SQL INSERT

SQL INSERT statement is a SQL query. It is used to insert a single or a multiple records in a table.

SQL INSERT INTO Statement

The INSERT INTO statement is used to insert new records in a table.

INSERT INTO Syntax

It is possible to write the INSERT INTO statement in two ways.

1) **Inserting Data Directly Into a Table**

The first way specifies only the values to be inserted:

```
INSERT INTO table_name
VALUES (value1, value2, value3, ...);
```

> **NOTE:** make sure the order of the values is in the same order as the columns in the table. The INSERT INTO syntax would be as follows:

Let's take an example of table which has two records within it.

To Create a Table

```
Create Table Students(
 Reg_No int Not Null,
 Name varchar(255),
 Branch varchar(255),
 Email varchar(255)
);
```

To Insert

```
INSERT INTO Students
values (20184165,'Saurav Chaudhary','CSE','saurav@saurav.com');

INSERT INTO Students
values (20184063,'Rajan Kr Jaiswal','CSE','rajan@rajan.com');
```

2) **Insert Data by Specifying Columns**

In this method specifies both the column name and values.

```
INSERT INTO table_name (column1, column2, column3, ...)
VALUES (value1, value2, value3, ...);
```

Let's take an example where we insert two records within it.

```
INSERT INTO Students (Reg_No,Name,Branch,Email)
values (20184149,'Lokesh Raj Singhi','CSE','lokes@lokesh.com');

INSERT INTO Students (Reg_No,Name,Branch,Email)
values (20185157,'Rajan Jayswal','IT','rajan@rajan.com');
```

Insert Data Only in Specified Columns

Suppose there is a case where email is unknown or the person dont have any mail id. So we can ignore that but that field shouldn't be of type NOT NULL.

```
INSERT INTO Students (Reg_No,Name,Branch)
values (20185154,'Dharm Raj Maurya','ECE');
```

The SQL INSERT INTO SELECT Statement

The INSERT INTO SELECT statement copies data from one table and inserts it into another table.

- INSERT INTO SELECT requires that data types in source and target tables match
- The existing records in the target table are unaffected

INSERT INTO SELECT Syntax

Copy all columns from one table to another table:

```
INSERT INTO table2
SELECT * FROM table1
WHERE condition;
```

Example:

```
INSERT INTO StudentCopy
SELECT * FROM Students;
```

> **Note:** Create a table of same structure as table1 for new table2 . In order to insert into it.

Applying condition

```
INSERT INTO StudentCopy
SELECT * FROM Students
where Reg_NO=20184165;
```

To Copy selected columns from one table into another table:

```
INSERT INTO table2 (column1, column2, column3, ...)
SELECT column1, column2, column3, ...
FROM table1
WHERE condition;
```

```sql
INSERT INTO StudentCopiees
(Reg_No,Name)
SELECT Reg_No,Name FROM Students
where Reg_NO=20184165;


SELECT * FROM StudentCopiees;
```