



Cairo University
Faculty of Computers and Artificial Intelligence
Information Systems Department

Database I, Year 2022/2023
Lab - 2
DML1 [Insert, Update, Delete]

1. Inserting New Rows

It is possible to write insert into statements in two ways:

1- specifies both the column names and the values to be inserted:

```
INSERT INTO <tablename> [<column list>]
VALUES (<expression>{[,<expression>]}))
```

2- if you are adding all values to all columns, you don't need to specify column names

```
INSERT INTO <tablename>
VALUES (value1,value2,.....)
```

Hint: you should make sure the order of the values is in the same order as the columns in the table.

Example 1:

- ❖ **Insert new student into the student table with the following properties:**
Student id=1 , Name= Ali, Age=19, and City= 'Cairo'

```
INSERT INTO Student (SSN,Name,Age,City) VALUES (1,'Ali',19,'Cairo')
```

```
INSERT INTO Student VALUES (2,'Wafaa',19,'Cairo',null,null)
```

```
////////////////////////////////////
```

```
insert into Student values (3,'Wafaa',19,'Cairo','IS',null) → this raise an error as major is the FK
and not inserted yet into department ... you should insert this row first into Department
table
```

```
INSERT INTO department values ('IS','Information System')
```

2. Updating Values in Rows

```
UPDATE <tablename>  
SET <column name>=<expression>,<column name>=<expression>  
[WHERE <Condition>]
```

Example 1:

- ❖ Increase the age of students by 1

```
update Student  
set age=age+1
```

Example 2: (Using Where Clause)

- ❖ Change the name of the Student with SSN 1 to be 'AHMED'

```
update Student  
set name='ahmed'  
where SSN=1
```

Example 3: (Update more than one column with a condition)

- ❖ Change the name of the STAFF with id 1 back to 'ALI' and let his age be 18

```
update Student  
set name='Ali',  
age=18  
where SSN=1
```

3. Deleting rows from a table

```
DELETE  
FROM <table name>  
[WHERE <Condition>]
```

Example 1:

- ❖ Delete all rows of table Student (**Don't try it**)

```
delete from Student
```

Example 2:

❖ Delete the Student with SSN 2

```
delete from Student  
where SSN=2
```

Example 3: (Using more than one condition)

❖ Delete the Student that has an id 1 or 2

```
delete from Student  
where SSN=2 or  
SSN=1
```

BETTER STATEMENT THAT DOES THE SAME JOB OF THE PREVIOUS ONE :

```
delete from Student  
where SSN IN (1,2);
```