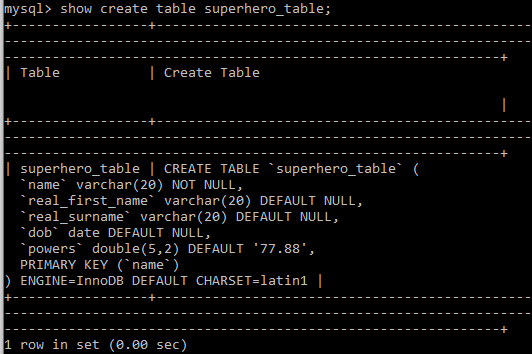
# Data Centric RAD

## Lab 3 MySQL Review II

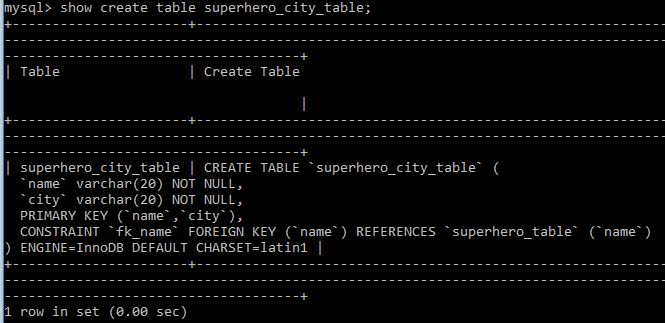
* Get superheroes\_wk3.sql from Moodle.
* Import it into MySQL described in Lab 1.
* use superheroes;
* Use the show create table <table name> command to find out the structure of the superhero\_table, and list the Primary Key(s) and Foreign Key(s).



Primary Key = name

There are no Foreign Keys.

* Use the show create table <table name> command to find out the structure of the superhero\_city\_table, and list the Primary Key(s) and Foreign Key(s).

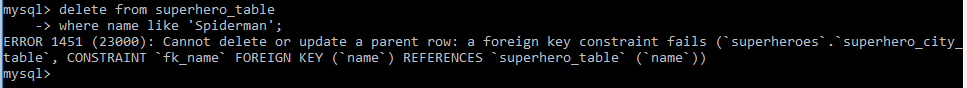


Primary Key = name, city

Foreign Key = name and it references the name column in the superhero\_table.

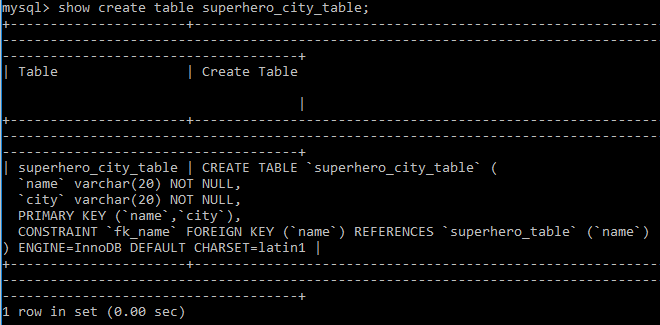
* Delete *Spiderman* from the superhero\_table.

What happens and why?



*Spiderman* cannot be deleted because it is referenced in the *superhero\_city\_table*.

When a show create table is performed on the *superhero\_city\_table* there is no ON DELTETE CASCADE, or ON DELETE SET NULL option, therefore the default is ON DELETE RESTRICT.



* Insert a new superhero in the *superhero\_table* as follows:

Name = ‘Joker’

real\_first\_name = ‘John’

real\_surname = ‘Jones’

dob = 1966-07-12

powers = 22



* Delete the superhero *Joker* from the *superhero\_table*.

What happens and why?

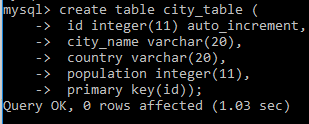


The row is successfully deleted because the value of the *name* column (*Joker*) is not used in the Foreign Key of the superhero\_city\_table.

* Delete the superhero\_city\_table as follows:

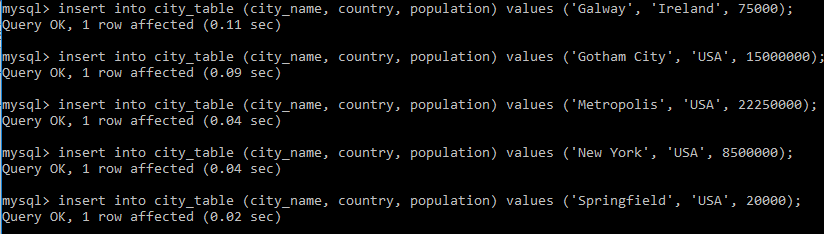


* Create a new table called *city\_table* as follows:



Populate it with the following data:

|  |  |  |
| --- | --- | --- |
| **Name** | **Country** | **Population** |
| Galway | Ireland | 75,000 |
| Gotham City | USA | 15,000,000 |
| Metropolis | USA | 22,250,000 |
| New York | USA | 8,500,000 |
| Springfield | USA | 20,000 |

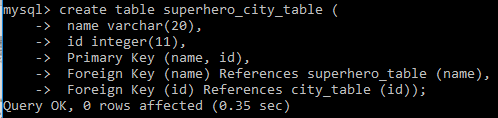


* Recreate the superhero\_city\_table, this time with two columns:
  + *name* which is a Foreign Key referring to the name column in the superhero\_table.
  + *city* which is a Foreign Key referring to the *id* column in the city\_table.

HINT: A Foreign Key is created using the following syntax:

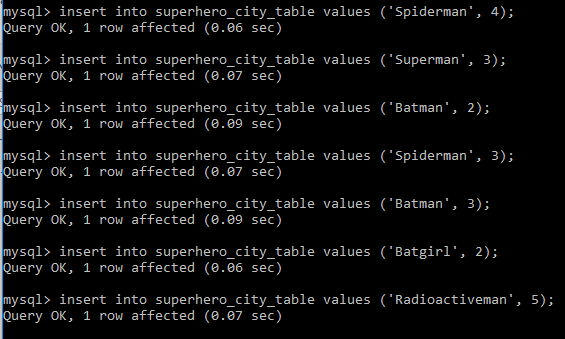
**Foreign Key(***column***) References** *table\_name* **(***column\_in\_referenced\_table***)**.

* + Primary Key is (name, id)



* Populate the superhero\_city\_table so that the following are associated:

|  |  |
| --- | --- |
| Spiderman | New York |
| Superman | Metropolis |
| Batman | Gotham City |
| Spiderman | Metropolis |
| Batman | Metropolis |
| Batgirl | Gotham City |
| Radioactiveman | Springfield |



* Delete *Galway* from city\_table.

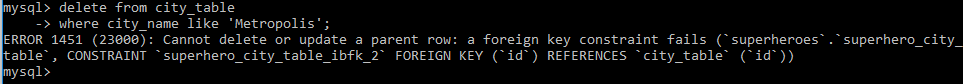
What happens and why?



The row is successfully deleted because the value of the *city\_name* column (*Galway*) is not used in the Foreign Key of the superhero\_city\_table.

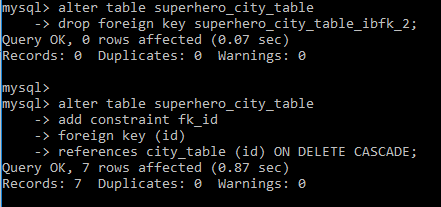
* Delete *Metropolis* from city\_table.

What happens and why?

 *Metropolis* cannot be deleted because it is referenced in the *superhero\_city\_table*.

When a show create table is performed on the *superhero\_city\_table* there is no ON DELTETE CASCADE, or ON DELETE SET NULL option, therefore the default is ON DELETE RESTRICT.

* Alter the city\_table as follows:

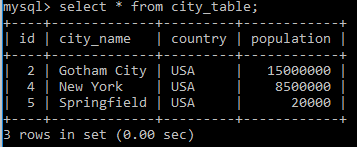


* Delete *Metropolis* from city\_table.

What happens and why?



*Metropolis* has been deleted from the city\_table:



And also from the superhero\_city\_table:

