**MySQL FOREIGN KEY examples**

CREATE DATABASE fkdemo;

USE fkdemo;

### RESTRICT & NO ACTION actions

CREATE TABLE categories(

categoryId INT AUTO\_INCREMENT PRIMARY KEY,

categoryName VARCHAR(100) NOT NULL

) ENGINE=INNODB;

CREATE TABLE products(

productId INT AUTO\_INCREMENT PRIMARY KEY,

productName varchar(100) not null,

categoryId INT,

CONSTRAINT fk\_category

FOREIGN KEY (categoryId)

REFERENCES categories(categoryId)

) ENGINE=INNODB;

**The following steps illustrate the RESTRICT action.**

INSERT INTO categories(categoryName)

VALUES

('Smartphone'),

('Smartwatch');

SELECT \* FROM categories;

INSERT INTO products(productName, categoryId)

VALUES('iPhone',1);

INSERT INTO products(productName, categoryId)

VALUES('iPad',3);

### **CASCADE action**

DROP TABLE products;

CREATE TABLE products(

productId INT AUTO\_INCREMENT PRIMARY KEY,

productName varchar(100) not null,

categoryId INT NOT NULL,

CONSTRAINT fk\_category

FOREIGN KEY (categoryId)

REFERENCES categories(categoryId)

ON UPDATE CASCADE

ON DELETE CASCADE

) ENGINE=INNODB;

INSERT INTO products(productName, categoryId)

VALUES

('iPhone', 1),

('Galaxy Note',1),

('Apple Watch',2),

('Samsung Galary Watch',2);

SELECT \* FROM products;

UPDATE categories

SET categoryId = 100

WHERE categoryId = 1;

SELECT \* FROM categories;

SELECT \* FROM products;

DELETE FROM categories

WHERE categoryId = 2;

SELECT \* FROM categories;

SELECT \* FROM products;

SET NULL action

DROP TABLE IF EXISTS categories;

DROP TABLE IF EXISTS products;

CREATE TABLE categories(

categoryId INT AUTO\_INCREMENT PRIMARY KEY,

categoryName VARCHAR(100) NOT NULL

)ENGINE=INNODB;

CREATE TABLE products(

productId INT AUTO\_INCREMENT PRIMARY KEY,

productName varchar(100) not null,

categoryId INT,

CONSTRAINT fk\_category

FOREIGN KEY (categoryId)

REFERENCES categories(categoryId)

ON UPDATE SET NULL

ON DELETE SET NULL

)ENGINE=INNODB;

INSERT INTO categories(categoryName)

VALUES

('Smartphone'),

('Smartwatch');

INSERT INTO products(productName, categoryId)

VALUES

('iPhone', 1),

('Galaxy Note',1),

('Apple Watch',2),

('Samsung Galary Watch',2);

UPDATE categories

SET categoryId = 100

WHERE categoryId = 1;

SELECT \* FROM categories;

SELECT \* FROM products;

DELETE FROM categories

WHERE categoryId = 2;

SELECT \* FROM products;

**Drop MySQL foreign key constraints**

ALTER TABLE table\_name

DROP FOREIGN KEY constraint\_name;

SHOW CREATE TABLE table\_name;

SHOW CREATE TABLE products;

ALTER TABLE products

DROP FOREIGN KEY fk\_category;

SHOW CREATE TABLE products;

**Disabling foreign key checks**

SET foreign\_key\_checks = 0;

SET foreign\_key\_checks = 1;