Lesson 4- Inserting data and couple of other things

insert

INSERT

```
INSERT INTO cats(name, age)
VALUES ('Jetson', 7);
```

Multiple insert

MULTIPLE INSERT

```
INSERT INTO cats(name, age)
VALUES ('Charlie', 10)
      ,('Sadie', 3)
      ,('Lazy Bear', 1);
```

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Exercise creating tables and inserting data

Create a *people* table

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

Single enter exrcise

Insert Your 1st Person!

first_name	last_name	age
'Tina'	'Belcher'	13

One more single entry with Same last name exercise

Insert Your 2nd Person!

first_name	last_name	age
'Bob'	'Belcher'	42

Multiple enter exercise

Multiple Insert Time!

first_name	last_name	age
'Linda'	'Belcher'	45
'Phillip'	'Frond'	38
'Calvin'	'Fischoeder'	70

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Solution of people tables exercise

```
mysql> CREATE TABLE people(
    -> first_name VARCHAR(20),
    -> last_name VARCHAR(20),
    -> age INT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> DESC people;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| first_name | varchar(20) | YES  |     | NULL    |       |
| last_name  | varchar(20) | YES  |     | NULL    |       |
| age        | int(11)     | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)

mysql>
```

```
| age           | int(11)     | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)

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

mysql> SELECT * FROM people;
+------------+-----------+------+
| first_name | last_name | age  |
+------------+-----------+------+
| Tina       | Belcher   | 13   |
+------------+-----------+------+
1 row in set (0.00 sec)

mysql>
```

```
mysql> SELECT * FROM people;
+------------+-----------+------+
| first_name | last_name | age  |
+------------+-----------+------+
| Tina       | Belcher   | 13   |
| Bob        | Belcher   | 42   |
+------------+-----------+------+
2 rows in set (0.00 sec)

mysql> INSERT INTO people(first_name, last_name, age)
    -> VALUES('Linda', 'Belcher', 45)
    -> ,('Phillip', 'Frond', 38)
    -> ,('Calvin', 'Fischoeder', 70);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM people;
```

Warnings

```
mysql> DESC cats;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| name  | varchar(50) | YES  |     | NULL    |       |
| age   | int(11)     | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> INSERT INTO cats(name, age)
    -> VALUES ('This cat is named
    '>          Charlie which is also a
    '>          human name.  In fact I know
    '>          a couple of Charlies.  Fun Fact',
    ->          10);
Query OK, 1 row affected, 1 warning (0.00 sec)

mysql> SHOW WARNINGS;
```

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Null and not null

```
CREATE TABLE cats2
    (
        name VARCHAR(100) NOT NULL,
        age  INT NOT NULL
    );
```

```
mysql> CREATE TABLE cats2(
    -> name VARCHAR(100) NOT NULL,
    -> age INT NOT NULL
    -> );
Query OK, 0 rows affected (0.01 sec)

mysql> DESC cats2;
+-------+--------------+------+-----+---------+-------+
| Field | Type         | Null | Key | Default | Extra |
+-------+--------------+------+-----+---------+-------+
| name  | varchar(100) | NO   |     | NULL    |       |
| age   | int(11)      | NO   |     | NULL    |       |
+-------+--------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql>
```

```
| name  | varchar(100) | NO   |     | NULL    |       |
| age   | int(11)      | NO   |     | NULL    |       |
+-------+--------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> INSERT INTO cats2(name) VALUES('Texas');
Query OK, 1 row affected, 1 warning (0.00 sec)

mysql> SHOW WARNINGS;
+---------+------+------------------------------------------+
| Level   | Code | Message                                  |
+---------+------+------------------------------------------+
| Warning | 1364 | Field 'age' doesn't have a default value |
+---------+------+------------------------------------------+
1 row in set (0.00 sec)
```

****

Default values

To Set Default Values

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

```
mysql> CREATE TABLE cats3
    -> (
    ->    name VARCHAR(20) DEFAULT 'no name provided',
    ->    age INT DEFAULT 99
    -> );
Query OK, 0 rows affected (0.01 sec)

mysql> DESC cats3;
+-------+-------------+------+-----+------------------+-------+
| Field | Type        | Null | Key | Default          | Extra |
+-------+-------------+------+-----+------------------+-------+
| name  | varchar(20) | YES  |     | no name provided |       |
| age   | int(11)     | YES  |     | 99               |       |
+-------+-------------+------+-----+------------------+-------+
2 rows in set (0.00 sec)
```

```
| name  | varchar(20) | YES  |      | no name provided |      |
| age   | int(11)     | YES  |      | 99               |      |
+-------+-------------+------+------+------------------+------+
2 rows in set (0.00 sec)

mysql> INSERT INTO cats3(age) VALUES(13);
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM cats3;
+------------------+------+
| name             | age  |
+------------------+------+
| no name provided |   13 |
+------------------+------+
1 row in set (0.00 sec)

mysql> INSERT INTO cats3() VALUES();
```

Isn't This Redundant?

```
CREATE TABLE cats4
  (
      name VARCHAR(100) NOT NULL DEFAULT 'unnamed',
      age  INT NOT NULL DEFAULT 99
  );
```

No!

We can still manually set things to NULL if
we don't specify NOT NULL

```
INSERT INTO cats3(name, age)
VALUES(NULL, 3);
```

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Primary key

```
| Jelly                                    |    7 |
| This cat is named
        Charlie which is also a |   10 |
| blah                                     |    0 |
| Lima                                     |    0 |
| Cuzco                                    |    0 |
| Alabama                                  | NULL |
| NULL                                     | NULL |
| NULL                                     | NULL |
| Helena                                   |    6 |
| Helena                                   |    6 |
| Helena                                   |    6 |
| Helena                                   |    6 |
| Helena                                   |    6 |
+------------------------------------------+------+
17 rows in set (0.00 sec)
```

```
CREATE TABLE unique_cats (cat_id INT NOT NULL
                          ,name VARCHAR(100)
                          ,age INT
                          ,PRIMARY KEY (cat_id));
```

```
mysql>
mysql> CREATE TABLE unique_cats (cat_id INT NOT NULL
    ->                          ,name VARCHAR(100)
    ->                          ,age INT
    ->                          ,PRIMARY KEY (cat_id));
Query OK, 0 rows affected (0.02 sec)

mysql> DESC unique_cats;
+--------+--------------+------+-----+---------+-------+
| Field  | Type         | Null | Key | Default | Extra |
+--------+--------------+------+-----+---------+-------+
| cat_id | int(11)      | NO   | PRI | NULL    |       |
| name   | varchar(100) | YES  |     | NULL    |       |
| age    | int(11)      | YES  |     | NULL    |       |
+--------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

```
|      1 | Fred |   23 |
+--------+------+------+
1 row in set (0.00 sec)

mysql> INSERT INTO unique_cats(cat_id, name, age) VALUES(2, "Louise", 3);
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM unique_cats;
+--------+--------+------+
| cat_id | name   | age  |
+--------+--------+------+
|      1 | Fred   |   23 |
|      2 | Louise |    3 |
+--------+--------+------+
2 rows in set (0.00 sec)

mysql>
```

Auto increment primary key ID

```
CREATE TABLE unique_cats2 (cat_id INT NOT NULL AUTO_INCREMENT
                          ,name VARCHAR(100)
                          ,age INT
                          ,PRIMARY KEY (cat_id));
```

```
mysql> CREATE TABLE unique_cats2 (cat_id INT NOT NULL AUTO_INCREMENT
    ->                           ,name VARCHAR(100)
    ->                           ,age INT
    ->                           ,PRIMARY KEY (cat_id));
Query OK, 0 rows affected (0.02 sec)

mysql> DESC unique_cats2;
+--------+--------------+------+-----+---------+----------------+
| Field  | Type         | Null | Key | Default | Extra          |
+--------+--------------+------+-----+---------+----------------+
| cat_id | int(11)      | NO   | PRI | NULL    | auto_increment |
| name   | varchar(100) | YES  |     | NULL    |                |
| age    | int(11)      | YES  |     | NULL    |                |
+--------+--------------+------+-----+---------+----------------+
3 rows in set (0.00 sec)

mysql>
```

```
mysql>
mysql>
mysql>
mysql>
mysql> INSERT INTO unique_cats2(name, age) VALUES('Skippy',4);
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM unique_cats2;
+--------+--------+------+
| cat_id | name   | age  |
+--------+--------+------+
|      1 | Skippy |    4 |
+--------+--------+------+
1 row in set (0.00 sec)

mysql> SELECT * FROM unique_cats2;
```

```
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO unique_cats2(name, age) VALUES('Skippy',4);
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM unique_cats2;
+--------+--------+------+
| cat_id | name   | age  |
+--------+--------+------+
|      1 | Skippy |    4 |
|      2 | Jiff   |    3 |
|      3 | Jiff   |    3 |
|      4 | Jiff   |    3 |
|      5 | Skippy |    4 |
+--------+--------+------+
5 rows in set (0.00 sec)
```

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Exercise

Define an Employees table, with the following fields:

- id - number(automatically increments), mandatory, 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'

Solution

THE SOLUTION

```sql
CREATE TABLE employees (
    id INT NOT NULL AUTO_INCREMENT,
    last_name VARCHAR(255) NOT NULL,
    first_name VARCHAR(255) NOT NULL,
    middle_name VARCHAR(255),
    age INTEGER NOT NULL,
    current_status VARCHAR(100) NOT NULL DEFAULT 'employed',
    PRIMARY KEY (id)
);
```



```sql
1  CREATE TABLE employees (
2      id INT AUTO_INCREMENT NOT NULL,
3      first_name VARCHAR(255) NOT NULL,
4      last_name VARCHAR(255) NOT NULL,
5      middle_name VARCHAR(255),
6      age INT NOT NULL,
7      current_status VARCHAR(255) NOT NULL DEFAULT 'employed',
8      PRIMARY KEY(id)
9  );
10
11  INSERT INTO employees(first_name, last_name, age) VALUES
12  ('Dora', 'Smith', 58);
13
```