# 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).
  + CREATE TABLE `superhero\_table` (   `name` varchar(20) NOT NULL,   `real\_first\_name` varchar(20) DEFAULT NULL,   `real\_surname` varchar(20) DEFAULT NULL,   `dob` date DEFAULT NULL,   `powers` double(5,2) DEFAULT '77.88',   PRIMARY KEY (`name`) ) ENGINE=InnoDB DEFAULT CHARSET=latin1
  + PK: ‘name’
  + FK: None
* 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).
  + CREATE TABLE `superhero\_city\_table` (   `name` varchar(20) NOT NULL,   `city` varchar(20) NOT NULL,   PRIMARY KEY (`name`,`city`),   CONSTRAINT `fk\_name` FOREIGN KEY (`name`) REFERENCES `superhero\_table` (`name`) ) ENGINE=InnoDB DEFAULT CHARSET=latin1
  + PK: ‘name’ + ‘city’
  + FK: ‘name’ (superhero\_table)
* Delete *Spiderman* from the superhero\_table.

What happens and why?

* + Not allowed, Referential integrity is ensured. Not orphan child allowed on superhero\_city\_table
* 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

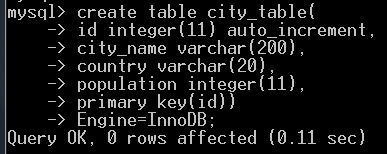
* + INSERT INTO superhero\_table VALUES ('Joker','John','Jones','1966-07-12',22)
* Delete the superhero *Joker* from the *superhero\_table*.

What happens and why?

* + delete from superhero\_table where name = 'Joker'
  + It is allowed because Joker isn’t refenenced in 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 |

* + INSERT INTO city\_table (`city\_name`,`Country`,`population`)VALUES (‘Galway',’Ireland’,75000);
  + INSERT INTO city\_table (`city\_name`,`Country`,`population`)VALUES ('Gotham City','USA',15000000);
  + INSERT INTO city\_table (`city\_name`,`Country`,`population`)VALUES ('Metropolis','USA',22250000);
  + INSERT INTO city\_table (`city\_name`,`Country`,`population`)VALUES ('New York','USA',8500000);
  + INSERT INTO city\_table (`city\_name`,`Country`,`population`)VALUES ('Springfield','USA',20000);
* 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, city)
* 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 |

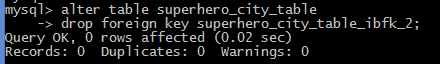
* Delete *Galway* from city\_table.

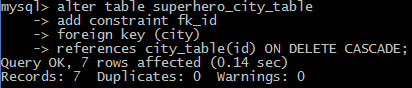
What happens and why?

* + Allowed - No child reference that Galway record
* Delete *Metropolis* from city\_table.

What happens and why?

* + Not allowed – Record referenced in superhero\_city\_table
* Alter the city\_table as follows:





* Delete *Metropolis* from city\_table.

What happens and why?

* + It deletes related records in child table()