

MySQL

The Basics of CRUD

Create

Create

Read

Create

Read

Update

Create

Read

Update

Delete

Create

Create

This Should Be Review

INSERT INTO

```
INSERT INTO cats(name, age)  
VALUES( 'Taco' , 14 );
```

Create

Read

Update

Delete

Create

Read

Update

Delete

Let's start with a clean slate...

```
DROP TABLE cats;
```

```
CREATE TABLE cats
(
    cat_id INT NOT NULL 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);
```


Read

Read

How do we retrieve and search data?

SELECT

Remember This?

```
SELECT * FROM cats;
```

```
SELECT * FROM cats;
```

```
SELECT * FROM cats;
```



```
SELECT * FROM cats;
```



"Give Me All Columns"

SELECT Expression

What columns do you want?


```
SELECT name FROM cats;
```

```
SELECT age FROM cats;
```

```
SELECT name, age FROM cats;
```

The WHERE clause

Let's Get Specific

We'll use WHERE all the time

Not just to SELECT...

```
SELECT * FROM cats WHERE age=4;
```

```
SELECT * FROM cats WHERE name='Egg';
```

Rapid Fire Exercises

Write the SQL that selects the following:

cat_id
1
2
3
4
5
6
7

Write the SQL that selects the following:

name	breed
Ringo	Tabby
Cindy	Maine Coon
Dumbledore	Maine Coon
Egg	Persian
Misty	Tabby
George Michael	Ragdoll
Jackson	Sphynx

Write the SQL that selects the following:
(Just the Tabby cats)

name	age
Ringo	4
Misty	13

Write the SQL that selects the following:
cat_id is same as age

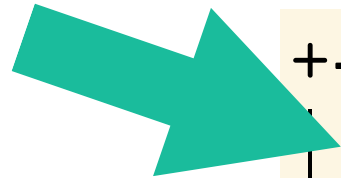
cat_id	age
4	4
7	7

Aliases

Easier to read results

```
SELECT cat_id AS id, name FROM cats;
```

+-----+-----+	
id	name
+-----+-----+	
1	Ringo
2	Cindy
3	Dumbledore
4	Egg
5	Misty
6	George Michael
7	Jackson
+-----+-----+	



+-----+-----+	
id	name
+-----+-----+	
1	Ringo
2	Cindy
3	Dumbledore
4	Egg
5	Misty
6	George Michael
7	Jackson
+-----+-----+	

Update

Update

How do we alter existing data?

```
UPDATE cats SET breed='Shorthair'  
WHERE breed='Tabby';
```

```
UPDATE cats SET age=14  
WHERE name='Misty';
```

A Good Rule of

Try SELECTing before you UPDATE



Thumb

Your Turn!

Relatively Painless UPDATE exercises

Change Jackson's name to "Jack"

Change Ringo's breed to
"British Shorthair"

Update both Maine Coons'
ages to be 12

Delete

Delete

Time to learn to...delete things

```
DELETE FROM cats WHERE name='Egg';
```

```
DELETE FROM cats;
```

```
DELETE FROM cats;
```

Always run SELECT first to double check...

Your Turn!

Get Some Practice With DELETE

DELETE all 4 year old cats

DELETE cats whose age is
the same as their cat_id

DELETE all cats 🐱

Super

Super

Ultra

Super

Ultra

Hyper

Super

Ultra

Hyper

Mega

Super

Ultra **CRUD**

Hyper Exercise

Mega

Spring Cleaning

The Annual Closet Inventory

Create a new database
shirts_db

Create a new table
shirts

shirt_id	article	color	shirt_size	last_worn
1	t-shirt	white	S	10
2	t-shirt	green	S	200
3	polo shirt	black	M	10
4	tank top	blue	S	50
5	t-shirt	pink	S	0
6	polo shirt	red	M	5
7	tank top	white	S	200
8	tank top	blue	M	15

Cannot Be NULL

Primary Key



shirt_id	article	color	shirt_size	last_worn
1	t-shirt	white	S	10
2	t-shirt	green	S	200
3	polo shirt	black	M	10
4	tank top	blue	S	50
5	t-shirt	pink	S	0
6	polo shirt	red	M	5
7	tank top	white	S	200
8	tank top	blue	M	15

```
('t-shirt', 'white', 'S', 10),  
( 't-shirt', 'green', 'S', 200),  
( 'polo shirt', 'black', 'M', 10),  
( 'tank top', 'blue', 'S', 50),  
( 't-shirt', 'pink', 'S', 0),  
( 'polo shirt', 'red', 'M', 5),  
( 'tank top', 'white', 'S', 200),  
( 'tank top', 'blue', 'M', 15)
```

Get All That Data In There
With a single line

Add A New Shirt

Purple polo shirt, size M last worn 50 days ago

SELECT all shirts

But Only Print Out Article and Color

SELECT all medium shirts

Print Out Everything But shirt_id

Update all polo shirts

Change their size to L

Update the shirt last worn
15 days ago
Change last_worn to 0

Update all white shirts

Change size to 'XS' and color to 'off white'

Delete all old shirts

Last worn 200 days ago

Delete all tank tops

Your tastes have changed...

Delete all shirts

Catastrophe!

Drop the entire shirts table

Catastrophe Again!

```
CREATE TABLE shirts
(
    shirt_id INT NOT NULL AUTO_INCREMENT,
    article VARCHAR(100),
    color VARCHAR(100),
    shirt_size VARCHAR(100),
    last_worn INT,
    PRIMARY KEY(shirt_id)
);
```