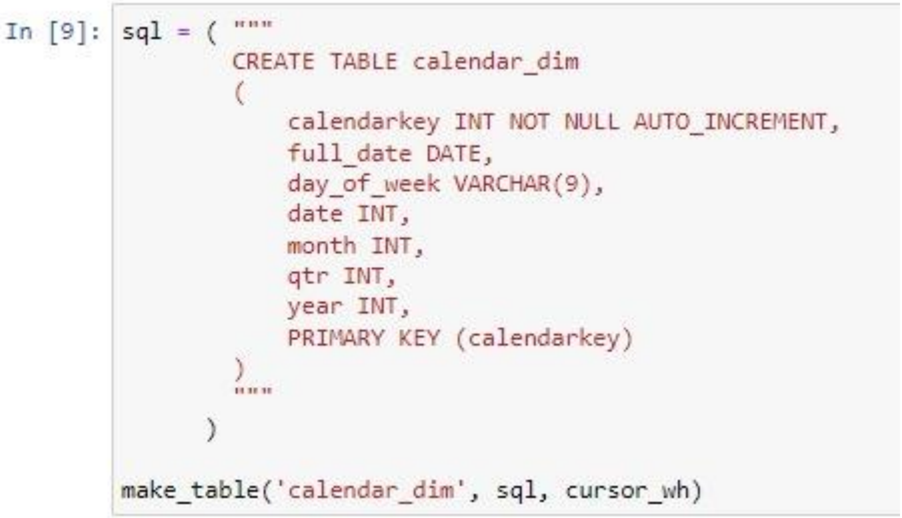
## Dimension Tables:

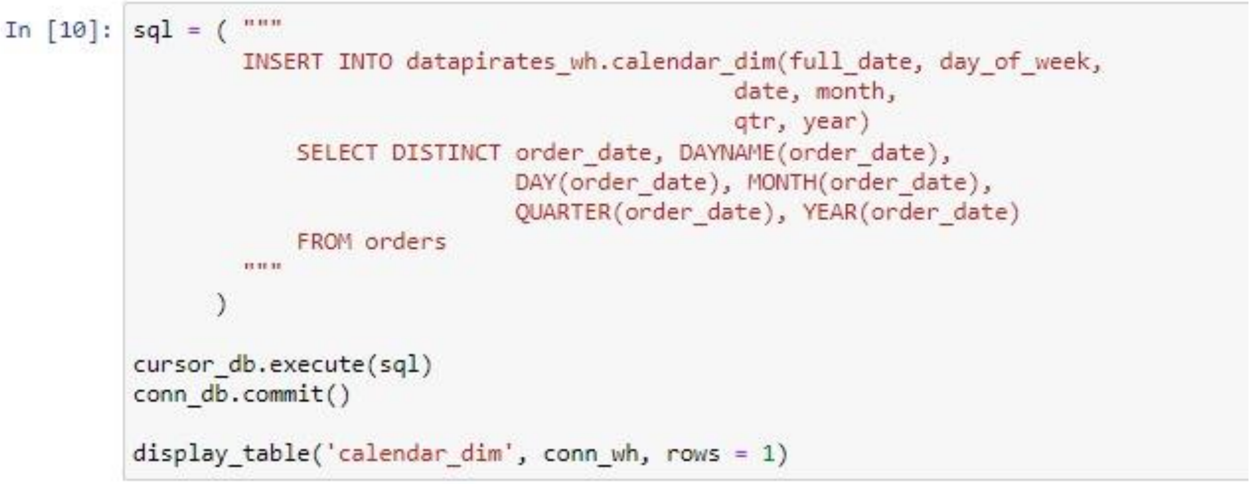
### 1. Calendar_dim Table Creation



```
In [9]: sql = ( """
                CREATE TABLE calendar_dim
                (
                    calendarkey INT NOT NULL AUTO_INCREMENT,
                    full_date DATE,
                    day_of_week VARCHAR(9),
                    date INT,
                    month INT,
                    qtr INT,
                    year INT,
                    PRIMARY KEY (calendarkey)
                )
                """
              )

        make_table('calendar_dim', sql, cursor_wh)
```

## Data Insertion in Calendar_dim Table

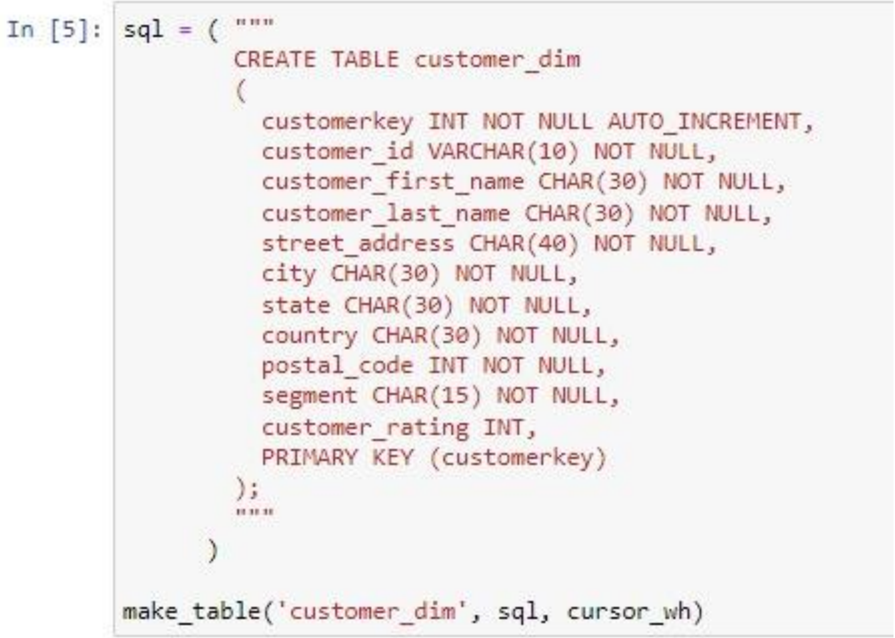


```
In [10]: sql = ( """
                 INSERT INTO datapirates_wh.calendar_dim(full_date, day_of_week,
                                                         date, month,
                                                         qtr, year)
                     SELECT DISTINCT order_date, DAYNAME(order_date),
                                     DAY(order_date), MONTH(order_date),
                                     QUARTER(order_date), YEAR(order_date)
                     FROM orders
                 """
               )

         cursor_db.execute(sql)
         conn_db.commit()

         display_table('calendar_dim', conn_wh, rows = 1)
```

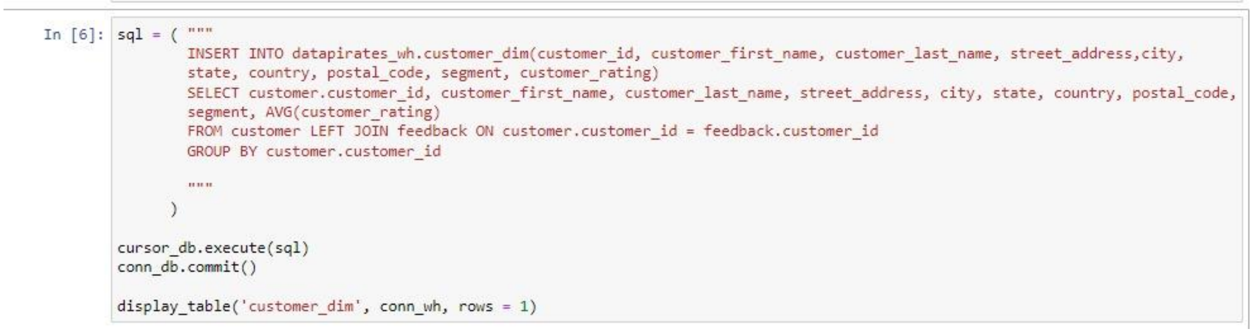
## 2. Customer_dim Table Creation



```
In [5]: sql = ( """
                CREATE TABLE customer_dim
                (
                  customerkey INT NOT NULL AUTO_INCREMENT,
                  customer_id VARCHAR(10) NOT NULL,
                  customer_first_name CHAR(30) NOT NULL,
                  customer_last_name CHAR(30) NOT NULL,
                  street_address CHAR(40) NOT NULL,
                  city CHAR(30) NOT NULL,
                  state CHAR(30) NOT NULL,
                  country CHAR(30) NOT NULL,
                  postal_code INT NOT NULL,
                  segment CHAR(15) NOT NULL,
                  customer_rating INT,
                  PRIMARY KEY (customerkey)
                );
                """
              )

        make_table('customer_dim', sql, cursor_wh)
```

## Data Insertion in Customer_dim Table



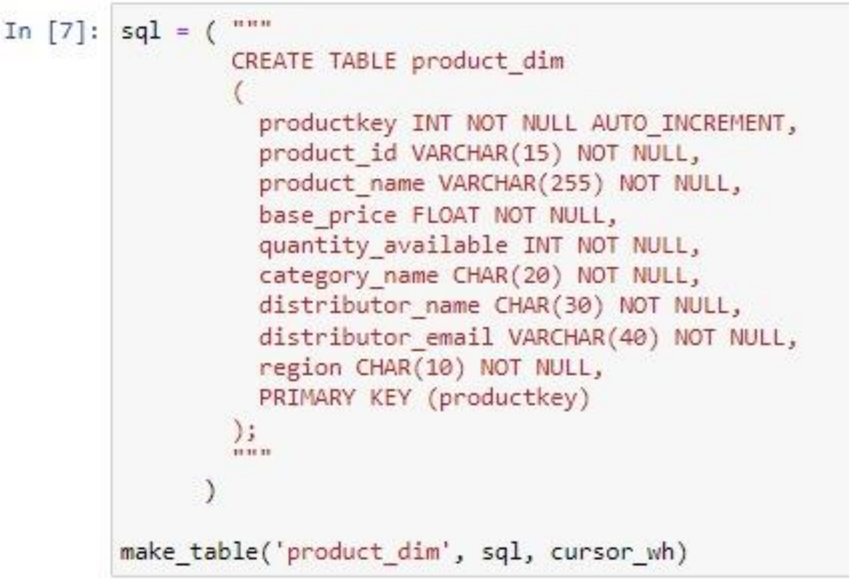
```
In [6]: sql = ( """
                INSERT INTO datapirates_wh.customer_dim(customer_id, customer_first_name, customer_last_name, street_address,city,
                state, country, postal_code, segment, customer_rating)
                SELECT customer.customer_id, customer_first_name, customer_last_name, street_address, city, state, country, postal_code,
                segment, AVG(customer_rating)
                FROM customer LEFT JOIN feedback ON customer.customer_id = feedback.customer_id
                GROUP BY customer.customer_id

                """
              )

        cursor_db.execute(sql)
        conn_db.commit()

        display_table('customer_dim', conn_wh, rows = 1)
```

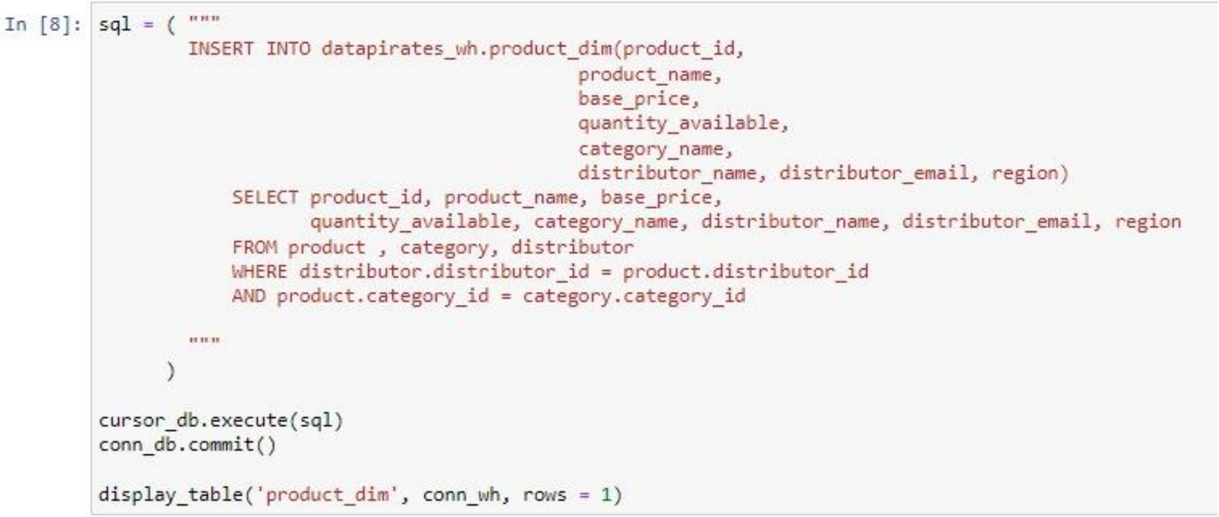
### 3. Product_dim Table Creation



```
In [7]: sql = ( """
                CREATE TABLE product_dim
                (
                  productkey INT NOT NULL AUTO_INCREMENT,
                  product_id VARCHAR(15) NOT NULL,
                  product_name VARCHAR(255) NOT NULL,
                  base_price FLOAT NOT NULL,
                  quantity_available INT NOT NULL,
                  category_name CHAR(20) NOT NULL,
                  distributor_name CHAR(30) NOT NULL,
                  distributor_email VARCHAR(40) NOT NULL,
                  region CHAR(10) NOT NULL,
                  PRIMARY KEY (productkey)
                );
                """
              )

        make_table('product_dim', sql, cursor_wh)
```

## Data Insertion in Product_dim Table



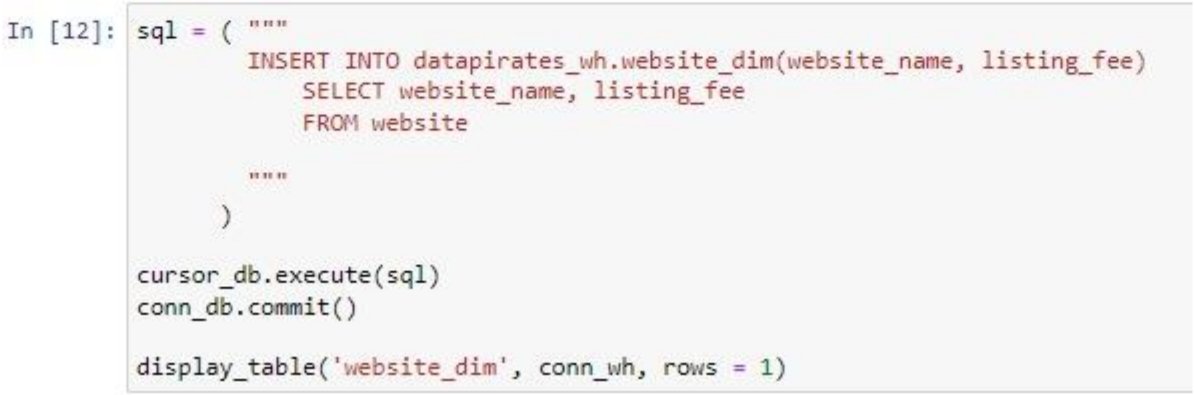
```
In [8]: sql = ( """
                INSERT INTO datapirates_wh.product_dim(product_id,
                                                   product_name,
                                                   base_price,
                                                   quantity_available,
                                                   category_name,
                                                   distributor_name, distributor_email, region)
                    SELECT product_id, product_name, base_price,
                           quantity_available, category_name, distributor_name, distributor_email, region
                    FROM product , category, distributor
                    WHERE distributor.distributor_id = product.distributor_id
                    AND product.category_id = category.category_id

                """
              )

        cursor_db.execute(sql)
        conn_db.commit()

        display_table('product_dim', conn_wh, rows = 1)
```

## 4. Website_dim Table Creation



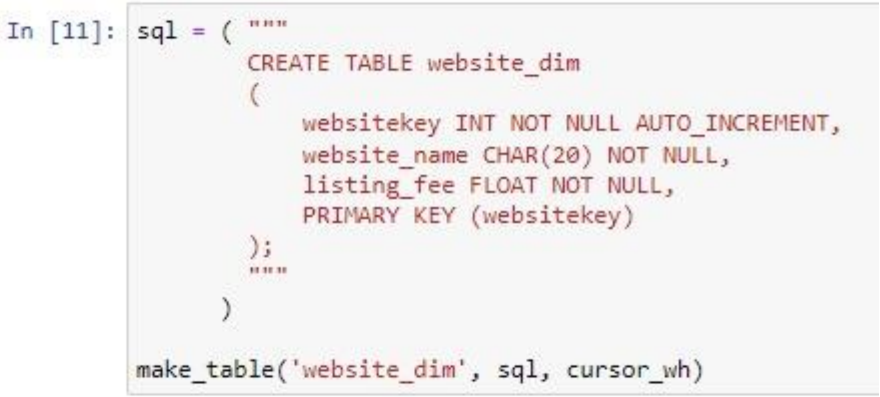
```
In [12]: sql = ( """
                 INSERT INTO datapirates_wh.website_dim(website_name, listing_fee)
                     SELECT website_name, listing_fee
                     FROM website

                 """
               )

         cursor_db.execute(sql)
         conn_db.commit()

         display_table('website_dim', conn_wh, rows = 1)
```

## Data Insertion in Website_dim Table

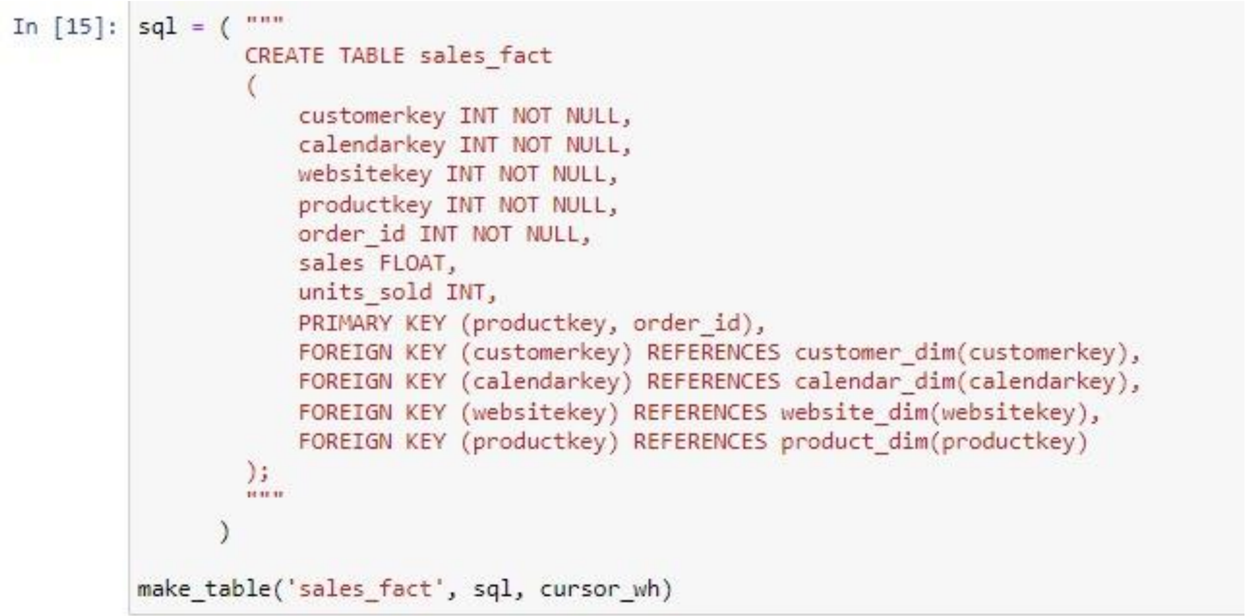


```
In [11]: sql = ( """
                 CREATE TABLE website_dim
                 (
                     websitekey INT NOT NULL AUTO_INCREMENT,
                     website_name CHAR(20) NOT NULL,
                     listing_fee FLOAT NOT NULL,
                     PRIMARY KEY (websitekey)
                 );
                 """
               )

         make_table('website_dim', sql, cursor_wh)
```

## Fact Tables :

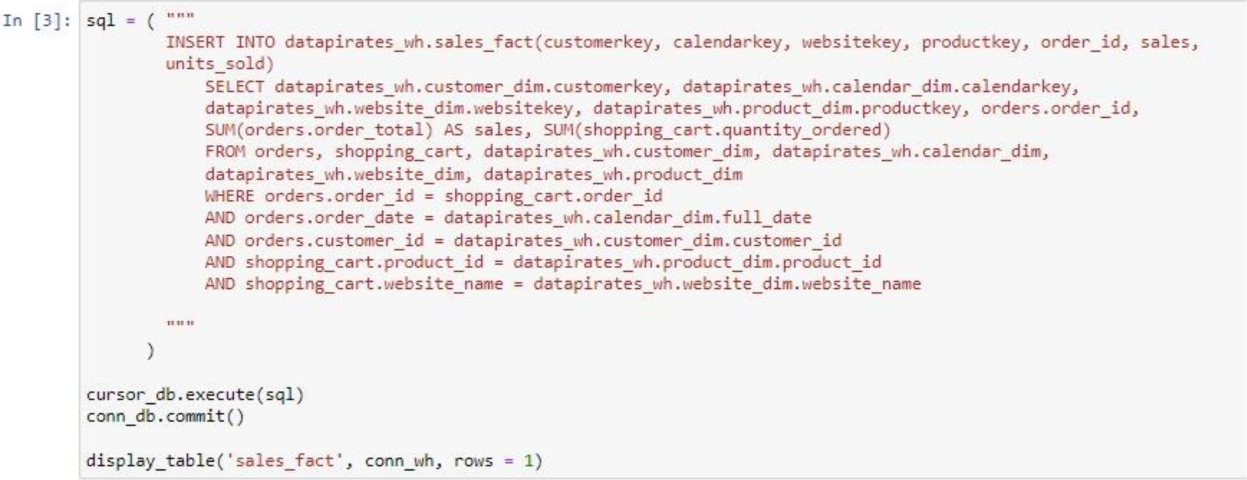
### 1. Sales_fact Table Creation



```
In [15]: sql = ( """
                 CREATE TABLE sales_fact
                 (
                     customerkey INT NOT NULL,
                     calendarkey INT NOT NULL,
                     websitekey INT NOT NULL,
                     productkey INT NOT NULL,
                     order_id INT NOT NULL,
                     sales FLOAT,
                     units_sold INT,
                     PRIMARY KEY (productkey, order_id),
                     FOREIGN KEY (customerkey) REFERENCES customer_dim(customerkey),
                     FOREIGN KEY (calendarkey) REFERENCES calendar_dim(calendarkey),
                     FOREIGN KEY (websitekey) REFERENCES website_dim(websitekey),
                     FOREIGN KEY (productkey) REFERENCES product_dim(productkey)
                 );
                 """
               )

         make_table('sales_fact', sql, cursor_wh)
```

## Data Insertion in Sales_fact Table



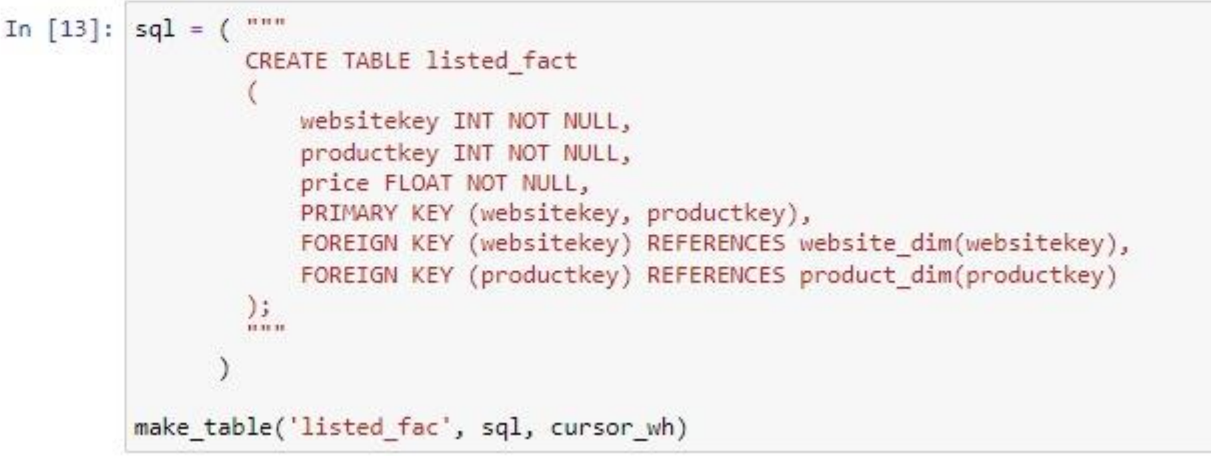
```
In [3]: sql = ( """
                INSERT INTO datapirates_wh.sales_fact(customerkey, calendarkey, websitekey, productkey, order_id, sales,
                units_sold)
                    SELECT datapirates_wh.customer_dim.customerkey, datapirates_wh.calendar_dim.calendarkey,
                    datapirates_wh.website_dim.websitekey, datapirates_wh.product_dim.productkey, orders.order_id,
                    SUM(orders.order_total) AS sales, SUM(shopping_cart.quantity_ordered)
                    FROM orders, shopping_cart, datapirates_wh.customer_dim, datapirates_wh.calendar_dim,
                    datapirates_wh.website_dim, datapirates_wh.product_dim
                    WHERE orders.order_id = shopping_cart.order_id
                    AND orders.order_date = datapirates_wh.calendar_dim.full_date
                    AND orders.customer_id = datapirates_wh.customer_dim.customer_id
                    AND shopping_cart.product_id = datapirates_wh.product_dim.product_id
                    AND shopping_cart.website_name = datapirates_wh.website_dim.website_name

                """
              )

        cursor_db.execute(sql)
        conn_db.commit()

        display_table('sales_fact', conn_wh, rows = 1)
```

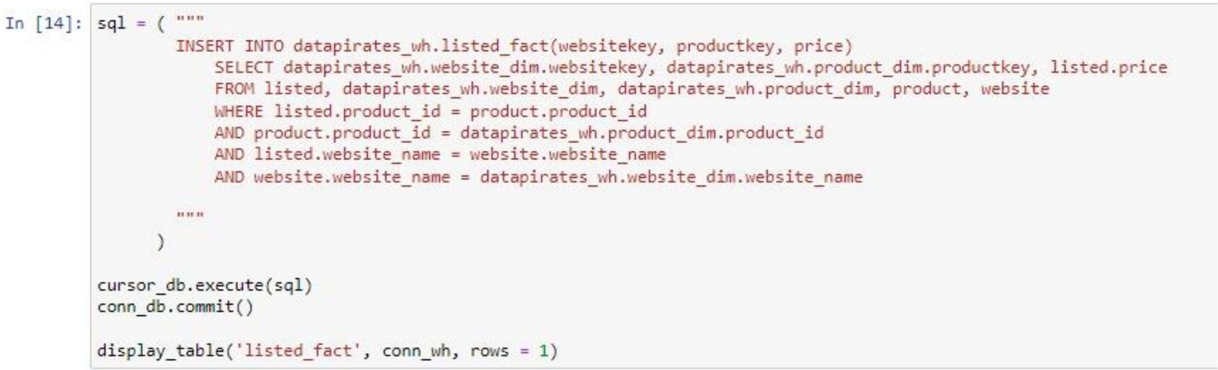
## 2. Listed_fact Table Creation



```
In [13]: sql = ( """
                CREATE TABLE listed_fact
                (
                    websitekey INT NOT NULL,
                    productkey INT NOT NULL,
                    price FLOAT NOT NULL,
                    PRIMARY KEY (websitekey, productkey),
                    FOREIGN KEY (websitekey) REFERENCES website_dim(websitekey),
                    FOREIGN KEY (productkey) REFERENCES product_dim(productkey)
                );
                """
              )

         make_table('listed_fac', sql, cursor_wh)
```

## Data Insertion in Listed_fact Table



```
In [14]: sql = ( """
                INSERT INTO datapirates_wh.listed_fact(websitekey, productkey, price)
                    SELECT datapirates_wh.website_dim.websitekey, datapirates_wh.product_dim.productkey, listed.price
                    FROM listed, datapirates_wh.website_dim, datapirates_wh.product_dim, product, website
                    WHERE listed.product_id = product.product_id
                    AND product.product_id = datapirates_wh.product_dim.product_id
                    AND listed.website_name = website.website_name
                    AND website.website_name = datapirates_wh.website_dim.website_name

                """
              )

         cursor_db.execute(sql)
         conn_db.commit()

         display_table('listed_fact', conn_wh, rows = 1)
```