MySQL scripts to create tables.

a. product: the "product" tables should include the name, category of the product; it should also provide information to tell us when this product was added to the table, and who added this product.

CREATE TABLE product (

    product_id INT AUTO_INCREMENT PRIMARY KEY,

    name VARCHAR(100) NOT NULL,

    category VARCHAR(100) NOT NULL,

    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,

    created_by VARCHAR(32) NOT NULL

);

b. product price: this table will store the current price information of each product and we should be able to join it with the product table. It should include the price, current discount percent(default to 0), the updated time and who updated it.

CREATE TABLE product_price {

    product_id INT PRIMARY KEY,

    price DECIMAL(10, 2) NOT NULL,

    discount_percent DECIMAL(5, 2) DEFAULT 0,

    modified_time TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,

    modified_by VARCHAR(32) NOT NULL,

    FOREIGN KEY (product_id) REFERENCES product(product_id)

);

c. product price change log: this table will store the old and new value of the "product price" table that's impacted by any insert/update/delete and contains information of who and when the operation was performed.

CREATE TABLE product_price_change_log (

   log_id INT AUTO_INCREMENT PRIMARY KEY,

   product_id INT,

   old_price DECIMAL(10, 2),

   new_price DECIMAL(10, 2),

   old_discount_percentage DECIMAL(5, 2),

   new_discount_percentage DECIMAL(5, 2),

   operation VARCHAR(10) NOT NULL,

   modified_time TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,

   modified_by VARCHAR(32) NOT NULL,

   FOREIGN KEY (product_id) REFERENCES product(product_id)

);

Query to join "product" table and "product price" table together to show the product name, category, price, and who/when it gets updated.

SELECT

  product.name,

  product.category,

  product_price.price,

  product_price .modified_by,

  product_price .modified_time

FROM

  product

INNER JOIN

  product_price ON product.product_id = product_price.product_id;