

SQL DATA MANIPULATION COMMANDS

- ❑ UPDATE statement
+ "WHERE" clause
- ❑ DELETE statement
+ "WHERE" clause

UPDATE STATEMENT + "WHERE" CLAUSE



WHERE clause

- is used to filter records in **SELECT**, **UPDATE**, **DELETE** statements
- is used to set conditions (works like “IF statements” in programming) for your queries
- uses logical operators such as:

Operator	Description
=	Equal
>	Greater than
<	Less than
>=	Greater than or equal
<=	Less than or equal
<>	Not equal

- [OPTIONAL] can also use relational operators for combination of conditions, such as **AND** , **OR**

EXAMPLE

Database name: **DB_COLLEGE**

Table name: **TBL_STUDENTS**

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

UPDATE statement

- is used to change data in existing records in a table
- can be used with **WHERE** clause, can be used without **WHERE** clause
- General Syntax: **UPDATE**, **SET**, **WHERE**

- Specific Syntax:

```
UPDATE pangalan_ng_table_na_may_papalitan
SET ano_papalitan_na_column1 = ano_ipapalit_na_data1,
    ano_papalitan_na_column2 = ano_ipapalit_na_data2,
    ano_papalitan_na_column3 = ano_ipapalit_na_data3, etc...
WHERE condition/s;
```

IMPORTANT NOTES:

- if used with **WHERE** clause, only specific records in table will be changed
- if used without **WHERE** clause, ALL of the records in table will be changed

EXAMPLE

Database name: **DB_COLLEGE**

Table name: **TBL_STUDENTS**

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

■ UPDATE TBL_STUDENTS SET course = 'ComSci';

```
mysql> UPDATE TBL_STUDENTS
-> SET course = 'ComSci';
Query OK, 7 rows affected (0.00 sec)
Rows matched: 7  Changed: 7  Warnings: 0
```

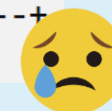
```
mysql> SELECT * FROM TBL_STUDENTS;
```

student_number	student_name	course	failed_subjects	gwa
1000111	Jin Kazama	ComSci	2	2.41
1000112	Kazuya Mishima	ComSci	2	2.48
1000113	Paul Phoenix	ComSci	8	5.00
1000114	Bryan Fury	ComSci	3	2.73
1000115	Steve Fox	ComSci	0	1.09
1000116	Lars Alexandersson	ComSci	1	2.29
1000117	Victor Chevalier	ComSci	0	1.27

```
7 rows in set (0.00 sec)
```

IMPORTANT NOTE:

Always check
if you need to use
WHERE clause!



student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

- UPDATE TBL_STUDENTS
SET course = 'ComSci'
WHERE course = 'BSCS';

```
mysql> UPDATE TBL_STUDENTS
-> SET course = 'ComSci'
-> WHERE course = 'BSCS';
Query OK, 3 rows affected (0.00 sec)
Rows matched: 3  Changed: 3  Warnings: 0
```

```
mysql> SELECT * FROM TBL_STUDENTS;
```

student_number	student_name	course	failed_subjects	gwa
1000111	Jin Kazama	ComSci	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	ComSci	1	2.29
1000117	Victor Chevalier	ComSci	0	1.27

```
7 rows in set (0.00 sec)
```


student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

- UPDATE TBL_STUDENTS
SET failed_subjects = 0
WHERE student_name = 'Jin Kazama';

```
mysql> UPDATE TBL_STUDENTS
-> SET failed_subjects = 0
-> WHERE student_name = 'Jin Kazama';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> SELECT * FROM TBL_STUDENTS;
```

student_number	student_name	course	failed_subjects	gwa
1000111	Jin Kazama	BSCS	0	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

```
7 rows in set (0.00 sec)
```

QUESTION!

What is the output?

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

- UPDATE TBL_STUDENTS
SET gwa = 5.00;

QUESTION!

What is the output?

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

- ```
UPDATE TBL_STUDENTS
SET failed_subjects = 0
WHERE student_number = 1000113;
```

# QUESTION!

What is the output?

| student_number<br>(INT, PK) | student_name<br>(VARCHAR 50) | course<br>(VARCHAR 10) | failed_subjects<br>(INT) | gwa<br>(DECIMAL 5,2) |
|-----------------------------|------------------------------|------------------------|--------------------------|----------------------|
| 1000111                     | Jin Kazama                   | BSCS                   | 2                        | 2.41                 |
| 1000112                     | Kazuya Mishima               | BSCPE                  | 2                        | 2.48                 |
| 1000113                     | Paul Phoenix                 | BSIT                   | 8                        | 5.00                 |
| 1000114                     | Bryan Fury                   | BSCPE                  | 3                        | 2.73                 |
| 1000115                     | Steve Fox                    | BSIT                   | 0                        | 1.09                 |
| 1000116                     | Lars Alexandersson           | BSCS                   | 1                        | 2.29                 |
| 1000117                     | Victor Chevalier             | BSCS                   | 0                        | 1.27                 |

- ```
UPDATE TBL_STUDENTS  
SET gwa = 1.14  
WHERE student_name = 'Victor Chevaleir';
```

QUESTION!

What is the output?

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

- UPDATE TBL_STUDENTS
SET student_number = 1000117
WHERE student_number = 1000111;

QUESTION!

What is the output?

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

- ```
UPDATE TBL_STUDENTS
SET student_number = 1000118
WHERE student_number = 1000111;
```

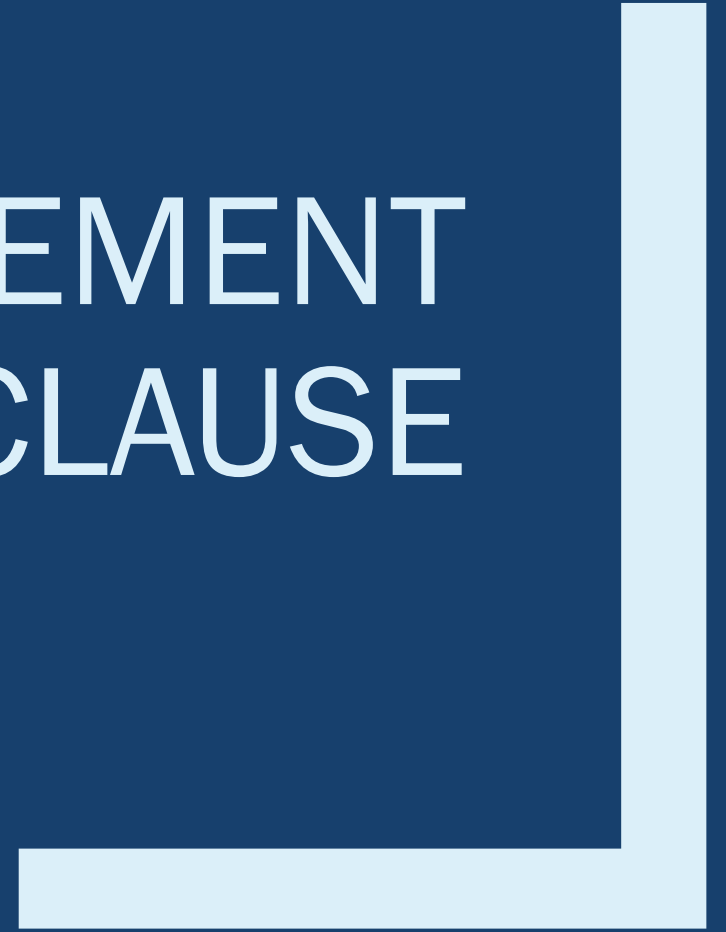
# QUESTION!

What is the output?

| student_number<br>(INT, PK) | student_name<br>(VARCHAR 50) | course<br>(VARCHAR 10) | failed_subjects<br>(INT) | gwa<br>(DECIMAL 5,2) |
|-----------------------------|------------------------------|------------------------|--------------------------|----------------------|
| 1000111                     | Jin Kazama                   | BSCS                   | 2                        | 2.41                 |
| 1000112                     | Kazuya Mishima               | BSCPE                  | 2                        | 2.48                 |
| 1000113                     | Paul Phoenix                 | BSIT                   | 8                        | 5.00                 |
| 1000114                     | Bryan Fury                   | BSCPE                  | 3                        | 2.73                 |
| 1000115                     | Steve Fox                    | BSIT                   | 0                        | 1.09                 |
| 1000116                     | Lars Alexandersson           | BSCS                   | 1                        | 2.29                 |
| 1000117                     | Victor Chevalier             | BSCS                   | 0                        | 1.27                 |

- ```
UPDATE TBL_STUDENTS
SET failed_subjects = 0
WHERE course = 'BSCS' AND gwa < 2.50;
```

DELETE STATEMENT + "WHERE" CLAUSE



DELETE statement

- is used to remove an entire record (row) in a table
- can be used with **WHERE** clause, can be used without **WHERE** clause
- General Syntax: **DELETE FROM**, **WHERE**
- Specific Syntax:
DELETE FROM pangalan_ng_table_na_may_papalitan
WHERE condition/s;

IMPORTANT NOTES:

- if used with **WHERE** clause, only specific records in table will be deleted
- if used without **WHERE** clause, ALL of the records in table will be deleted

EXAMPLE

Database name: **DB_COLLEGE**

Table name: **TBL_STUDENTS**

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

■ DELETE FROM TBL_STUDENTS;

```
mysql> DELETE FROM TBL_STUDENTS;  
Query OK, 7 rows affected (0.00 sec)
```

```
mysql> SELECT * FROM TBL_STUDENTS;  
Empty set (0.00 sec)
```



IMPORTANT NOTE:

Always check
if you need to use
WHERE clause!

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

■ DELETE FROM TBL_STUDENTS WHERE gwa = 5.00;

```
mysql> DELETE FROM TBL_STUDENTS
      -> WHERE gwa = 5.00;
Query OK, 1 row affected (0.00 sec)
```

```
mysql> SELECT * FROM TBL_STUDENTS;
```

student_number	student_name	course	failed_subjects	gwa
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

```
6 rows in set (0.00 sec)
```

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

■ DELETE FROM TBL_STUDENTS WHERE failed_subjects > 0;

```
mysql> DELETE FROM TBL_STUDENTS
      -> WHERE failed_subjects > 0;
Query OK, 5 rows affected (0.02 sec)
```

```
mysql> SELECT * FROM TBL_STUDENTS;
+-----+-----+-----+-----+-----+
| student_number | student_name | course | failed_subjects | gwa |
+-----+-----+-----+-----+-----+
| 1000115 | Steve Fox | BSIT | 0 | 1.09 |
| 1000117 | Victor Chevalier | BSCS | 0 | 1.27 |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

QUESTION!

What is the output?

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

- `DELETE FROM TBL_STUDENTS
WHERE student_number = 1000113;`

QUESTION!

What is the output?

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

- `DELETE FROM TBL_STUDENTS
WHERE course = 'BSCPE';`

QUESTION!

What is the output?

student_number (INT, PK)	student_name (VARCHAR 50)	course (VARCHAR 10)	failed_subjects (INT)	gwa (DECIMAL 5,2)
1000111	Jin Kazama	BSCS	2	2.41
1000112	Kazuya Mishima	BSCPE	2	2.48
1000113	Paul Phoenix	BSIT	8	5.00
1000114	Bryan Fury	BSCPE	3	2.73
1000115	Steve Fox	BSIT	0	1.09
1000116	Lars Alexandersson	BSCS	1	2.29
1000117	Victor Chevalier	BSCS	0	1.27

■ DELETE FROM TBL_STUDENTS

DISCLAIMER:

You may watch other YouTube tutorials
or read other programming articles
so you can help yourself self-study
about database programming.

Translation sa Tagalog:

Hindi lahat ng dapat mong matututunan
ay nasa loob lamang ng silid-aralan.

The image features two dark blue L-shaped brackets. One is located on the left side, with its vertical bar extending downwards and its horizontal bar extending to the right. The other is on the right side, with its vertical bar extending upwards and its horizontal bar extending to the left. These brackets frame the central text.

ACTIVITY

[INFOMNGT] ACTIVITY

- Answer the eLMS activity:
 - ❖ *PREFINALS – Task Performance 01*
 - ❖ *PREFINALS – Task Performance 02*