

CRUD Operation - SQL Session 3

- Multiple Insertions :

```
mysql> INSERT INTO cats(name , age)
-> VALUES('Charlie' , 10) ,
-> ('Sadie' , 3),
-> ('Lazy Bear' , 1);
Query OK, 3 rows affected (0.02 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

Comma,
[Silly Mistake]

```
mysql> SELECT * FROM Cats;
+-----+-----+
| name | age |
+-----+-----+
| Jetson | 7 |
| Kitty | 19 |
| Charlie | 10 |
| Sadie | 3 |
| Lazy Bear | 1 |
```

Create a *people* table

- `first_name` - 20 char limit
- `last_name` - 20 char limit
- `age`

Insert Your 1st Person!

<code>first_name</code>	<code>last_name</code>	<code>age</code>
'Tina'	'Belcher'	13

Insert Your 2nd Person!

<code>first_name</code>	<code>last_name</code>	<code>age</code>
'Bob'	'Belcher'	42

Multiple Insert Time!

<code>first_name</code>	<code>last_name</code>	<code>age</code>
'Linda'	'Belcher'	45
'Phillip'	'Frond'	38
'Calvin'	'Fischoeder'	70

first_name	last_name	age
'Bob'	'Belcher'	42

```
mysql> CREATE TABLE people(
->   first_name varchar(20),
->   last_name varchar(20),
->   age int
-> );
Query OK, 0 rows affected (0.09 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_employee |
+-----+
| cats
| people
+-----+
2 rows in set (0.01 sec)
```

```
mysql> DESC people;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| first_name | varchar(20) | YES |   | NULL    |       |
| last_name  | varchar(20) | YES |   | NULL    |       |
| age        | int      | YES |   | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> INSERT INTO people()
-> VALUES();
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM people;
+-----+-----+-----+
| first_name | last_name | age  |
+-----+-----+-----+
| NULL      | NULL     | NULL |
+-----+-----+-----+
```

IS NULL Property.

```
mysql> DELETE FROM people where first_name = NULL;
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> SELECT * FROM people;
+-----+-----+-----+
| first_name | last_name | age  |
+-----+-----+-----+
| NULL      | NULL     | NULL |
+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> DELETE FROM people where first_name is NULL;
Query OK, 1 row affected (0.01 sec)
```

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

```
mysql> INSERT INTO people(first_name , last_name , age)
-> VALUES('Tina' , 'Belchar' ,13);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO people(first_name , last_name , age)
-> VALUES('Bob' , 'Belchar' ,42);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO people(first_name , last_name , age)
-> VALUES('Linda' , 'Belchar' ,45),
-> ('Philip' , 'Frond' , 38),
-> ('Calvin' , 'Fischoeder' , 70);
Query OK, 3 rows affected (0.01 sec)
```

```

-> VALUES('Linda' , 'Belchar' , 45),
-> ('Philip' , 'Frond' , 38),
-> ('Calvin' , 'Fischoeder' , 70);
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

```

```

mysql> SELECT * FROM people;
+-----+-----+-----+
| first_name | last_name | age |
+-----+-----+-----+
| Tina       | Belchar   | 13  |
| Bob        | Belchar   | 42  |
| Linda      | Belchar   | 45  |
| Philip     | Frond    | 38  |
| Calvin     | Fischoeder| 70  |
+-----+-----+-----+
5 rows in set (0.00 sec)

```

Working on Not Null :

```

mysql> CREATE TABLE cats2(
->   name varchar(50) NOT NULL,
->   age int NOT NULL
-> );
Query OK, 0 rows affected (0.05 sec)

mysql> DESC cats2;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(50) | NO   |   | NULL    |       |
| age   | int        | NO   |   | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)

mysql> INSERT INTO cats2()
-> VALUES();
ERROR 1364 (HY000): Field 'name' doesn't have a default value

```

Restrict the user to insert values if it is mandatory.

NOT NULL - means making it mandatory.

===== ➔ DEFAULT VALUES:

===== ➤ DEFAULT VALUES:

```
CREATE TABLE cats3
(
    name VARCHAR(100) DEFAULT 'unnamed',
    age  INT DEFAULT 99
);
```

```
mysql> DESC cats3;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| name  | varchar(100) | YES  |     | unnamed  |       |
| age   | int         | YES  |     | 99       |       |
+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

```
mysql> SELECT * FROM Cats3;
+-----+-----+
| name | age  |
+-----+-----+
| Jenkins | 99 |
+-----+-----+
1 row in set (0.00 sec)
```

USE OF DEFAULT WITH NOT NULL :

```
mysql> CREATE TABLE cats4
-> (
->     name VARCHAR(100) NOT NULL DEFAULT 'unnamed',
->     age  INT NOT NULL DEFAULT 99
-> );
Query OK, 0 rows affected (0.05 sec)

mysql> DESC Cats4;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| name  | varchar(100) | NO   |     | unnamed  |       |
| age   | int         | NO   |     | 99       |       |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> INSERT INTO Cats4()
-> VALUES();
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM Cats4;
+-----+-----+
| name | age  |
+-----+-----+
| unnamed | 99 |
+-----+-----+
```

```

| name    | age |
+-----+---+
| unnamed | 99 |
+-----+---+
1 row in set (0.00 sec)

mysql>

```

What is Primary KEY.



How Do We Make Each Unique?

Primary
Key

Name	Breed	Age	CatID
Monty	Tabby	10	1
Monty	Tabby	10	2
Monty	Tabby	10	3
Monty	Tabby	10	4

- Unique - we require primary key.

```

mysql> CREATE TABLE unique_cats (
->   cat_id INT NOT NULL PRIMARY KEY,
->   name VARCHAR(100),
->   age INT
-> );
Query OK, 0 rows affected (0.04 sec)

```

```

mysql>
mysql> DESC unique_cats;

```

Field	Type	Null	Key	Default	Extra
cat_id	int	NO	PRI	NULL	
name	varchar(100)	YES		NULL	
age	int	YES		NULL	

3 rows in set (0.00 sec)

Working with Auto_Increment :

```

mysql> CREATE TABLE unique_cats3 (
->   cat_id INT AUTO_INCREMENT,
->   name VARCHAR(100),
->   age INT,
->   PRIMARY KEY (cat_id)
-> );
Query OK, 0 rows affected (0.05 sec)

```

```

    ->      PRIMARY KEY (cat_id)
    -> );
Query OK, 0 rows affected (0.05 sec)

mysql> DESC unique_cats3;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra       |
+-----+-----+-----+-----+-----+
| cat_id | int       | NO   | PRI | NULL    | auto_increment |
| name   | varchar(100) | YES  |     | NULL    |               |
| age    | int       | YES  |     | NULL    |               |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

```

```

mysql> INSERT INTO unique_cats3(name , age)
    -> VALUES('Kitty' , 22),
    -> ('Marlin' , 21);
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM unique_cats3;
+-----+-----+-----+
| cat_id | name   | age  |
+-----+-----+-----+
|      1 | Kitty  |  22 |
|      2 | Marlin |  21 |
+-----+-----+-----+

```

```

mysql> INSERT INTO unique_cats3(cat_id,name , age)
    -> VALUES(91293 , 'Billo' , 7);
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM unique_cats3;
+-----+-----+-----+
| cat_id | name   | age  |
+-----+-----+-----+
|      1 | Kitty  |  22 |
|      2 | Marlin |  21 |
|  91293 | Billo  |   7 |
+-----+-----+-----+
3 rows in set (0.00 sec)

```

```

mysql> INSERT INTO unique_cats3(name , age)
    -> VALUES('Meow' , 11),
    -> ('Gori' , 15);
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM unique_cats3;
+-----+-----+-----+
| cat_id | name   | age  |
+-----+-----+-----+
|      1 | Kitty  |  22 |
|      2 | Marlin |  21 |
|  91293 | Billo  |   7 |
|  91294 | Meow   |  11 |
|  91295 | Gori   |  15 |
+-----+-----+-----+
5 rows in set (0.00 sec)

```

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

QUICK CHALLENGE :

Define an Employees table, with the following fields:

- **id** - number(automatically increments) and primary key
- **last_name** - text, mandatory
- **first_name** - text, mandatory
- **middle_name** - text, not mandatory
- **age** - number mandatory
- **current_status** - text, mandatory, defaults to 'employed'

```
mysql> CREATE TABLE Employees(
    ->   id INT NOT NULL PRIMARY KEY auto_increment,
    ->   last_name varchar(50) NOT NULL,
    ->   first_name varchar(50) NOT NULL ,
    ->   middle_name varchar(50),
    ->   age int NOT NULL,
    ->   current_status VARCHAR(100) NOT NULL DEFAULT 'employed'
    -> );
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> DESC Employees;
+-----+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id         | int        | NO   | PRI | NULL    | auto_increment |
| last_name  | varchar(50) | NO   |     | NULL    |                |
| first_name | varchar(50) | NO   |     | NULL    |                |
| middle_name | varchar(50) | YES  |     | NULL    |                |
| age        | int        | NO   |     | NULL    |                |
| current_status | varchar(100) | NO   |     | employed |                |
+-----+-----+-----+-----+-----+-----+
```

```
CREATE TABLE employees (
    id INT AUTO_INCREMENT PRIMARY KEY,
    last_name VARCHAR(100) NOT NULL,
    first_name VARCHAR(100) NOT NULL,
    middle_name VARCHAR(100),
    age INT NOT NULL,
    current_status VARCHAR(100) NOT NULL DEFAULT 'employed'
);
```

);

<https://codeshare.io/0gyl8m>

```
CREATE TABLE cats
(
    cat_id INT AUTO_INCREMENT,
    name   VARCHAR(100),
    breed  VARCHAR(100),
    age    INT,
    PRIMARY KEY (cat_id)
);

INSERT INTO cats(name, breed, age)
VALUES ('Ringo', 'Tabby', 4),
       ('Cindy', 'Maine Coon', 10),
       ('Dumbledore', 'Maine Coon', 11),
       ('Egg', 'Persian', 4),
       ('Misty', 'Tabby', 13),
       ('George Michael', 'Ragdoll', 9),
       ('Jackson', 'Sphynx', 7);
```