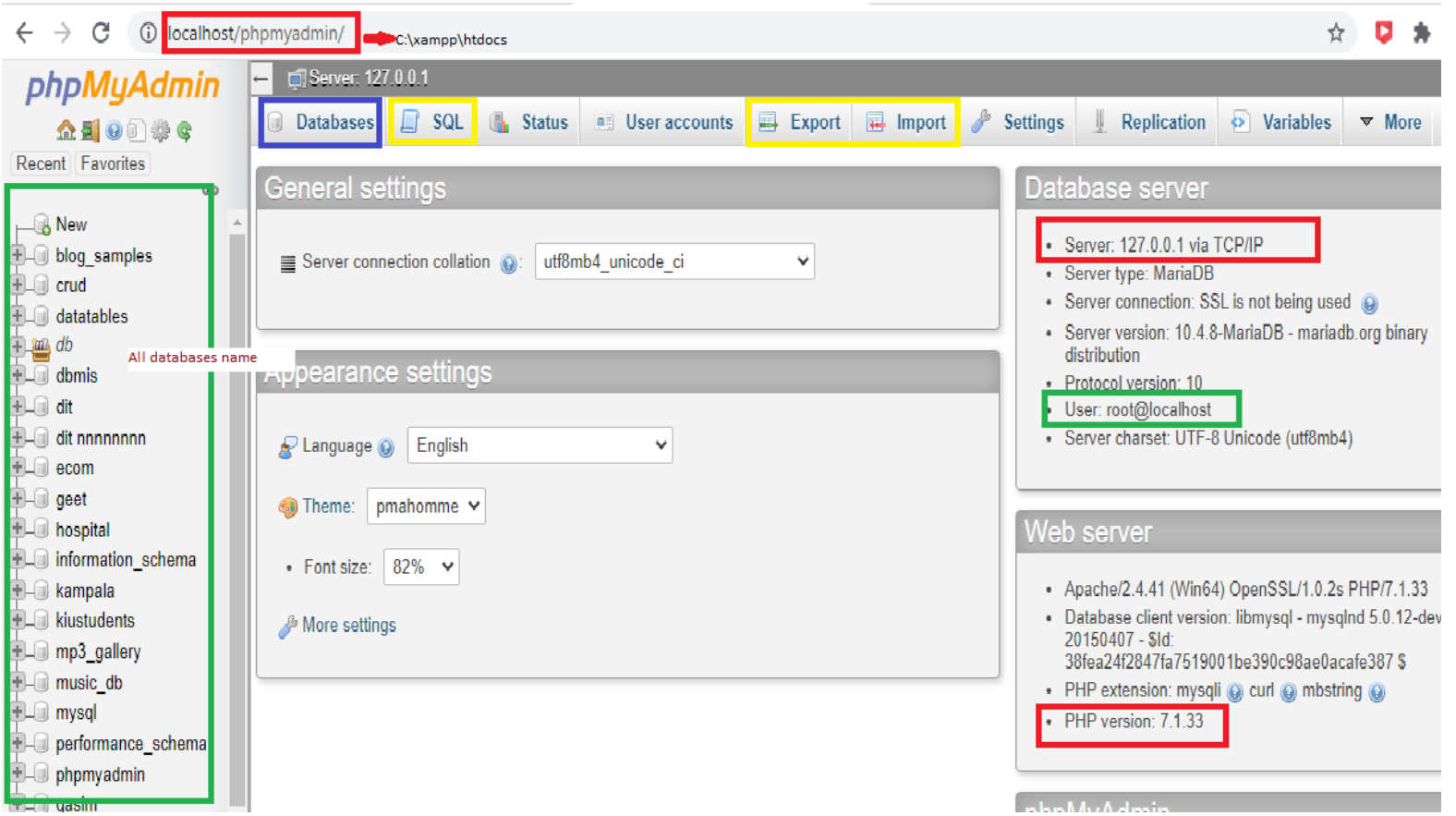
1.4 phpMyAdmin – Update Query Statement with SQL console and GUI

1.5 phpMyAdmin – Delete Query Statement with SQL console and GUI

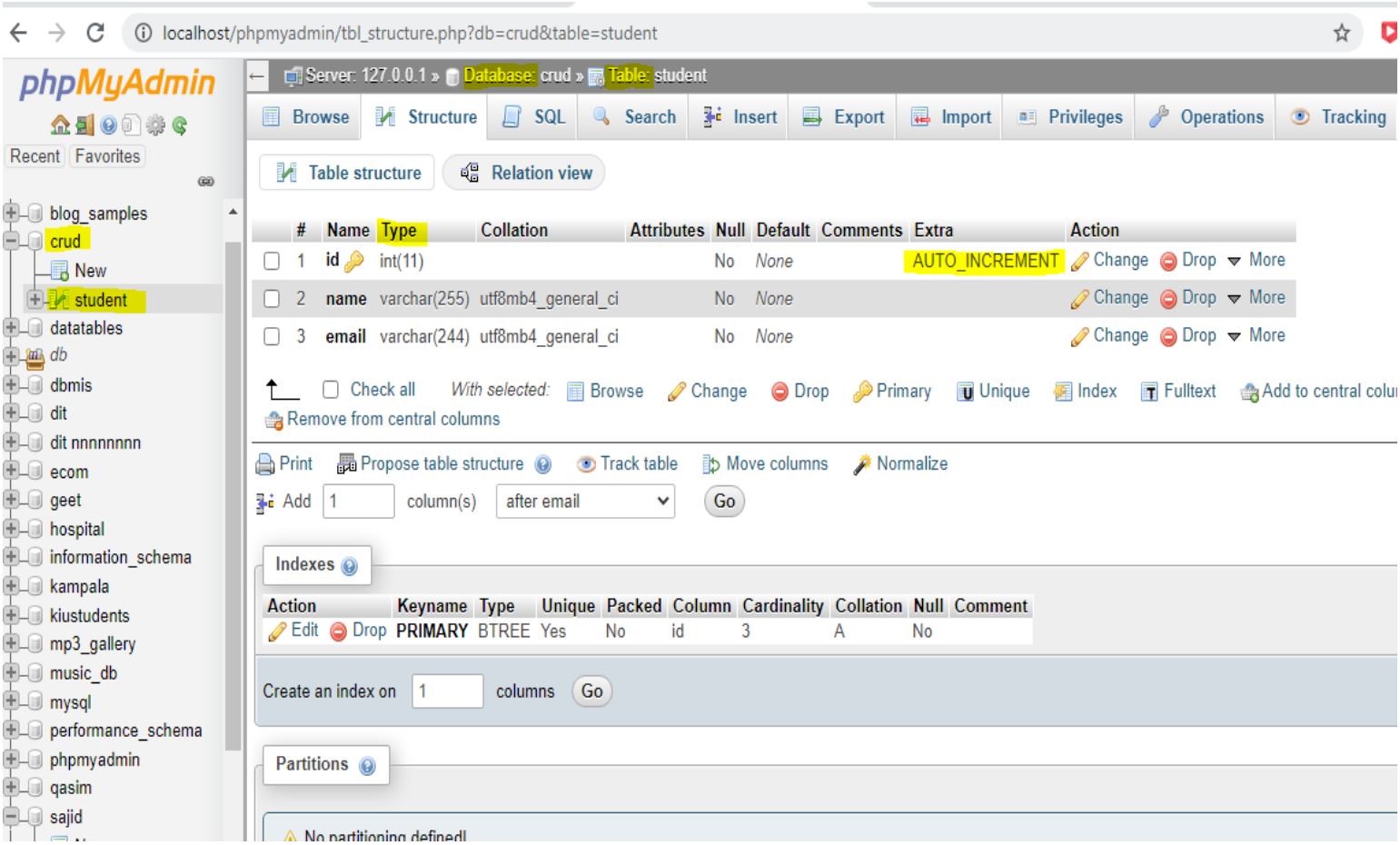
Definition of phpMyAdmin

PhpMyAdmin is a free and open source administration tool for MySQL and MariaDB. As a portable web application written primarily in PHP, it has become one of the most popular MySQL administration tools, especially for web hosting services. You can use phpMyAdmin to perform most administration tasks, including creating a database, running queries, and adding user accounts.

1.1 Overview Of phpMyAdmin

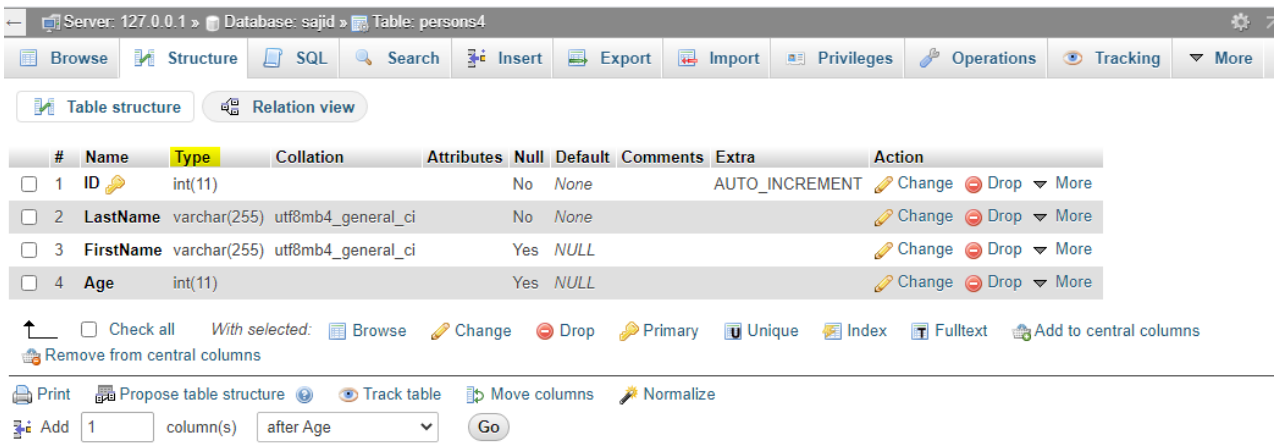


1: http://localhost path of c:\xampp\htdocs
2: Left Sidebar shows you databases name
3: SQL tab => you can run your MySQL Quries
4: Import and Export tab are Use for Backup
5: Server is showing its IP
6: User name is root
7: PHP version is 7.1.33



1: Database name is crude and Table name is student.
2: After selecting table -> click on Structure tab -> there are 3 Attributes with data types integer and varchar
3: id is AUTO_INCREMENT. Which is declared as Primary key
4: Structure Tab represents the structure of a Table

TABLE THAT WE SHALL USE FOR CRUD OPERATIONS



1.2 phpMyAdmin-Insert Query With SQL Console

To insert data into a MySQL table, you would need to use the SQL **INSERT INTO** command. You can insert data into the MySQL table by using the mysql> prompt or by using any script like PHP.

Syntax

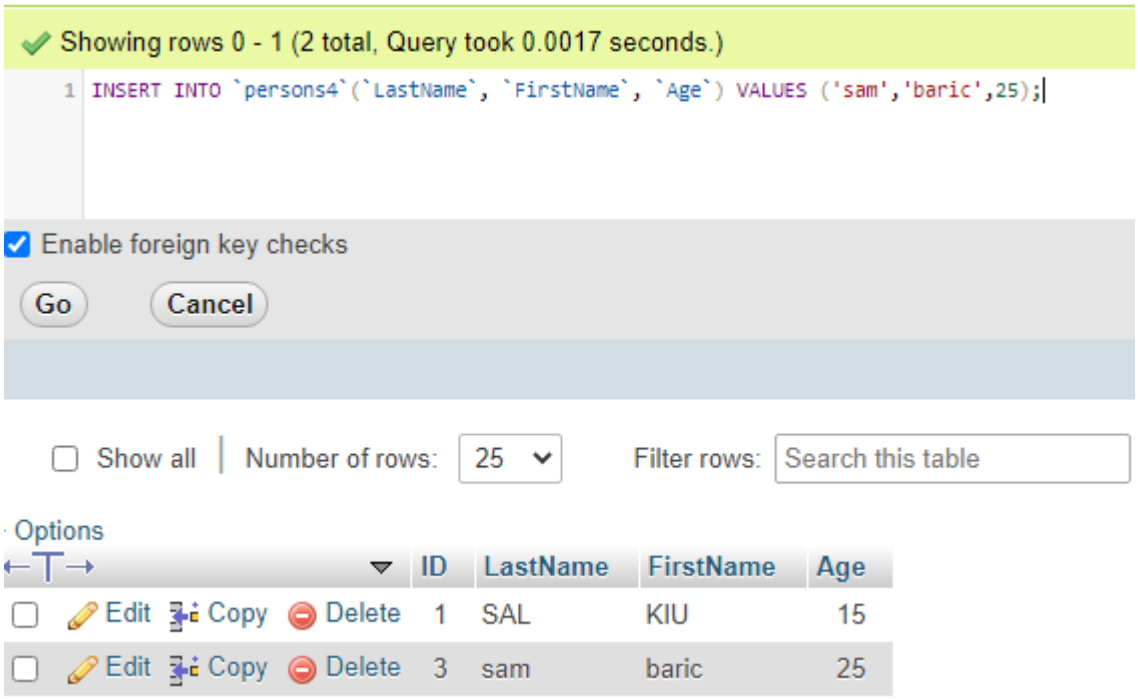
Here is a generic SQL syntax of INSERT INTO command to insert data into the MySQL table –

```
INSERT INTO table_name ( field1, field2,...fieldN )
  VALUES
  ( value1, value2,...valueN );
```

To insert string data types, it is required to keep all the values into double or single quotes. For example **"value"**.

Example:

```
MYSQL=>
INSERT INTO `persons4`(`LastName`, `FirstName`, `Age`) VALUES ('sam','baric',25);
```



Note: Id is declared as a primary key so we don't use in the query.

1.3 phpMyAdmin – Select Query with SQL

The SQL **SELECT** command is used to fetch data from the MySQL database. You can use this command at mysql> prompt as well as in any script like PHP.

Syntax

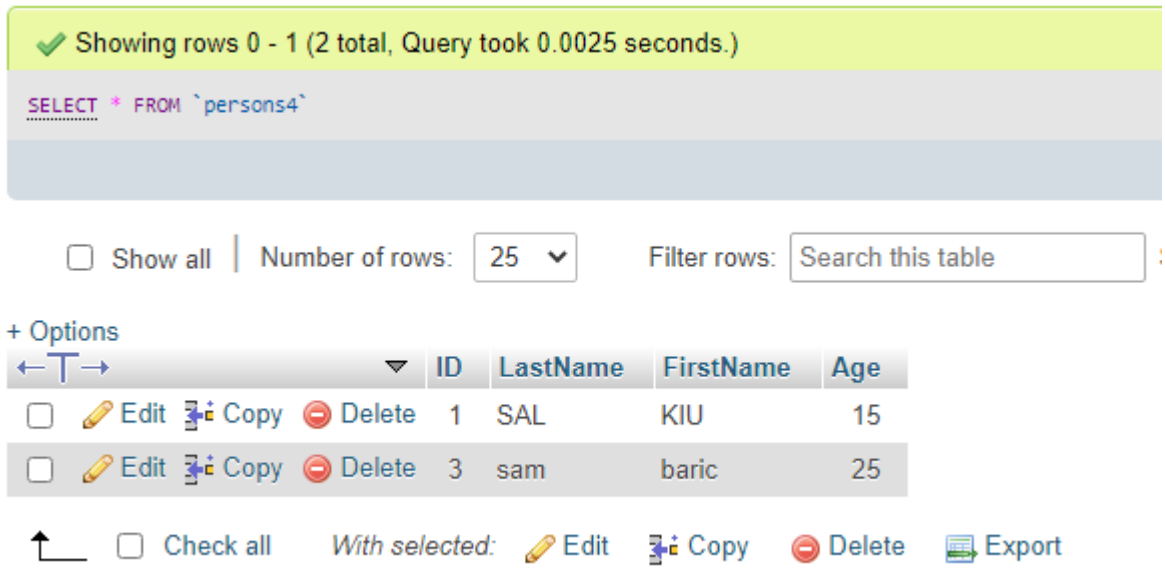
Here is generic SQL syntax of SELECT command to fetch data from the MySQL table −

```
SELECT field1, field2,...fieldN
FROM table_name1, table_name2...
[WHERE Clause]
[OFFSET M ][LIMIT N]
```

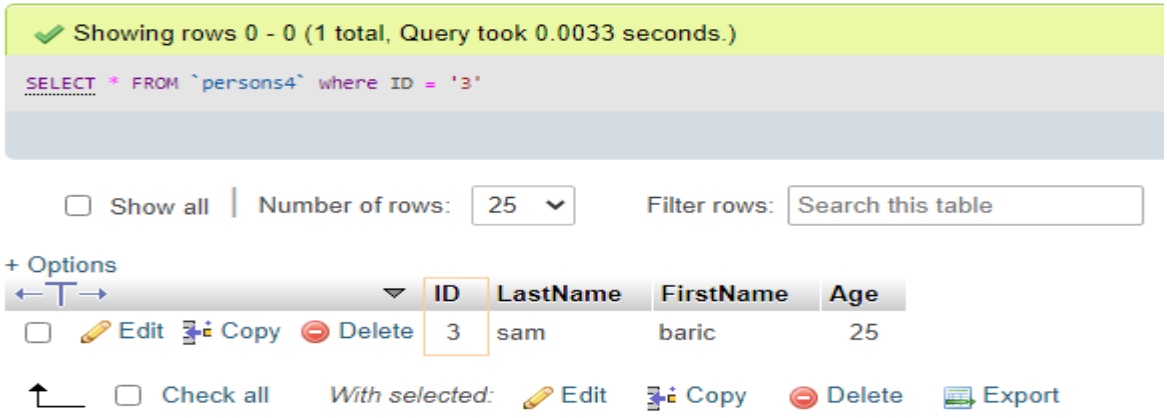
- You can use one or more tables separated by comma to include various conditions using a WHERE clause, but the WHERE clause is an optional part of the SELECT command.
- You can fetch one or more fields in a single SELECT command.
- You can specify star (*) in place of fields. In this case, SELECT will return all the fields.
- You can specify any condition using the WHERE clause.
- You can specify an offset using **OFFSET** from where SELECT will start returning records. By default, the offset starts at zero.
- You can limit the number of returns using the **LIMIT** attribute.

Example:

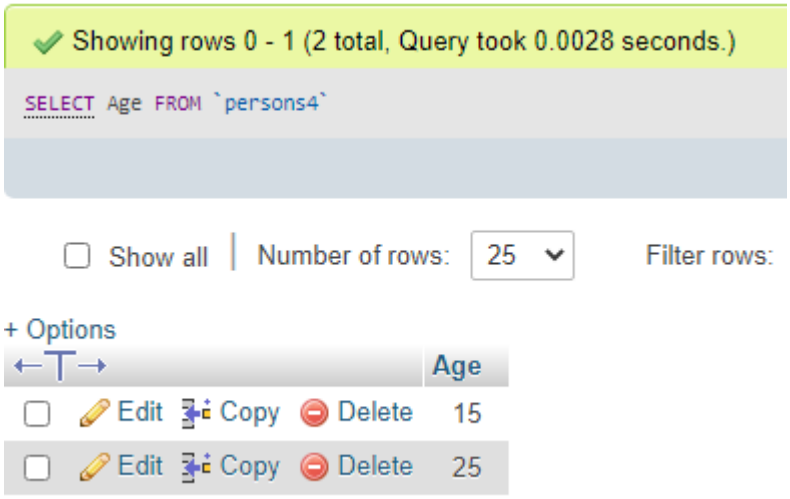
```
MYSQL=>   SELECT * FROM person4;
```



MYSQL=> SELECT * FROM `persons4` where ID = '3';



MYSQL=> SELECT Age FROM `persons4`;



1.4 phpMyAdmin – Update Query with SQL

There may be a requirement where the existing data in a MySQL table needs to be modified. You can do so by using the SQL **UPDATE** command. This will modify any field value of any MySQL table.

Syntax

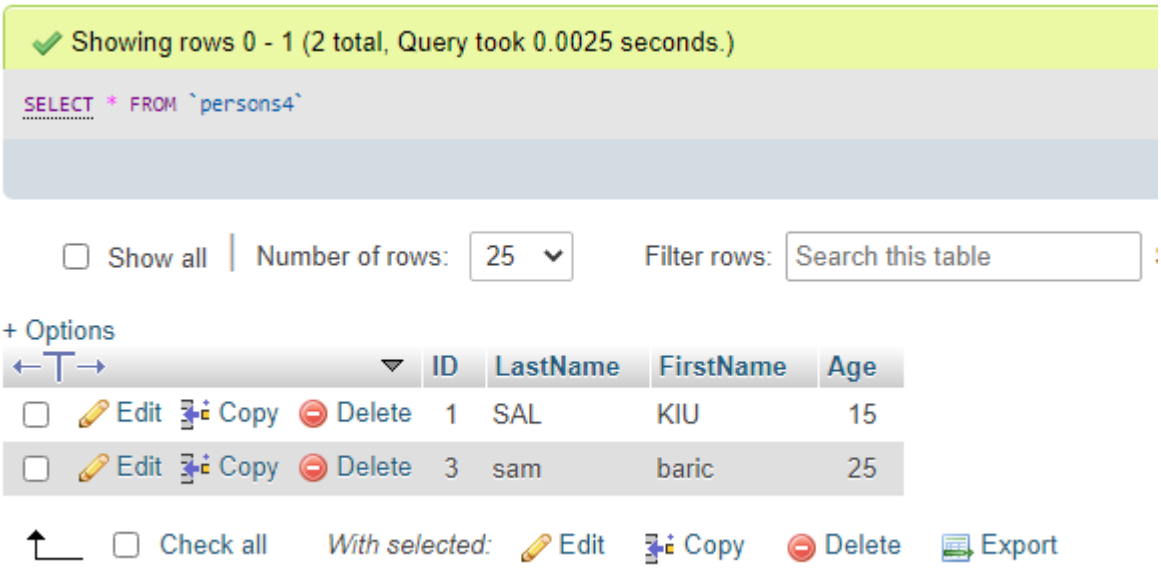
The following code block has a generic SQL syntax of the UPDATE command to modify the data in the MySQL table −

```
UPDATE table_name SET field1 = new-value1, field2 = new-value2
[WHERE Clause]
```

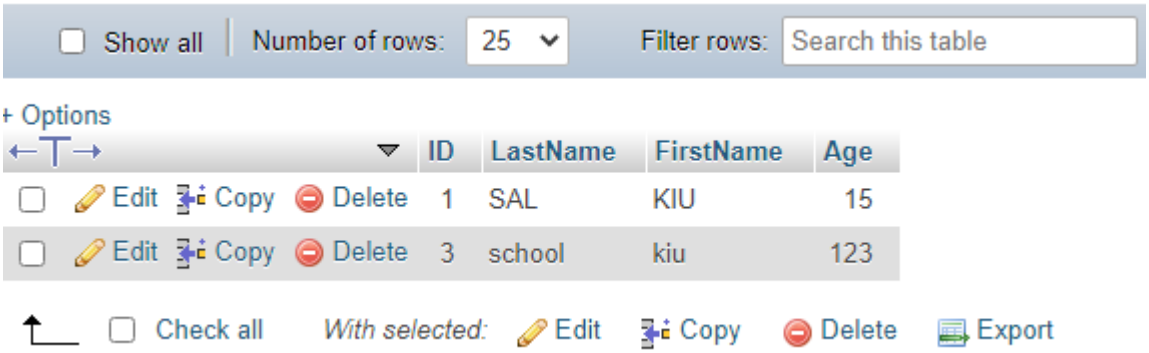
- You can update one or more field altogether.
- You can specify any condition using the WHERE clause.
- You can update the values in a single table at a time.

The WHERE clause is very useful when you want to update the selected rows in a table.

The `UPDATE` statement is used to modify the existing records in a table.



```
MYSQL=>UPDATE `persons4` SET `LastName`='school',`FirstName`='kiu',`Age`=123 WHERE ID = '3';
```



1.5 phpMyAdmin – Delete Query with SQL

If you want to delete a record from any MySQL table, then you can use the SQL command **DELETE FROM**. You can use this command at the mysql> prompt as well as in any script like PHP.

Syntax

The following code block has a generic SQL syntax of the DELETE command to delete data from a MySQL table.

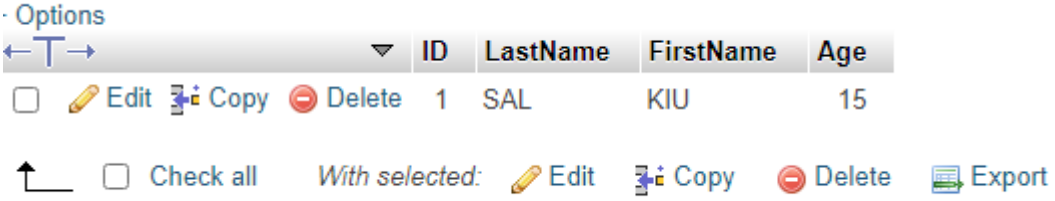
```
DELETE FROM table_name [WHERE Clause]
```

- If the WHERE clause is not specified, then all the records will be deleted from the given MySQL table.
- You can specify any condition using the WHERE clause.
- You can delete records in a single table at a time.

The WHERE clause is very useful when you want to delete selected rows in a table.

Example:

```
MYSQL=>     DELETE FROM `persons4` WHERE id = 3;
```



Self-Review Questions (SRQ) For Study Session 5,6

Now that you have completed this study unit, you can assess how well you have achieved its Learning Outcomes by answering these questions. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting or Online interactive sessions.

1. What is phpMyAdmin?
2. Write a query to Insert only one record in a Following table (Students)
3. Show all Record of Kami from Following table (Students)
4. Delete Record where id is 3.
5. Update Record (Sam to Richard) where id = 1.

Id	Name	Class	Dep
1	Sam	DIT	IT
2	Kami	BIT	SCIT
3	John	MIT	SOMAC

References and Additional Reading Materials

https://www.w3schools.com/sql/

https://www.tutorialspoint.com/mysql/index.htm