One Less Crochet

Company Overview:

At One Less Crochet, we believe in the power of creativity and craftsmanship, and we're on a mission to make the world a better place, one stitch at a time. Our carefully curated selection of crochet products showcases the finest and most eco-friendly materials available. From organic cotton and bamboo yarns to recycled fibers, we are committed to reducing our carbon footprint and promoting eco-conscious choices in the crafting community.

- **Craft ID:** A unique identifier assigned to every "Craft" product for inventory and tracking purposes.
- **Craft Name:** The name or title given to the specific "Craft" product, helping customers easily identify and refer to it.
- **Selling Price:** The retail price at which the "Craft" product is offered to customers.
- **Manufacturing Cost:** The total cost incurred during the production of the "Craft" item, including materials, labor, and other production expenses.
- **Size:** The dimensions or measurements of the "Craft" product, providing customers with information about its physical size.
- **Color:** The color or color variants available for the "Craft" product, allowing customers to select their preferred option.
- **Type:** The size variations available for the "Craft" product. The values can be XS, S, M, L, and XL, indicating different size options suitable for various crafting projects.
- **Fit:** If applicable, the "Fit" attribute indicates the compatibility of the "Craft" product with specific crafting materials or other accessories.
- **Description:** A detailed and engaging description of the "Craft" product, highlighting its features, benefits, and eco-friendly nature. This description would entice customers to choose "Craft" and provide essential information about its use and purpose in crafting projects.

By carefully defining these attributes for the "Craft" product, One Less Craft can efficiently manage its inventory, assist customers in making informed decisions, and showcase the product's unique selling points, ultimately enhancing the overall customer experience.

Product: Crafts

Product Attributes:

Attributes	Sample Data
Craft ID	100001
Craft Name	Cushion Macrame
Selling Price	43.97
Manufacturing Cost	15.64
Size	M
Color	Beige
Type	Macrame
Fit	Null
Description	This beautiful woven cushion is ideal to add some boho chic to your home. Tied using our most sustainable, recycled cotton yarn Nova Vita 4 in a calming neutral cream shade.

One Less Craft

347 Kings Street
Winnipeg, AB T2H 0K8
647-860-1654

Customer Sales Invoice

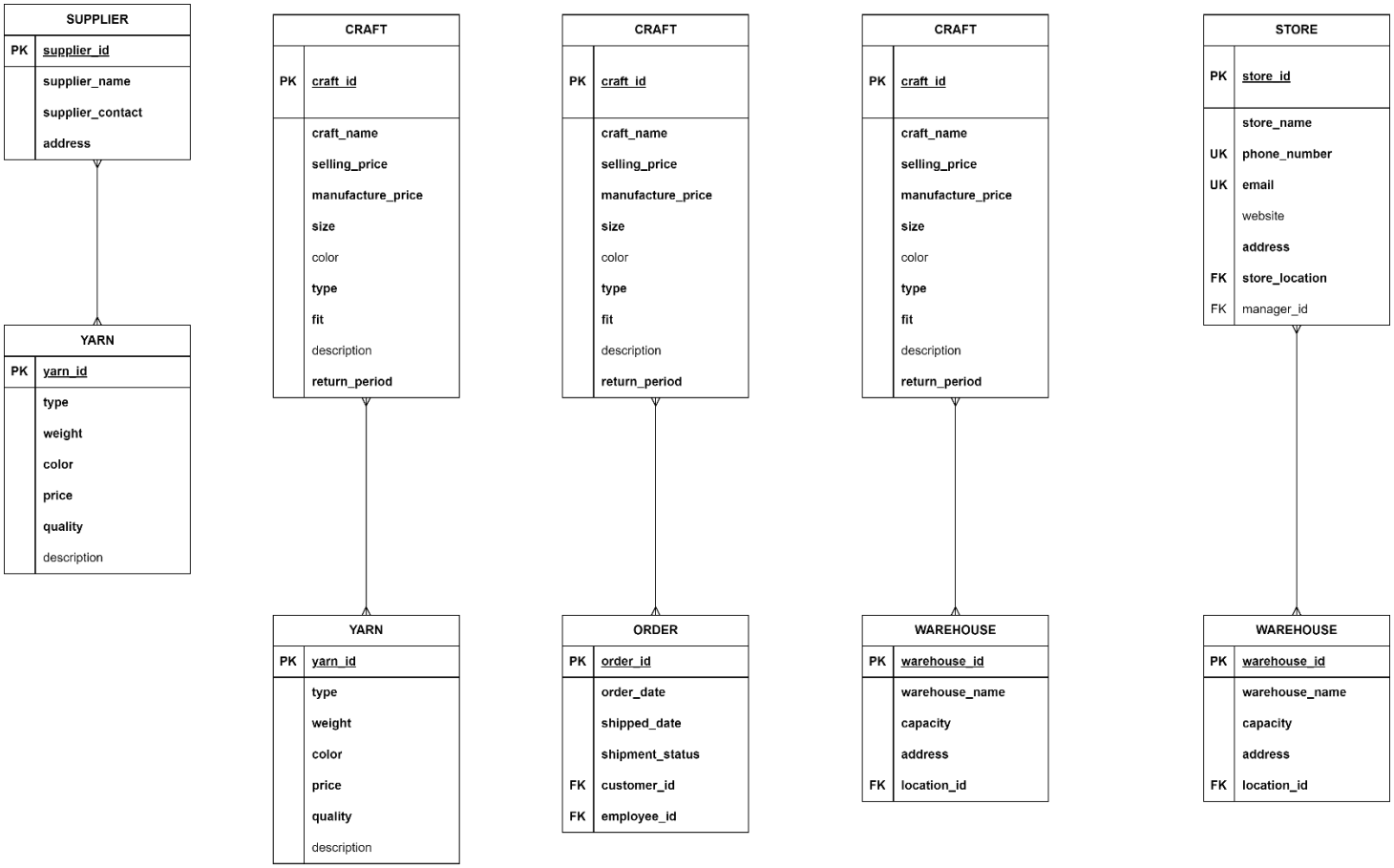
Customer ID: 000008
Customer Name: Sophia Wilson
Customer Address: 345 Oak Ave
Winnipeg, AB T2H 0K8

Order ID: 1023
Order Date: 23/06/2024
Associate ID: 208
Associate Name: John Doe

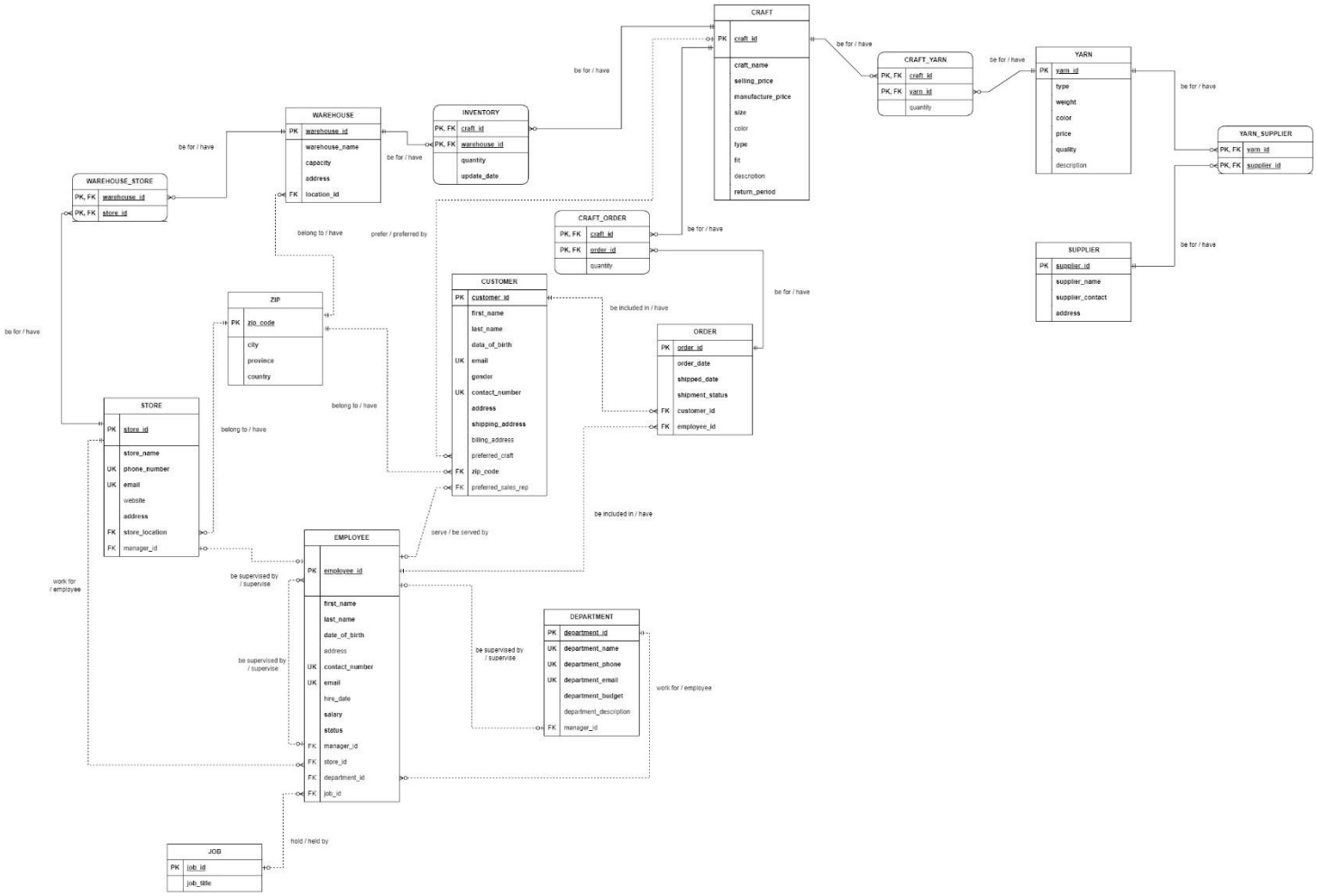
Product ID	Name	Size	Fit	Color	Description	Qty	Unit Price	Extended Price
319	Candle Holder	M	Standard	Metallic	Decorative candle holder for ambiance	2	$ 22.25	$ 44.50
320	Crochet Hat	M	One Size	Brown	Cozy crochet hat for colder days	5	$ 16.75	$ 83.75
306	Handmade Earrings	S	Standard	Multicolor	Self-Propelled Gas Push Mower	2	$ 19.99	$ 39.98
302	Crochet Blanket	XL	Oversized	White	Cozy blanket for any room	1	$ 89.50	$ 89.50
329	Braided Bracelet	S	Standard	Brown	Bracelet with intricate braided pattern	1	$ 10.75	$ 10.75
							Sub-total	$ 268.48
							Tax	$ 40.27
							Invoice Total	$ 308.75

Entity Relationship Diagram

Many To Many Relationships



Entity Relationship Diagram (Many to Many relationships resolved)



ERD Language

Each EMPLOYEE ***must*** work for zero or one DEPARTMENT.
Each DEPARTMENT ***may*** employee zero, one or more EMPLOYEEs.
Each EMPLOYEE ***may*** supervise zero or one DEPARTMENT.
Each DEPARTMENT ***may*** be supervised by zero or one EMPLOYEE.
Each EMPLOYEE (Mgr. role) may supervise zero, one or more EMPLOYEEs (Emp role).
Each EMPLOYEE (Emp role) may be supervised by zero or one EMPLOYEE (Mgr. role).
Each EMPLOYEE ***must*** work for one and only one STORE.
Each STORE ***must*** employee one or more EMPLOYEEs.
Each EMPLOYEE ***may*** supervise one and only one STORE.
Each STORE ***may*** be supervised by one and only one EMPLOYEE.

Each EMPLOYEE *may* be included in zero, one or more ORDERs.
Each ORDER *must* have one and only one EMPLOYEE.
Each EMPLOYEE *may* hold one and only one JOB.
Each JOB *may* be held by zero, one or more EMPLOYEEs.
Each EMPLOYEE *may* serve zero, one or more CUSTOMERs.
Each CUSTOMER *may* be served by zero or one EMPLOYEE.
Each CUSTOMER *must* have one and only one ZIP.
Each CUSTOMER *may* prefer zero or one CRAFT.
Each CRAFT *may* be preferred by zero, one or more CUSTOMERs.
Each ZIP *may* belong to zero, one or more CUSTOMERs.
Each ZIP *may* belong to zero, one or more WAREHOUSEs.
Each WAREHOUSE *must* have one and only one ZIP.
Each ZIP *may* belong to zero, one or more STOREs.
Each STORE *must* have one and only one ZIP.
Each CUSTOMER *may* be included in zero, one or more ORDERs.
Each ORDER *must* have one and only one CUSTOMER.

Each ORDER *may* have zero, one or more ORDER_CRAFTs.
Each ORDER_CRAFT *must* be for one and only one ORDER.
Each CRAFT *may* have zero, one or more ORDER_CRAFTs.
Each ORDER_CRAFT *must* be for one and only one CRAFT.

Each CRAFT *may* have zero, one or more CRAFT_YARNs.
Each CRAFT_YARN *must* be for one and only one CRAFT.
Each YARN *may* have zero, one or more CRAFT_YARNs.
Each CRAFT_YARN *must* be for one and only one YARN.

Each CRAFT *may* have zero, one or more INVENTORYs.
Each INVENTORY *must* be for one and only one CRAFT.
Each WAREHOUSE *may* have zero, one or more INVENTORYs.
Each INVENTORY *must* be for one and only one WAREHOUSE.

Each WAREHOUSE *may* have zero one or more WAREHOUSE_STOREs.
Each WAREHOUSE_STORE *must* be for one and only one WAREHOUSE.
Each STORE *may* have zero one or more WAREHOUSE_STOREs.
Each WAREHOUSE_STORE *must* be for one and only one STORE.

Each YARN *may* be supplied by zero, one or more YARN_SUPPLIERs.
Each YARN_SUPPLIER *must* be for one and only one YARN.
Each SUPPLIER *may* be supply zero, one or more YARN_SUPPLIER.
Each YARN_SUPPLIER *must* be for one and only one SUPPLIER.

Relational Data Model (Physical DM)

WAREHOUSE_STORES				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk, fk	*	warehouse_id	numeric	(6,0)
pk, fk	*	store_id	numeric	(6,0)

CRAFT_YARNS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk, fk	*	craft_id	numeric	(6,0)
pk, fk	*	yarn_id	numeric	(6,0)
	o	quantity	numeric	(6,0)

YARN_SUPPLIERS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk, fk	*	yarn_id	numeric	(6,0)
pk, fk	*	supplier_id	numeric	(6,0)

CRAFT_ORDERS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk, fk	*	craft_id	numeric	(6,0)
pk, fk	*	order_id	numeric	(6,0)
	*	quantity	numeric	(10,0)

SUPPLIERS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	supplier_id	numeric	(6,0)
	*	supplier_name	varchar	20
	*	supplier_contact	varchar	10
	*	supplier_address	varchar	50

JOBS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	job_id	numeric	(5,0)
	*	job_title	varchar	30

YARNS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	yarn_id	numeric	(6,0)
	*	yarn_type	varchar	15
	*	yarn_weight	varchar	15
	*	yarn_color	varchar	15
	*	yarn_price	numeric	(9,2)
	*	yarn_quality	varchar	20
	o	yarn_description	varchar	100

INVENTORIES				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk, fk	*	warehouse_id	numeric	(5,0)
pk, fk	*	craft_id	numeric	(6,0)
	*	quantity	numeric	(8,0)
	*	update_date	date	

CUSTOMERS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	customer_id	numeric	(6,0)
	*	first_name	varchar	20
	*	last_name	varchar	20
	*	date_of_birth	date	
uk	*	email	varchar	50
	o	gender	varchar	1
uk	*	contact_number	varchar	10
	*	address	varchar	50
	*	shipping address	varchar	50
	o	billing_address	varchar	50
fk	o	favorite_craft	numeric	(6,0)
fk	*	zip_code	varchar	10
fk	o	preferred_sales_rep	varchar	20

CRAFTS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	craft_id	numeric	(6,0)
	*	craft_name	varchar	20
	*	selling_price	numeric	(9,2)
	*	manufacturing_cost	numeric	(9,2)
	*	size	varchar	4
	o	colour	varchar	20
	*	craft_type	varchar	20
	*	fit	varchar	20
	o	craft_description	varchar	100

STORES				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	store_id	numeric	(6,0)
	*	store_name	varchar	20
uk	*	phone_number	varchar	10
uk	*	email	varchar	30
	o	website	varchar	30
	*	address	varchar	50
fk	*	zip_code	varchar	10
fk	o	manager_id	numeric	(6,0)

ZIPS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
PK	*	zip_code	varchar	10
	*	city	varchar	20
	*	province	varchar	20
	*	country	varchar	20

WAREHOUSE				
Key Type	**Optionality**	**Column Name**	**Datatype**	**Length**
pk	*	warehouse_id	numeric	(6,0)
	*	warehouse_name	varchar	30
	*	address	varchar	50
	*	capacity	numeric	(8,2)
fk	*	zip_code	varchar	10

ORDER				
Key type	**Optionality**	**column name**	**datatype**	**length**
pk	*	order_id	numeric	(5,0)
	*	order_date	date	
	*	shipped_date	date	
	*	shipped_status	varchar	15
fk	*	customer_id	numeric	(6,0)
fk	*	employee_id	numeric	(6,0)
	*	return_period	varchar	30

CUSTOMERS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	customer_id	numeric	(6,0)
	*	first_name	varchar	20
	*	last_name	varchar	20
	*	date_of_birth	date	
uk	*	email	varchar	50
	o	gender	varchar	1
uk	*	contact_number	varchar	10
	*	address	varchar	50
	*	shipping address	varchar	50
	o	billing_address	varchar	50
fk	o	favorite_craft	numeric	(6,0)
fk	*	zip_code	varchar	10
fk	o	preferred_sales_rep	varchar	20

CRAFTS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	craft_id	numeric	(6,0)
	*	craft_name	varchar	20
	*	selling_price	numeric	(9,2)
	*	manufacturing_cost	numeric	(9,2)
	*	size	varchar	4
	o	colour	varchar	20
	*	craft_type	varchar	20
	*	fit	varchar	20
	o	craft_description	varchar	100

STORES				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
pk	*	store_id	numeric	(6,0)
	*	store_name	varchar	20
uk	*	phone_number	varchar	10
uk	*	email	varchar	30
	o	website	varchar	30
	*	address	varchar	50
fk	*	zip_code	varchar	10
fk	o	manager_id	numeric	(6,0)

ZIPS				
Key Type	**Optionality**	**Column Name**	**Data Type**	**Length**
PK	*	zip_code	varchar	10
	*	city	varchar	20
	*	province	varchar	20
	*	country	varchar	20

WAREHOUSES				
Key Type	**Optionality**	**Column Name**	**Datatype**	**Length**
pk	*	warehouse_id	numeric	(6,0)
	*	warehouse_name	varchar	30
	*	address	varchar	50
	*	capacity	numeric	(8,2)
fk	*	zip_code	varchar	10

ORDERS				
Key type	**Optionality**	**column name**	**datatype**	**length**
pk	*	order_id	numeric	(5,0)
	*	order_date	date	
	*	shipped_date	date	
	*	shipped_status	varchar	15
fk	*	customer_id	numeric	(6,0)
fk	*	employee_id	numeric	(6,0)
	*	return_period	varchar	30

EMPLOYEES				
Key type	**Optionality**	**column name**	**datatype**	**length**
pk	*	employee_id	numeric	(6,0)
	*	first_name	varchar	20
	*	last_name	varchar	20
	*	date_of_birth	date	
	o	address	varchar	50
uk	*	contact_number	numeric	(10,0)
uk	*	email	varchar	50
	o	hire_date	date	
	*	salary	numeric	(9,2)
	*	emp_status	varchar	15
fk	o	manger_id	numeric	(6,0)
fk	o	store_id	numeric	(6,0)
fk	o	department_id	numeric	(6,0)
fk	o	job_id	numeric	(6,0)

DEPARTMENTS				
Key type	**Optionality**	**column name**	**datatype**	**length**
pk	*	department_id	numeric	(6,0)
uk	*	department_name	varchar	30
uk	*	department_phone	varchar	10
uk	*	department_email	varchar	50
	*	department_budget	numeric	(9,2)
	o	department_description	varchar	100
fk	o	manger_id	numeric	(6,0)

DDL Statements

```
CREATE SCHEMA one_less_craft;

-- ----------------------------------------------------------------------------
                                       TABLES
-- ----------------------------------------------------------------------------
CREATE TABLE crafts (
       craft_id NUMERIC(6,0) NOT NULL,
    craft_name VARCHAR(20) NOT NULL,
    selling_price NUMERIC(9,2) NOT NULL,
    manufacturing_cost NUMERIC(9,2) NOT NULL,
    size VARCHAR(4) NOT NULL,
    color VARCHAR(20),
    craft_type VARCHAR(20) NOT NULL,
    fit VARCHAR(20) NOT NULL,
    craft_description VARCHAR(100));

-- Primary Key
ALTER TABLE crafts
       ADD CONSTRAINT crafts_craft_id_pk
       PRIMARY KEY (craft_id);

-- Constraints
ALTER TABLE crafts
       ADD CONSTRAINT crafts_selling_price_gt_manufacturing_cost
       CHECK (selling_price > manufacturing_cost);

ALTER TABLE crafts
       ADD CONSTRAINT crafts_size
       CHECK (size IN ('xs', 's', 'm', 'l', 'xl'));

-- ----------------------------------------------------------------------------

CREATE TABLE customers (
    customer_id NUMERIC(6,0) NOT NULL,
    first_name VARCHAR(20) NOT NULL,
    last_name VARCHAR(20) NOT NULL,
    date_of_birth DATE NOT NULL,
    email VARCHAR(50) NOT NULL,
    gender CHAR(1),
    contact_number VARCHAR(10) NOT NULL,
    address VARCHAR(50) NOT NULL,
    shipping_address VARCHAR(50) NOT NULL,
    billing_address VARCHAR(50),
    favorite_craft NUMERIC(6,0),
    zip_code VARCHAR(10) NOT NULL,
    preferred_sales_rep NUMERIC(6,0));

-- Primary Key
ALTER TABLE customers
       ADD CONSTRAINT customers_customer_id_pk
       PRIMARY KEY (customer_id);

-- Unique Keys
ALTER TABLE customers
       ADD CONSTRAINT customers_email_uk
```

```
        UNIQUE KEY (email);

ALTER TABLE customers
        ADD CONSTRAINT customers_contact_number_uk
        UNIQUE KEY (contact_number);

-- Constraints
ALTER TABLE customers
        ADD CONSTRAINT customers_email
        CHECK (email LIKE '%@%.%');

ALTER TABLE customers
        ADD CONSTRAINT customer_gender
        CHECK (gender IN ('M', 'F'));

-- ----------------------------------------------------------------------------
CREATE TABLE departments (
    department_id NUMERIC(6,0) NOT NULL,
    department_name VARCHAR(30) NOT NULL,
    department_phone VARCHAR(10) NOT NULL,
    department_email VARCHAR(50) NOT NULL,
    department_budget NUMERIC(9,2) NOT NULL,
    department_description VARCHAR(100),
    manager_id NUMERIC(6,0));

-- Primary Key
ALTER TABLE departments
        ADD CONSTRAINT departments_department_id_pk
        PRIMARY KEY (department_id);

-- Unique Keys
ALTER TABLE departments
        ADD CONSTRAINT departments_department_name_uk
        UNIQUE (department_name);

ALTER TABLE departments
        ADD CONSTRAINT departments_department_phone_uk
        UNIQUE (department_phone);

ALTER TABLE departments
        ADD CONSTRAINT departments_department_email_uk
        UNIQUE (department_email);

-- Constraints
ALTER TABLE departments
        ADD CONSTRAINT departments_department_email
        CHECK (department_email LIKE '%@%.%');

ALTER TABLE departments
        ADD CONSTRAINT departments_department_budget
        CHECK (department_budget >= 100000 AND department_budget <= 1000000);

-- ----------------------------------------------------------------------------
CREATE TABLE employees (
    employee_id NUMERIC(6,0) NOT NULL,
    first_name VARCHAR(20) NOT NULL,
    last_name VARCHAR(20) NOT NULL,
    date_of_birth DATE NOT NULL,
```

```
    address VARCHAR(50),
    contact_number NUMERIC(10,0) NOT NULL,
    email VARCHAR(50) NOT NULL,
    hire_date DATE DEFAULT (CURRENT_DATE),
    salary NUMERIC(9,2) NOT NULL,
    emp_status VARCHAR(15) NOT NULL,
    manager_id NUMERIC(6,0),
    store_id NUMERIC(6,0),
    department_id NUMERIC(6,0),
    job_id NUMERIC(6,0));

-- Primary Key
ALTER TABLE employees
       ADD CONSTRAINT employees_employee_id_pk
       PRIMARY KEY (employee_id);

-- Unique Key
ALTER TABLE employees
       ADD CONSTRAINT employees_contact_number_uk
       UNIQUE KEY (contact_number);

ALTER TABLE employees
       ADD CONSTRAINT employees_email_uk
       UNIQUE KEY (email);

-- Constraints
ALTER TABLE employees
       ADD CONSTRAINT employees_salary_range
       CHECK (salary >= 20000 AND salary <= 200000);

ALTER TABLE employees
       ADD CONSTRAINT employees_emp_status
       CHECK (emp_status IN ('Active', 'Inactive', 'Retired', 'On Vacation'));

ALTER TABLE employees
       ADD CONSTRAINT employees_hire_date_gt_date_of_birth
       CHECK (hire_date > date_of_birth);

ALTER TABLE employees
       ADD CONSTRAINT employees_email
       CHECK (email LIKE '%@%.%');

-- -----------------------------------------------------------------------
CREATE TABLE jobs (
       job_id NUMERIC(6,0) NOT NULL,
       job_title VARCHAR(30) NOT NULL);

-- Primary Key
ALTER TABLE jobs
       ADD CONSTRAINT jobs_job_id_pk
       PRIMARY KEY (job_id);

-- -----------------------------------------------------------------------
CREATE TABLE orders (
    order_id NUMERIC(6,0) NOT NULL,
    order_date DATE NOT NULL DEFAULT (CURRENT_DATE),
    shipped_date DATE NOT NULL,
    shipped_status VARCHAR(15) NOT NULL,
```

```
    customer_id NUMERIC(6,0) NOT NULL,
    employee_id NUMERIC(6,0) NOT NULL,
    return_period VARCHAR(30) NOT NULL);

-- Primary Key
ALTER TABLE orders
       ADD CONSTRAINT orders_order_id_pk
       PRIMARY KEY (order_id);

-- Constraints
ALTER TABLE orders
       ADD CONSTRAINT orders_order_date_lt_shipped_date
       CHECK (order_date <= shipped_date);

-- ----------------------------------------------------------------------------
CREATE TABLE stores (
    store_id NUMERIC(6,0) NOT NULL,
    store_name VARCHAR(20) NOT NULL,
    phone_number VARCHAR(10) NOT NULL,
    email VARCHAR(30) NOT NULL,
    website VARCHAR(30),
    address VARCHAR(50) NOT NULL,
    zip_code VARCHAR(10) NOT NULL,
    manager_id NUMERIC(6,0));

-- Primary Key
ALTER TABLE stores
       ADD CONSTRAINT stores_store_id_pk
       PRIMARY KEY (store_id);

-- Unique Keys
ALTER TABLE stores
       ADD CONSTRAINT stores_phone_number_uk
        UNIQUE KEY (phone_number);

ALTER TABLE stores
       ADD CONSTRAINT stores_email_uk
       UNIQUE KEY (email);

-- Constraints
ALTER TABLE stores
       ADD CONSTRAINT stores_email
       CHECK (email LIKE '%@%.%');

-- ----------------------------------------------------------------------------
CREATE TABLE suppliers (
    supplier_id NUMERIC(6,0) NOT NULL,
    supplier_name VARCHAR(24) NOT NULL,
    supplier_contact VARCHAR (10) NOT NULL,
    supplier_address VARCHAR (50) NOT NULL);

-- Primary Key
ALTER TABLE suppliers
       ADD CONSTRAINT suppliers_supplier_id_pk
       PRIMARY KEY (supplier_id);
```

```sql
-- ----------------------------------------------------------------------
CREATE TABLE warehouses (
    warehouse_id NUMERIC(6,0) NOT NULL,
    warehouse_name VARCHAR(30) NOT NULL,
    address VARCHAR(50) NOT NULL,
    capacity NUMERIC(8,2) NOT NULL,
    zip_code VARCHAR(10) NOT NULL);

-- Primary Key
ALTER TABLE warehouses
       ADD CONSTRAINT warehouses_warehouse_id_pk
              PRIMARY KEY (warehouse_id);

-- ----------------------------------------------------------------------
CREATE TABLE yarns (
       yarn_id NUMERIC(6,0) NOT NULL,
       yarn_type VARCHAR(15) NOT NULL,
    yarn_weight VARCHAR(15) NOT NULL,
    yarn_color VARCHAR(15) NOT NULL,
    yarn_price NUMERIC(9,2) NOT NULL,
    yarn_quality VARCHAR(20) NOT NULL,
    yarn_description VARCHAR(100));

-- Primary Key
ALTER TABLE yarns
       ADD CONSTRAINT yarns_yarn_id_pk
              PRIMARY KEY (yarn_id);

-- Constraints
ALTER TABLE yarns
       ADD CONSTRAINT yarns__yarn_quality
    CHECK (yarn_quality IN ('common', 'rare', 'premium', 'custom'));

ALTER TABLE yarns
       ADD CONSTRAINT yarns_yarn_price
    CHECK (yarn_price > 0);

-- ----------------------------------------------------------------------
CREATE TABLE zips (
       zip_code VARCHAR(10) NOT NULL,
    city VARCHAR(20) NOT NULL,
    province VARCHAR(20) NOT NULL,
    country VARCHAR(20) NOT NULL);

-- Primary Key
ALTER TABLE zips
       ADD CONSTRAINT zips_zip_code_pk
              PRIMARY KEY (zip_code);
```

```
-- -----------------------------------------------------------------------
                                INSTERSECTION TABLES
-- -----------------------------------------------------------------------
CREATE TABLE inventories (
       warehouse_id NUMERIC(6,0) NOT NULL,
       craft_id NUMERIC(6,0) NOT NULL,
    quantity NUMERIC(8,0) NOT NULL,
       update_date DATE NOT NULL DEFAULT (CURRENT_DATE));

-- Primary Key
ALTER TABLE inventories
       ADD CONSTRAINT inventories_warehouse_id_craft_id_pk
              PRIMARY KEY (warehouse_id, craft_id);

-- Foreign Key
ALTER TABLE inventories
       ADD CONSTRAINT inventories_warehouse_id_fk
       FOREIGN KEY (warehouse_id)
       REFERENCES warehouses (warehouse_id);

ALTER TABLE inventories
       ADD CONSTRAINT inventories_craft_id_fk
       FOREIGN KEY (craft_id)
       REFERENCES crafts (craft_id);

-- Constraints
ALTER TABLE inventories
       ADD CONSTRAINT inventories_quantity
       CHECK (quantity > 0);

-- -----------------------------------------------------------------------
CREATE TABLE crafts_orders (
    craft_id NUMERIC(6,0) NOT NULL,
    order_id NUMERIC(6,0) NOT NULL,
    quantity NUMERIC(10,0) NOT NULL);

-- Primary Key
ALTER TABLE crafts_orders
       ADD CONSTRAINT crafts_orders_craft_id_order_id_pk
       PRIMARY KEY (craft_id, order_id);

-- Foreign Key
ALTER TABLE crafts_orders
       ADD CONSTRAINT crafts_orders_craft_id_fk
       FOREIGN KEY (craft_id)
       REFERENCES crafts (craft_id);

ALTER TABLE crafts_orders
       ADD CONSTRAINT crafts_orders_order_id_fk
       FOREIGN KEY (order_id)
       REFERENCES orders (order_id);

-- -----------------------------------------------------------------------
CREATE TABLE crafts_yarns (
    craft_id NUMERIC(6,0) NOT NULL,
    yarn_id NUMERIC(6,0) NOT NULL,
    quantity NUMERIC(6,0));
```

```
-- Primary Keys
ALTER TABLE crafts_yarns
       ADD CONSTRAINT crafts_yarns_craft_id_yarn_id_pk
       PRIMARY KEY (craft_id, yarn_id);

-- Foreign Keys
ALTER TABLE crafts_yarns
       ADD CONSTRAINT crafts_yarns_craft_id_fk
       FOREIGN KEY (craft_id)
              REFERENCES crafts (craft_id);

ALTER TABLE crafts_yarns
       ADD CONSTRAINT crafts_yarns_yarn_id_fk
       FOREIGN KEY (yarn_id)
       REFERENCES yarns (yarn_id);

-- Constraints
ALTER TABLE crafts_yarns
       ADD CONSTRAINT crafts_yarns_quantity
       CHECK (quantity > 0);
-- ------------------------------------------------------------------------
CREATE TABLE warehouses_stores (
    warehouse_id NUMERIC(6,0) NOT NULL,
    store_id NUMERIC(6,0) NOT NULL);

-- Primary Keys
ALTER TABLE warehouses_stores
       ADD CONSTRAINT warehouses_stores_warehouse_id_store_id_pk
       PRIMARY KEY (warehouse_id, store_id);

-- Foreign Keys
ALTER TABLE warehouses_stores
       ADD CONSTRAINT warehouses_stores_warehouse_id_fk
    FOREIGN KEY (warehouse_id)
              REFERENCES warehouses (warehouse_id);

ALTER TABLE warehouses_stores
       ADD CONSTRAINT warehouses_stores_store_id_fk
       FOREIGN KEY (store_id)
       REFERENCES stores (store_id);

-- ------------------------------------------------------------------------
CREATE TABLE yarns_suppliers (
       yarn_id NUMERIC(6,0) NOT NULL,
       supplier_id NUMERIC(6,0) NOT NULL);

-- Primary Key
ALTER TABLE yarns_suppliers
       ADD CONSTRAINT yarns_suppliers_yarn_id_supplier_id_pk
       PRIMARY KEY (yarn_id, supplier_id);

-- Foreign Key
ALTER TABLE yarns_suppliers
       ADD CONSTRAINT yarns_suppliers_yarn_id_fk
       FOREIGN KEY (yarn_id)
       REFERENCES yarns (yarn_id);

ALTER TABLE yarns_suppliers
```

```
       ADD CONSTRAINT yarns_suppliers_supplier_id_fk
       FOREIGN KEY (supplier_id)
       REFERENCES suppliers (supplier_id);



-- ----------------------------------------------------------------------------
                                    FOREIGN KEYS
-- ----------------------------------------------------------------------------
                                     CUSTOMERS
-- FOREIGN Keys
ALTER TABLE customers
       ADD CONSTRAINT customers_favorite_craft_fk
       FOREIGN KEY (favorite_craft)
       REFERENCES crafts (craft_id);

ALTER TABLE customers
       ADD CONSTRAINT customers_zip_code_fk
       FOREIGN KEY (zip_code)
       REFERENCES zips (zip_code);

ALTER TABLE customers
       ADD CONSTRAINT customers_preferred_sales_rep_fk
       FOREIGN KEY (preferred_sales_rep)
       REFERENCES employees (employee_id);

-- ----------------------------------------------------------------------------
                                     DEPARTMENTS
-- Foreign Key
ALTER TABLE departments
       ADD CONSTRAINT departments_manager_id_fk
       FOREIGN KEY (manager_id)
       REFERENCES employees (employee_id);

-- ----------------------------------------------------------------------------
                                     EMPLOYEES
-- Foreign Key
ALTER TABLE employees
       ADD CONSTRAINT employees_manager_id_fk
       FOREIGN KEY (manager_id)
       REFERENCES employees (employee_id);

ALTER TABLE employees
       ADD CONSTRAINT employees_store_id_fk
       FOREIGN KEY (store_id)
       REFERENCES stores (store_id);

ALTER TABLE employees
       ADD CONSTRAINT employees_department_id_fk
       FOREIGN KEY (department_id)
       REFERENCES departments (department_id);

ALTER TABLE employees
       ADD CONSTRAINT employees_job_id_fk
       FOREIGN KEY (job_id)
       REFERENCES jobs (job_id);
```

```
-- ----------------------------------------------------------------------------
                                       ORDERS
-- Foreign Key
ALTER TABLE orders
       ADD CONSTRAINT orders_customer_id_fk
       FOREIGN KEY (customer_id)
       REFERENCES customers (customer_id);

ALTER TABLE orders
       ADD CONSTRAINT orders_employee_id_fk
       FOREIGN KEY (employee_id)
       REFERENCES employees (employee_id);

-- ----------------------------------------------------------------------------
                                       STORES
-- Foreign Key
ALTER TABLE stores
       ADD CONSTRAINT stores_zip_code_fk
       FOREIGN KEY (zip_code)
       REFERENCES zips (zip_code);

ALTER TABLE stores
       ADD CONSTRAINT stores_manager_id_fk
       FOREIGN KEY (manager_id)
       REFERENCES employees (manager_id);

-- ----------------------------------------------------------------------------
                                     WAREHOUSES
-- Foreign Key
ALTER TABLE warehouses
       ADD CONSTRAINT warehouses_zip_code_fk
       FOREIGN KEY (zip_code)
       REFERENCES zips (zip_code);
```

Test Cases

CUSTOMERS Table

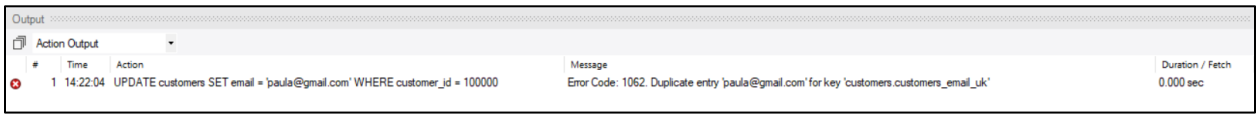
```
-- -----------------------------------------------------------------------------
                                customers_customer_id_pk
-- -----------------------------------------------------------------------------

--                                          ** Valid test **
-- Expected results: Insert statement add a row in the customers table
-- Action:
INSERT INTO customers
VALUES (100000, 'Maria', 'Gutierrez', '2000-08-17', 'maria@gmail.com', 'F', '3183908929',
'Torres de la Javeriana', 'Torres de la Javeriana', NULL, NULL, 'M4H1B6', NULL);
-- Test results: 1 row(s) affected
```

```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the customers table
-- Action:
INSERT INTO customers
VALUES (100000, 'John', 'Alexander', '1995-10-17', 'alexander@gmail.com', 'M',
'6478601662', '347 Lawson Road', '347 Lawson Road', NULL, NULL, 'M1C2J8', NULL);
-- Test results: Error Code: 1062. Duplicate entry '100000' for key 'customers.PRIMARY'
```

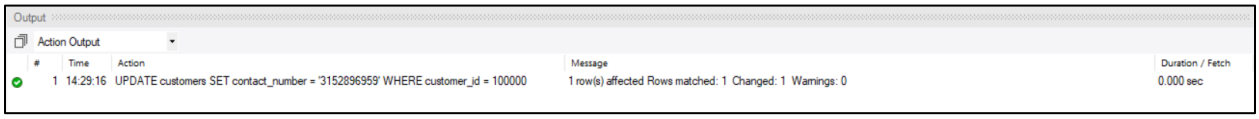
```
-- -----------------------------------------------------------------------------
                                    customers_email_uk
-- -----------------------------------------------------------------------------

                                    ** Valid test **
-- Expected results: Insert statement add a row in the customers table
-- Action:
INSERT INTO customers
VALUES (100001, 'Paul', 'Smith', '1994-05-25', 'paula@gmail.com', 'F', '3102245116',
'Midland 54675 RD', 'Midland 54675 RD', NULL, NULL, 'M2M3W8', NULL);
-- Test results: 1 row(s) affected
```

```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the customers table
-- Action:
UPDATE customers
```

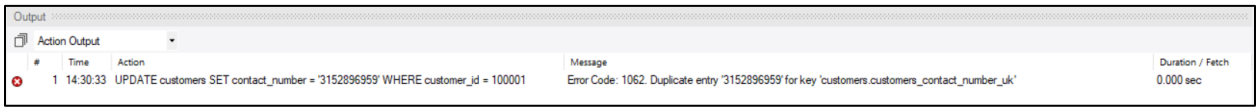
```
SET email = 'paula@gmail.com'
WHERE customer_id = 100000;
-- Test results: Error Code: 1062. Duplicate entry 'paula@gmail.com' for key
'customers.customers_email_uk'
```



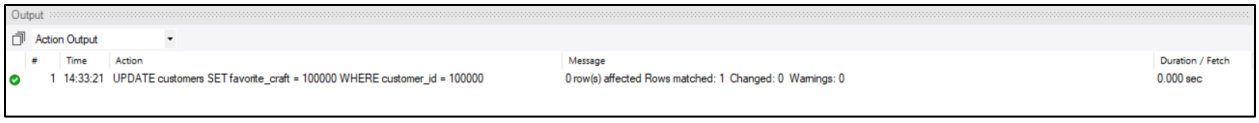

```
-- ------------------------------------------------------------------------
                                customers_contact_number_uk
-- ------------------------------------------------------------------------

--                                          ** Valid test **
-- Expected results: Update statement modifies a row in the customers table
-- Action:
UPDATE customers
SET contact_number = '3152896959'
WHERE customer_id = 100000;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```




```
-- ------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the customers table
-- Action:
UPDATE customers
SET contact_number = '3152896959'
WHERE customer_id = 100001;
-- Test results: Error Code: 1062. Duplicate entry '3152896959' for key
'customers.customers_contact_number_uk'
```

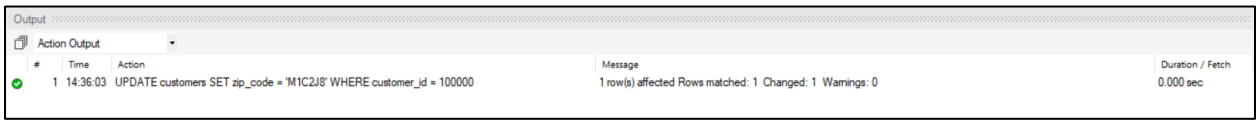



```
-- ------------------------------------------------------------------------
                                customers_favorite_craft_fk
-- ------------------------------------------------------------------------
-- IMPORTANT: 000001, 000002, 000003 craft_id exits in crafts table
--                                          ** Valid test **
-- Expected results: Update statement modifies a row in the customers table
-- Action:
UPDATE customers
SET favorite_craft = 100000
WHERE customer_id = 100000;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```




```
-- ------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the customers table
-- Action:
UPDATE customers
SET favorite_craft = 000004
WHERE customer_id = 100000;
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`customers`, CONSTRAINT `customers_favorite_craft_fk`
FOREIGN KEY (`favorite_craft`) REFERENCES `crafts` (`craft_id`))
```

```
-- ------------------------------------------------------------------------
                                    customers_zip_code_fk
-- ------------------------------------------------------------------------
-- IMPORTANT: M1C2J8, M4H1B6, M2M3W8 zip_code exits in zips table
--                                    ** Valid test **
-- Expected results: Update statement modifies a row in the customers table
-- Action:
UPDATE customers
SET zip_code = 'M1C2J8'
WHERE customer_id = 100000;
-- Test results: 1 row Inserted
```



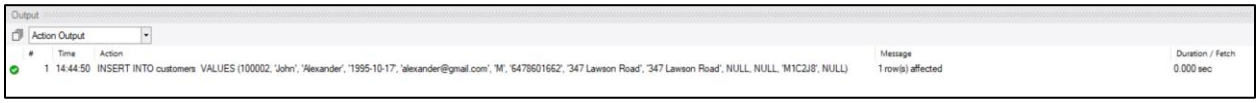

```
-- ------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the customers table
-- Action:
UPDATE customers
SET zip_code = 'M4T9K3'
WHERE customer_id = 100000;
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`customers`, CONSTRAINT `customers_zip_code_fk`
FOREIGN KEY (`zip_code`) REFERENCES `zips` (`zip_code`))
```

```
-- ------------------------------------------------------------------------
```

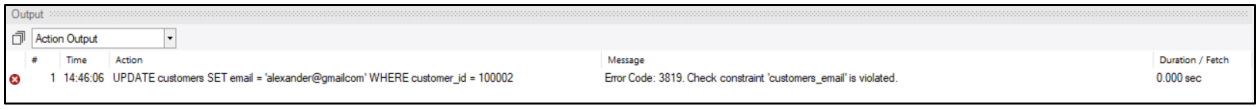
```
                                customers_preferred_sales_rep_fk
-- -----------------------------------------------------------------------------
-- IMPORTANT: 100001, 100002, 100003 employee_id exits in employees table
--                                              ** Valid test **
-- Expected results: Update statement modifies a row in the customers table
-- Action:
UPDATE customers
SET preferred_sales_rep = 100001
WHERE customer_id = 100000;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```

```
-- -----------------------------------------------------------------------------
                                        ** InValid test **
-- Expected results: Update statement fails to modify a row in the customers table
-- Action:
UPDATE customers
SET preferred_sales_rep = 100004
WHERE customer_id = 100000;
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`customers`, CONSTRAINT
`customers_preferred_sales_rep_fk` FOREIGN KEY (`preferred_sales_rep`) REFERENCES
`employees` (`employee_id`))
```

```
-- -----------------------------------------------------------------------------
                                        customers_email
-- -----------------------------------------------------------------------------

--                                              ** Valid test **
-- Expected results: Insert statement add a row in the customers table
-- Action:
INSERT INTO customers
VALUES (100002, 'John', 'Alexander', '1995-10-17', 'alexander@gmail.com', 'M',
'6478601662', '347 Lawson Road', '347 Lawson Road', NULL, NULL, 'M1C2J8', NULL);
-- Test results: 1 row(s) affected
```

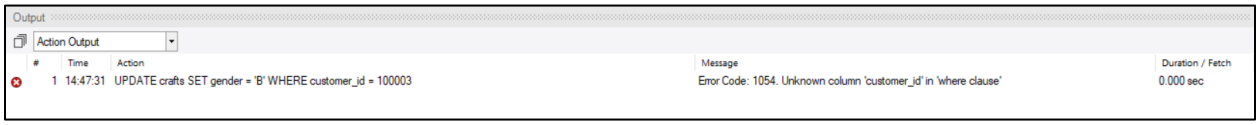



```
-- -----------------------------------------------------------------------------
                                        ** InValid test **
-- Expected results: Update statement fails to modify a row in the customers table
-- Action:
UPDATE customers
SET email = 'alexander@gmailcom'
WHERE customer_id = 100002;
-- Test results: Error Code: 3819. Check constraint 'customers_email' is violated.
```




```
-- ------------------------------------------------------------------------------
                                    customers_gender
-- ------------------------------------------------------------------------------

--                                          ** Valid test **
-- Expected results: Insert statement add a row in the customers table
-- Action:
INSERT INTO customers
VALUES (100003, 'Tatiana', 'Marquez', '1997-09-16', 'tatiana@gmail.com', 'F',
'6474536789', '347 Lawson Road', '347 Lawson Road', NULL, NULL, 'M1C2J8', NULL);
-- Test results: 1 row(s) affected
```

```
-- ------------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the customers table
-- Action:
UPDATE crafts
SET gender = 'B'
WHERE customer_id = 100003;
-- Test results: Error Code: 1054. Unknown column 'customer_id' in 'where clause'
```



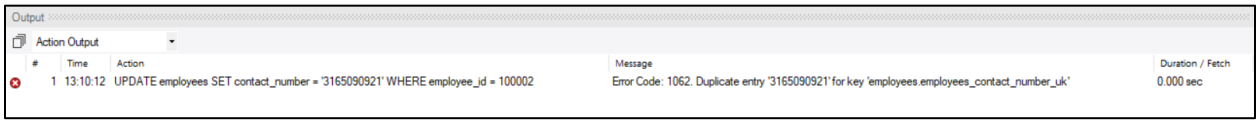
EMPLOYEES Table

```
-- -----------------------------------------------------------------------------
                                employees_employee_id_pk
-- -----------------------------------------------------------------------------
                                    ** Valid test **
-- Expected results: Insert statement add a row in the employees table
-- Action:
INSERT INTO employees
VALUES (100002, 'Bryan', 'Bonilla', '1996-02-08', '1245 Kingston Rd', '6475368908',
'b.bonilla@gmail.com', '2023-04-19', 150000, 'Active', NULL, NULL, NULL, NULL);
-- Test results: 1 row(s) affected
```

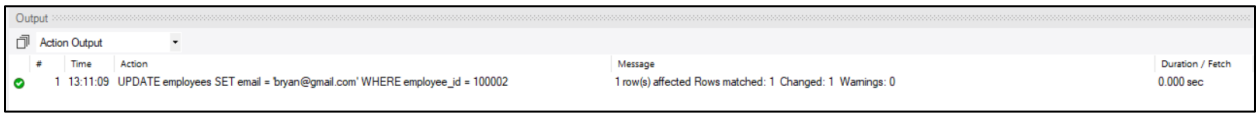
```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the employees table
-- Action:
INSERT INTO employees
VALUES (100002, 'Rocio', 'Alarcon', '1971-02-28', '19 Urbe Village', '3165090921',
'r.alarcon@gmail.com', '2021-08-06', 190000, 'Active', NULL, NULL, NULL, NULL);
-- Test results: Error Code: 1062. Duplicate entry '100002' for key 'employees.PRIMARY'
```

```
-- -----------------------------------------------------------------------------
                                employees_contact_number_uk
-- -----------------------------------------------------------------------------
                                    ** Valid test **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
INSERT INTO employees
VALUES (100003, 'Rocio', 'Alarcon', '1971-02-28', '19 Urbe Village', '3165090921',
'r.alarcon@gmail.com', '2021-08-06', 190000, 'Active', NULL, NULL, NULL, NULL);
-- Test results: 1 row(s) affected
```

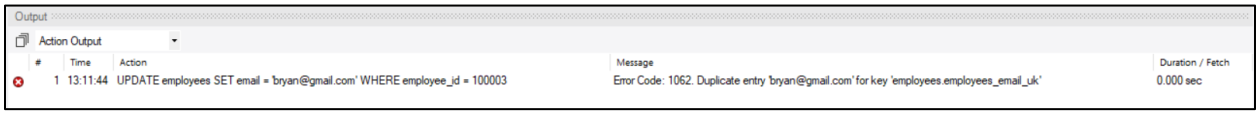
```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET contact_number = '3165090921'
WHERE employee_id = 100002;
-- Test results: Error Code: 1062. Duplicate entry '3165090921' for key
'employees.employees_contact_number_uk'
```




```
-- ------------------------------------------------------------------------
                                    employees_email_uk
-- ------------------------------------------------------------------------
                                    ** Valid test **
-- Expected results: Insert statement add a row in the employees table
-- Action:
UPDATE employees
SET email = 'bryan@gmail.com'
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```



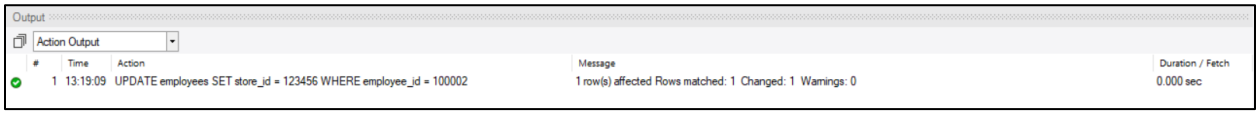

```
-- ------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET email = 'bryan@gmail.com'
WHERE employee_id = 100003;
-- Test results: Error Code: 1062. Duplicate entry 'bryan@gmail.com' for key
'employees.employees_email_uk'
```




```
-- ------------------------------------------------------------------------
                                    employees_manager_id_fk
-- ------------------------------------------------------------------------
                                    ** Valid test **
-- Expected results: Insert statement add a row in the employees table
-- Action:
INSERT INTO employees
VALUES (100004, 'Bailey', 'Brown', '2001-09-03', '78 Snowboard Street', '8609875467',
'b.brown@gmail.com', '2017-03-18', 100000, 'Active', 100002, NULL, NULL, NULL);
-- Test results: 1 row(s) affected
```

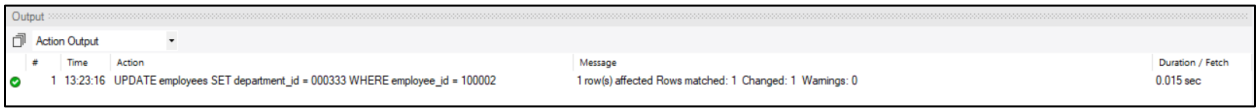
```
-- ------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET manager_id = 100005
WHERE employee_id = 100002;
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`employees`, CONSTRAINT `employees_manager_id_fk`
FOREIGN KEY (`manager_id`) REFERENCES `employees` (`employee_id`))
```

```
-- ------------------------------------------------------------------------
                                    employees_store_id_fk
-- ------------------------------------------------------------------------
-- IMPORTANT: 123456, 123457, 123458 store_id exist in the stores table.
--                                      ** Valid test **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET store_id = 123456
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```



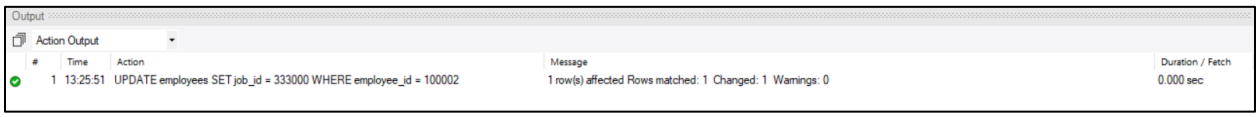

```
-- ------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET store_id = 101010
WHERE employee_id = 100002;
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`employees`, CONSTRAINT `employees_store_id_fk`
FOREIGN KEY (`store_id`) REFERENCES `stores` (`store_id`))
```

```
-- ------------------------------------------------------------------------
                                employees_department_id_fk
-- ------------------------------------------------------------------------
-- IMPORTANT: 000111, 000222, 000333 department_id exist in the departments table.
--                                        ** Valid test **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET department_id = 000333
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```




```
-- ------------------------------------------------------------------------
                                     ** InValid test **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET department_id = 999999
WHERE employee_id = 100002;
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`employees`, CONSTRAINT `employees_department_id_fk`
FOREIGN KEY (`department_id`) REFERENCES `departments` (`department_id`))
```

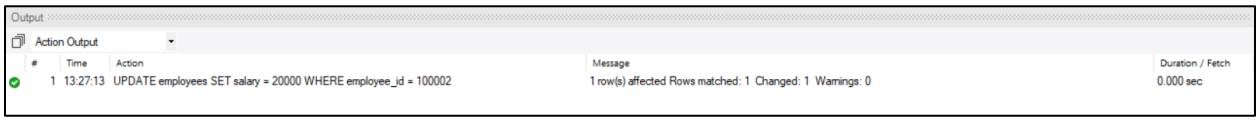
```
-- ------------------------------------------------------------------------
                                     employees_job_id_fk
-- ------------------------------------------------------------------------
-- IMPORTANT: 111000, 222000, 333000 job_id exist in the jobs table.
--                                        ** Valid test **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET job_id = 333000
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```



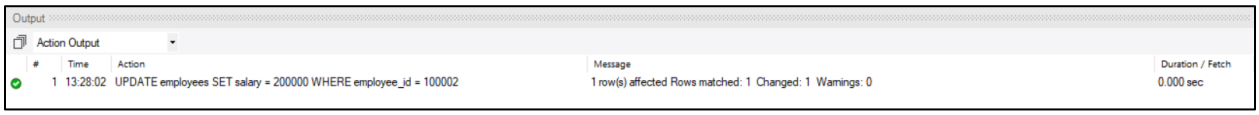

```
-- ------------------------------------------------------------------------
                                     ** InValid test **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET job_id = 567467
WHERE employee_id = 100002;
```

```
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`employees`, CONSTRAINT `employees_job_id_fk` FOREIGN
KEY (`job_id`) REFERENCES `jobs` (`job_id`))
```

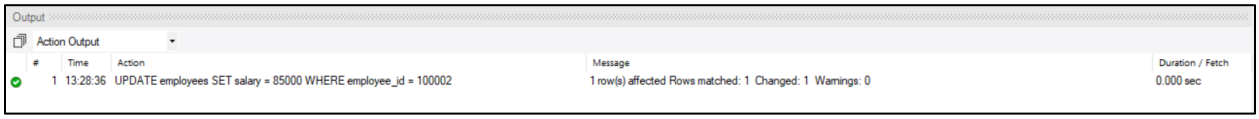
```
-- ------------------------------------------------------------------------------
                                    employees_salary_range
-- ------------------------------------------------------------------------------
                                    ** Valid test #1 **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET salary = 20000
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```




```
                                    ** Valid test #2 **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET salary = 200000
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```

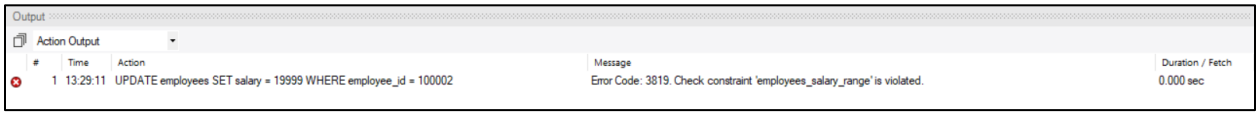



```
                                    ** Valid test #3 **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET salary = 85000
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```

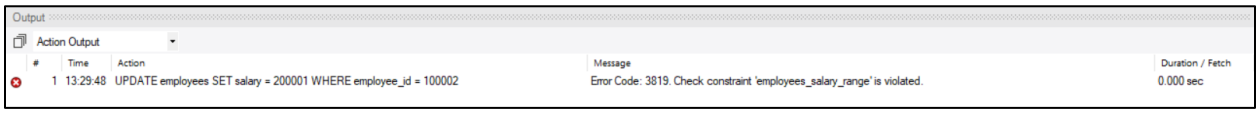



```
-- ------------------------------------------------------------------------------
                                    ** InValid test #1 **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET salary = 19999
WHERE employee_id = 100002;
```

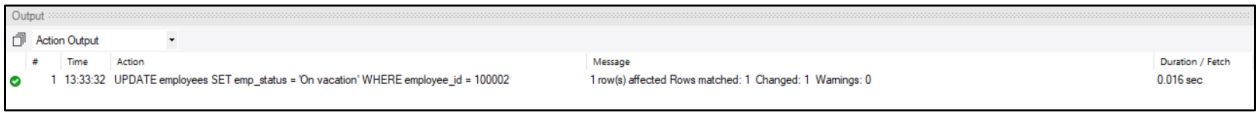
```
-- Test results: Error Code: 3819. Check constraint 'employees_salary_range' is violated.
```



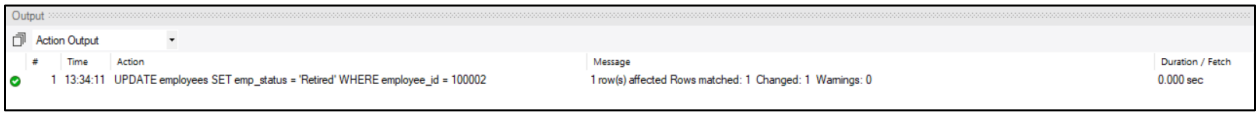

```
                                        ** InValid test #2 **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET salary = 200001
WHERE employee_id = 100002;
-- Test results: Error Code: 3819. Check constraint 'employees_salary_range' is violated.
```



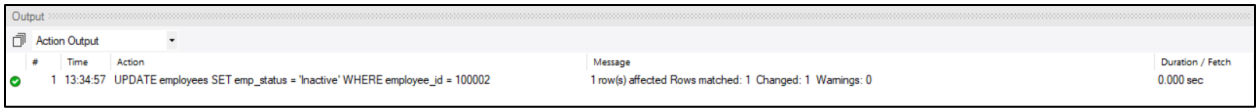

```
-- ------------------------------------------------------------------------------
                                        employees_emp_status
-- ------------------------------------------------------------------------------

                                        ** Valid test #1 **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET emp_status = 'On vacation'
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```



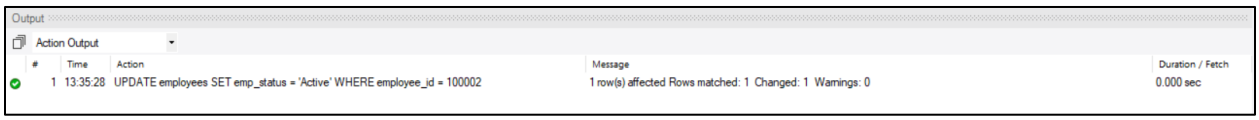

```
                                        ** Valid test #2 **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET emp_status = 'Retired'
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```



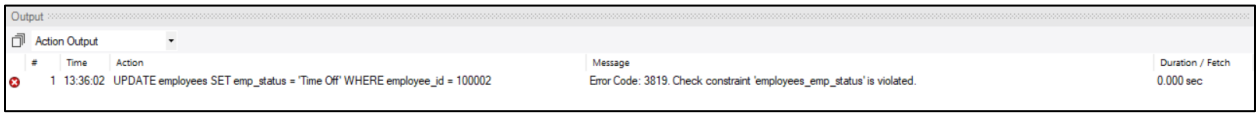

```
                                        ** Valid test #3 **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET emp_status = 'Inactive'
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```



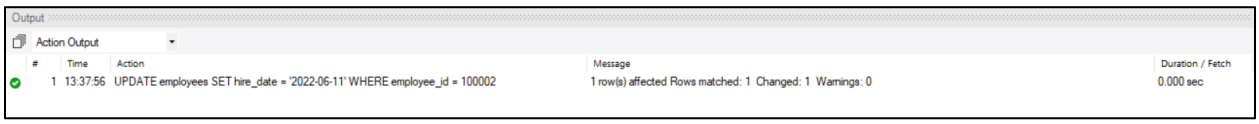

```
                                    ** Valid test #4 **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET emp_status = 'Active'
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```



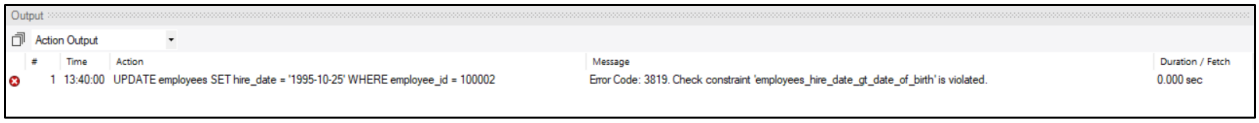

```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET emp_status = 'Time Off'
WHERE employee_id = 100002;
-- Test results:
```



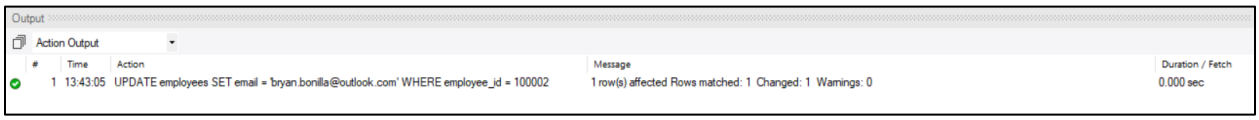

```
-- -----------------------------------------------------------------------------
                            employees_hire_date_gt_date_of_birth
-- -----------------------------------------------------------------------------
--                                      ** Valid test **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET hire_date = '2022-06-11' -- DOB = '1996-02-08'
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```



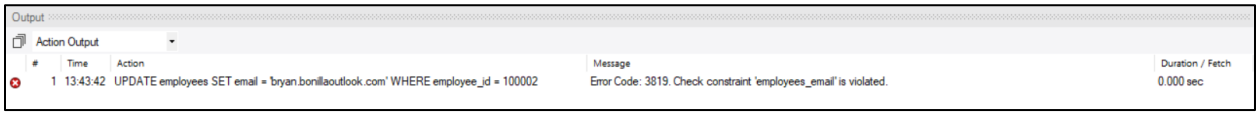

```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET hire_date = '1995-10-25'
WHERE employee_id = 100002;
-- Test results: Error Code: 3819. Check constraint
'employees_hire_date_gt_date_of_birth' is violated.
```



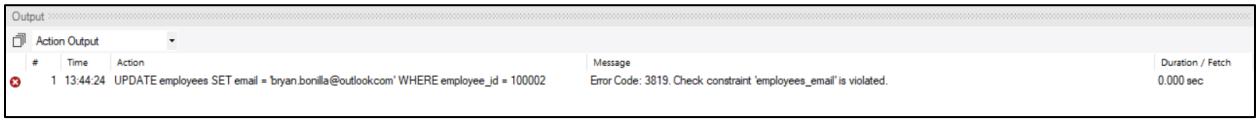

```
-- ------------------------------------------------------------------------
                                  employees_email
-- ------------------------------------------------------------------------
                                  ** Valid test **
-- Expected results: Update statement modifies a row in the employees table
-- Action:
UPDATE employees
SET email = 'bryan.bonilla@outlook.com'
WHERE employee_id = 100002;
-- Test results: 1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```




```
-- ------------------------------------------------------------------------
                                ** InValid test #1 **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET email = 'bryan.bonillaoutlook.com'
WHERE employee_id = 100002;
-- Test results: Error Code: 3819. Check constraint 'employees_email' is violated.
```




```
                                ** InValid test #2 **
-- Expected results: Update statement fails to modify a row in the employees table
-- Action:
UPDATE employees
SET email = 'bryan.bonilla@outlookcom'
WHERE employee_id = 100002;
-- Test results: Error Code: 3819. Check constraint 'employees_email' is violated.
```



ORDERS Table

```
-- ---------------------------------------------------------------------------
                                    Orders_pk
-- ---------------------------------------------------------------------------

                                    **valid test**
-- Expected results: Insert statement add a row in the orders table
-- Action:
insert into orders values(
300001, '2023-08-07', '2023-08-09', 'shipping', 200001, 100001, '30 days');
-- Test results:
-- 1 row(s) affected
```

✓	1	14:06:03	insert into orders values(300001, '2023-08-07', '2023-08-09', 'shipping', 200001, 100001, '30 days')	1 row(s) affected

```
-- ---------------------------------------------------------------------------
                                    **InValid test**
-- Expected results: Error due to duplication in primary key
-- Action:
insert into orders values(
300001, '2023-05-03', '2023-05-05', 'shipped', 200001, 100001, '20 days');
-- Test results:
-- Error Code: 1062. Duplicate entry '300001' for key 'orders.PRIMARY'
```

✗	1	14:14:15	insert into orders values(300001, '2023-05-03', '2023-05-05', 'shipped', 200001, 100001, '20 days')	Error Code: 1062. Duplicate entry '300001' for key 'orders.PRIMARY'	0.000 sec

```
-- ---------------------------------------------------------------------------
                                    **InValid test**
-- Expected results: Insert statments fails to add a row in a orders table
-- Action:
insert into orders values(
null , '2023-05-03', '2023-05-05', 'shipped', 200001, 100001, '20 days');
-- test results:
-- Error Code: 1048. Column 'order_id' cannot be null
```

✗	1	14:26:26	insert into orders values(null , '2023-05-03', '2023-05-05', 'shipped', 200001, 100001, '20 days')	Error Code: 1048. Column 'order_id' cannot be null

```
-- ---------------------------------------------------------------------------
                                  orders_customer_id_fk
-- ---------------------------------------------------------------------------
--                                  ** Valid test **
-- Expected results: Insert statement add a row in the orders table
-- Action:
INSERT INTO orders
VALUES (300003, '2023-05-03', '2023-05-05', 'shipped', 200001, 100001, '20 days');
-- test results:
-- 1 row(s) affected
```

✓	1	00:14:07	INSERT INTO orders VALUES (300003, '2023-05-03', '2023-05-05', 'shipped', 200001, 100001, '20 days')	1 row(s) affected

```
-- ---------------------------------------------------------------------------
```

```
                                    ** InValid test **
-- Expected results: Insert statement add a row in the orders table
-- Action:
INSERT INTO orders
VALUES (300004, '2023-05-03', '2023-05-05', 'shipped', 200002, 100001, '20 days');
-- test results:
-- Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails
-- (`final_project`.`orders`, CONSTRAINT `orders_customer_id_fk`
-- FOREIGN KEY (`customer_id`) REFERENCES `customers` (`customer_id`))
```

1	00:23:53	INSERT INTO orders VALUES (300004, '2023-05-03', '2023-05-05', 'shipped', 200002, 100001, '20 days')	Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails (final_project`.`orders`, ...	

```
-- ------------------------------------------------------------------------------
                                    orders_employee_id_fk
-- ------------------------------------------------------------------------------
--                                    ** Valid test **
-- Expected results: Insert statement add a row in the orders table
-- Action:
INSERT INTO orders
VALUES (300005, '2023-05-03', '2023-05-05', 'shipped', 200001, 100001, '20 days');
-- test results:
-- 1 row(s) affected
```

1	00:28:14	INSERT INTO orders VALUES (300005, '2023-05-03', '2023-05-05', 'shipped', 200001, 100001, '20 days')	1 row(s) affected	

```
-- ------------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement add a row in the orders table
-- Action:
INSERT INTO orders
VALUES (300004, '2023-05-03', '2023-05-05', 'shipped', 200001, 100002, '20 days');
-- test results:
-- Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails
(`final_project`.`orders`,
-- CONSTRAINT `orders_employee_id_fk` FOREIGN KEY (`employee_id`) REFERENCES `employees`
(`employee_id`))
```

1	00:34:41	INSERT INTO orders VALUES (300004, '2023-05-03', '2023-05-05', 'shipped', 200001, 100002, '20 days')	Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails (final_project`.`orders`, ...	

```
-- ------------------------------------------------------------------------
                                    **Valid test**
-- Expected results: Defaulty added order date with the present date
-- Action:
insert into orders (order_id, order_date, shipped_date, shipped_status, customer_id,
employee_id, return_period)
values(
300002, default, null, 'shipped', 200001, 100001, '20 days');
-- test results:
-- 1 row(s) affected
```

4	01:03:17	insert into orders (order_id, order_date, shipped_date, shipped_status, customer_id, employee_id, return_...	1 row(s) affected	

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

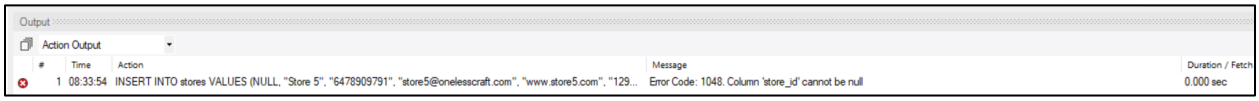
order_id	order_date	shipped_date	shipped_status	customer_id	employee_id	return_period
300002	2023-08-09	NULL	shipped	200001	100001	20 days

STORES Table

```
-- --------------------------------------------------------------------------------
                                    stores_store_id_pk
-- --------------------------------------------------------------------------------
-- ** Valid test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100004, 'Store 4', '6478909789', 'store4@onelesscraft.com', 'www.store4.com',
'131 Yorkdale Blvd', 'M2N1N5', 800001);
-- Test results: 1 row(s) affected
```

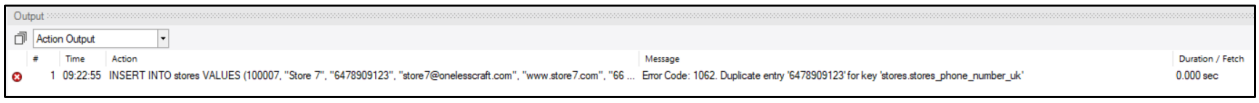
```
-- --------------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100004, 'Store 5', '6478909790', 'store5@onelesscraft.com', 'www.store5.com',
'1299 Finch Ave', 'M2N0H7', 800001);
-- Test results: Error Code: 1062. Duplicate entry '100004' for key 'stores.PRIMARY'
```

```
-- --------------------------------------------------------------------------------
                                    ** InValid test2 **
-- Expected results: Insert statement fails to add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (NULL, 'Store 5', '6478909791', 'store5@onelesscraft.com', 'www.store5.com', '1299
Finch Ave', 'M2N0H7', 800001);
-- Test results: Error Code: 1048. Column 'store_id' cannot be null
```



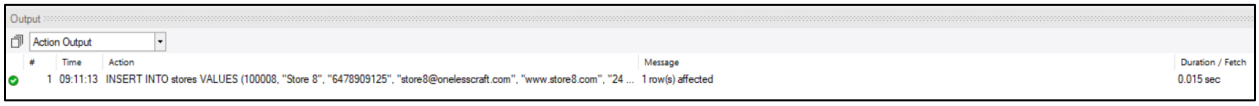

```
-- --------------------------------------------------------------------------------
                                    stores_phone_number_uk
-- --------------------------------------------------------------------------------
-- ** Valid test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100006, 'Store 6', '6478909123', 'store6@onelesscraft.com', 'www.store6.com', '65
Warden Ave', 'M2N1N5', NULL);
-- Test results: 1 row(s) affected
```

```
-- ----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100007, 'Store 7', '6478909123', 'store7@onelesscraft.com', 'www.store7.com', '66
Warden Ave', 'M2N1N5', NULL);
-- Test results: Error Code: 1062. Duplicate entry 'store6@onelesscraft.com' for key
'stores.stores_email_uk'
```




```
-- ----------------------------------------------------------------------------
                                    ** InValid test 2**
-- Expected results: Insert statement fails to add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100007, 'Store 7', '647890912345', 'store7@onelesscraft.com', 'www.store7.com',
'66 Warden Ave', 'M2N1N5', NULL);
-- Test results: Error Code: 1406. Data too long for column 'phone_number' at row 1
```

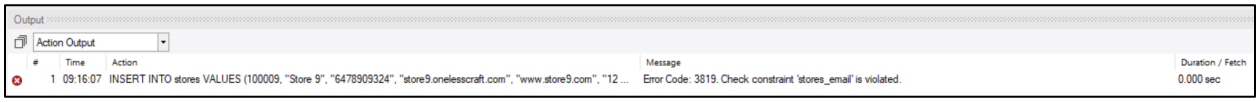
```
-- ----------------------------------------------------------------------------
                                    stores_email_uk
-- ----------------------------------------------------------------------------
-- ** Valid test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100008, 'Store 8', '6478909125', 'store8@onelesscraft.com', 'www.store8.com', '24
Lupin Dr', 'M2N1N5', NULL);
-- Test results: 1 row(s) affected
```



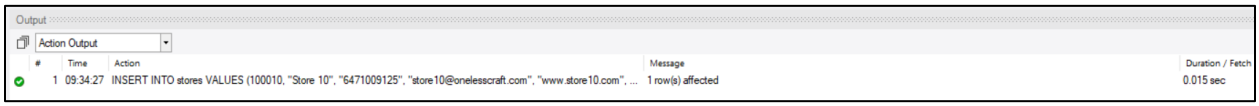

```
-- ----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100009, 'Store 9', '6478909324', 'store8@onelesscraft.com', 'www.store9.com', '12
Warden Ave', 'M2N1N5', NULL);
-- Test results: Error Code: 1062. Duplicate entry 'store8@onelesscraft.com' for key
'stores.stores_email_uk'
```

```
-- -----------------------------------------------------------------------------
                                    stores_email CHECK
-- -----------------------------------------------------------------------------
-- ** Valid test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100008, 'Store 8', '6478909125', 'store8@onelesscraft.com', 'www.store8.com', '24
Lupin Dr', 'M2N1N5', NULL);
-- Test results: 1 row(s) affected
```

```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100009, 'Store 9', '6478909324', 'store9.onelesscraft.com', 'www.store9.com', '12
Warden Ave', 'M2N1N5', NULL);
-- Test results: Error Code: 3819. Check constraint 'stores_email' is violated.
```

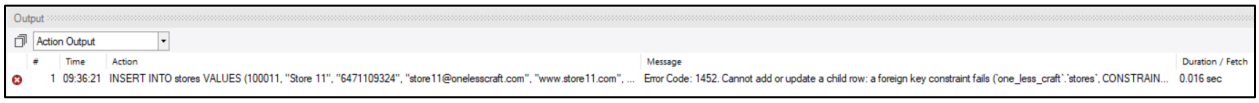



```
-- -----------------------------------------------------------------------------
                                    stores_zip_code_fk
-- -----------------------------------------------------------------------------
-- ** Valid test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100010, 'Store 10', '6471009125', 'store10@onelesscraft.com', 'www.store10.com',
'32 Ashtonbee Dr', 'M2N1N5', NULL);
-- Test results: 1 row(s) affected
```

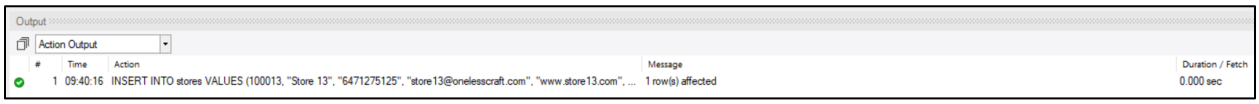



```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100011, 'Store 11', '6471109324', 'store11@onelesscraft.com', 'www.store11.com',
'46 Boem Ave', 'M2N1N6', NULL);
```

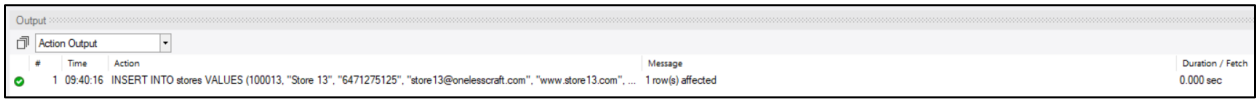
```
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`stores`, CONSTRAINT `stores_zip_code_fk` FOREIGN KEY
(`zip_code`) REFERENCES `zips` (`zip_code`))
```




```
-- ----------------------------------------------------------------------------
                                    stores_manager_id_fk
-- ----------------------------------------------------------------------------
-- ** Valid test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100013, 'Store 13', '6471275125', 'store13@onelesscraft.com', 'www.store13.com',
'4 Victoria Park Ave', 'M2N1N5', 800001);
-- Test results: 1 row(s) affected
```

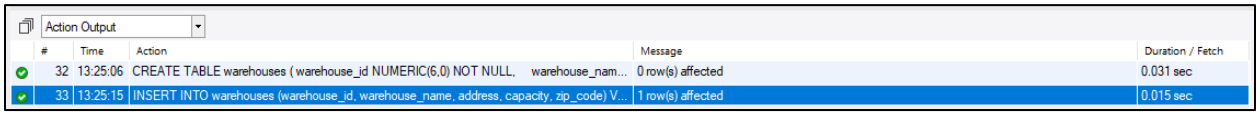



```
-- ----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the stores table
-- Action:
INSERT INTO stores
VALUES (100014, 'Store 14', '6471214125', 'store14@onelesscraft.com', 'www.store14.com',
'38 Tower Dr', 'M2N1N5', 800004);
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails (`one_less_craft`.`stores`, CONSTRAINT `stores_manager_id_fk` FOREIGN
KEY (`manager_id`) REFERENCES `employees` (`employee_id`))
```

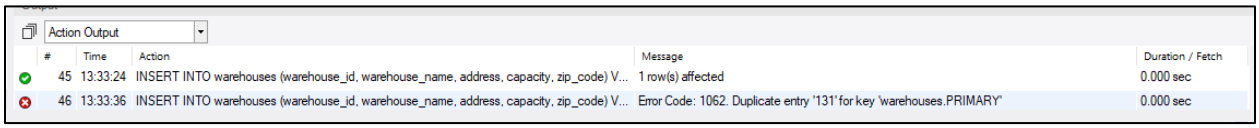


STORES Table

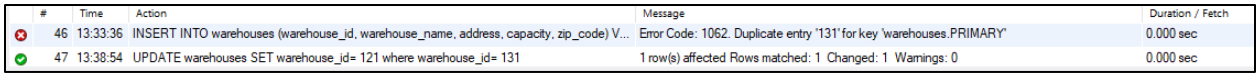
```
-- -----------------------------------------------------------------------------
                                warehouses_warehouses_id_pk
-- -----------------------------------------------------------------------------
                                    ** Valid test **

-- Expected results: Insert statement add a row in the warehouses table
-- Action:
INSERT INTO warehouses (warehouse_id, warehouse_name, address, capacity, zip_code)
VALUES (131, 'Yarn Store', '121 Dundas Street', 121215.82, '56604');

--1 row(s) affected  0.015 sec
```




```
-- -----------------------------------------------------------------------------
                                    ** invalid test **

-- Expected results: Insert statement fails to add a row in the warehouses table
-- Action:
INSERT INTO warehouses (warehouse_id, warehouse_name, address, capacity, zip_code)
VALUES (131, 'woolen Store', 'Pharmacy Ave', 253115, '25361');

-- Test results: Error Code: 1062. Duplicate entry '131' for key 'warehouses.PRIMARY'
```

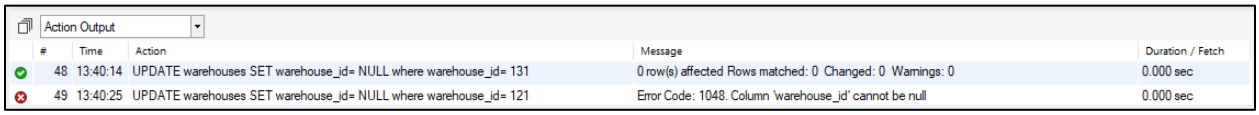



```
-- -----------------------------------------------------------------------------
                                warehouses_warehouses_id_pk
-- -----------------------------------------------------------------------------
                                    ** Valid test **

-- Expected results: Update statement modifies a row in the warehouses table
-- Action:
UPDATE warehouses
SET warehouse_id= 121
where warehouse_id= 131;
-- Test results: 1 row Inserted
```

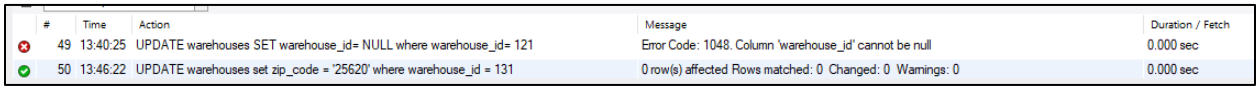



```
-- -----------------------------------------------------------------------------
                                    ** invalid test **

-- Expected results: update statement fails to modify a row in the warehouses table
-- Action:
UPDATE warehouses
SET warehouse_id= NULL
```

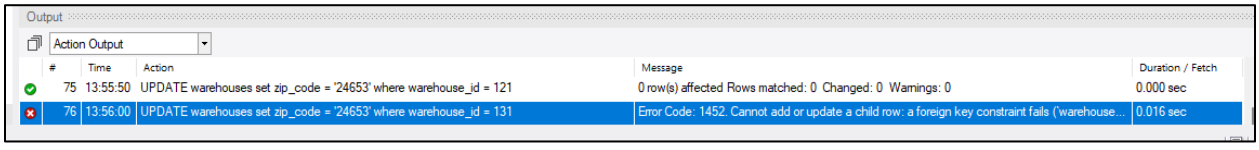
```
where warehouse_id= 121;

-- Test results: Error Code: 1048. Column 'warehouse_id' cannot be null
```



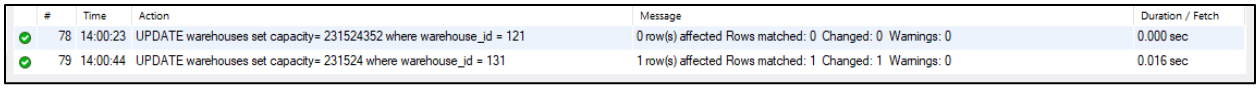

```
-- ----------------------------------------------------------------------------
                                warehouses_zip_code_fk
-- ----------------------------------------------------------------------------

                                  ** Valid test **

-- Expected results: Update statement modifies a row in the warehouses table
-- Action:
UPDATE warehouses
set zip_code = '25620'
where warehouse_id = 131;
-- Test results: 1 row Inserted
```




```
-- ----------------------------------------------------------------------------
                                  ** invalid test **

-- Expected results: update statement fails to modify a row in the warehouses table
-- Action:
UPDATE warehouses
set zip_code = '24653'
where warehouse_id = 131;
-- Test results: Error Code: 1452. Cannot add or update a child row: a foreign key
constraint fails
-- (`warehouses`.`warehouses`, CONSTRAINT `warehouses_zip_code_fk` FOREIGN KEY
(`zip_code`) REFERENCES `zips` (`zip_code`))
```

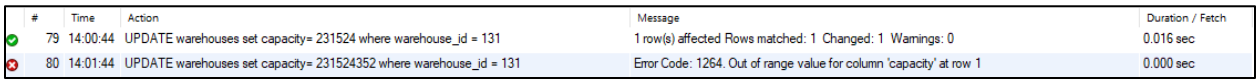



```
-- ----------------------------------------------------------------------------
                                warehouses_capacity
-- ----------------------------------------------------------------------------
                                  ** Valid test **
-- Expected results: Update statement modifies a row in the warehouses table
-- Action:
UPDATE warehouses
set capacity= 231524
where warehouse_id = 131;
-- Test results: 1 row Inserted
```



#	Time	Action	Message	Duration / Fetch
78	14:00:23	UPDATE warehouses set capacity= 231524352 where warehouse_id = 121	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
79	14:00:44	UPDATE warehouses set capacity= 231524 where warehouse_id = 131	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec

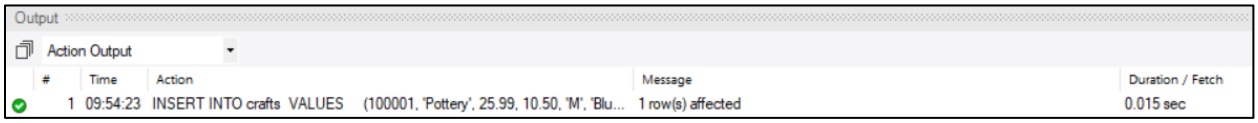
```
-- --------------------------------------------------------------------------
                                    ** invalid test **
-- Expected results: update statement fails to modify a row in the warehouses table
-- Action:
UPDATE warehouses
set capacity= 231524352
where warehouse_id = 131;

-- Test results: Error Code: 1264. Out of range value for column 'capacity' at row 1
```



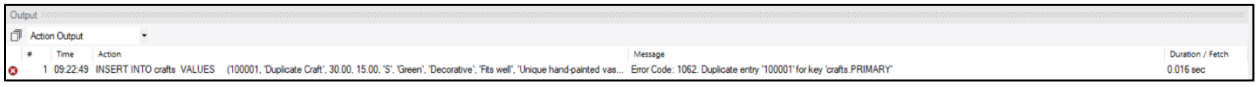
#	Time	Action	Message	Duration / Fetch
79	14:00:44	UPDATE warehouses set capacity= 231524 where warehouse_id = 131	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
80	14:01:44	UPDATE warehouses set capacity= 231524352 where warehouse_id = 131	Error Code: 1264. Out of range value for column 'capacity' at row 1	0.000 sec

CRAFTS Table

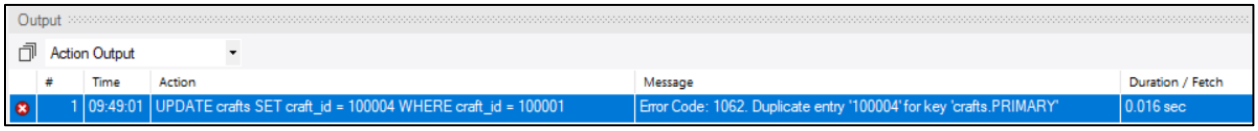
```
-- -----------------------------------------------------------------------------
                                    crafts_craft_id_pk
-- -----------------------------------------------------------------------------
--                                          ** Valid test **
-- Expected results: Insert statement add a row in the crafts table
-- Action:
INSERT INTO crafts
VALUES (100001, 'Pottery', 25.99, 10.50, 'M', 'Blue', 'Decorative', 'Fits well',
'Beautiful ceramic vase');
-- Test results: 1 row Inserted
```



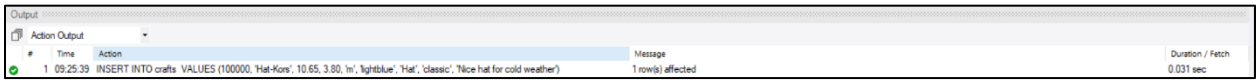

```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Insert statement fails to add a row in the crafts table
-- Action:
INSERT INTO crafts
VALUES    (100001, 'Duplicate Craft', 30.00, 15.00, 'S', 'Green', 'Decorative', 'Fits
well', 'Unique hand-painted vase');
-- Test results: Error Code: 1062. Duplicate entry '100001' for key 'crafts.PRIMARY'
```



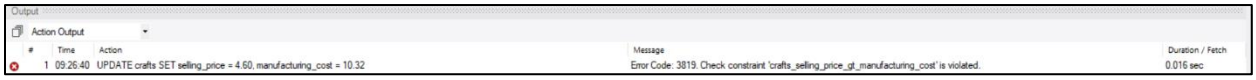

```
-- -----------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modifies a row in the crafts table
-- Action:
UPDATE crafts
SET craft_id = 100004
WHERE craft_id = 100001;
-- Test results: Error Code: 1062. Duplicate entry '100004' for key 'crafts.PRIMARY'
```




```
-- -----------------------------------------------------------------------------
                        crafts_selling_price_gt_manufacturing_cost
-- -----------------------------------------------------------------------------
                                    ** Valid test **
-- Expected results: Insert statement add a row in the crafts table
-- Action:
INSERT INTO crafts VALUES (100000,'Hat-Kors', 10.65, 3.80, 'm', 'lightblue', 'Hat',
'classic', 'Nice hat for cold weather');
-- Test results: 1 row Inserted
```



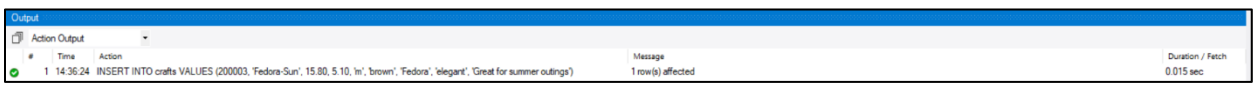

```
-- ------------------------------------------------------------------------
                                    ** InValid test **
-- Expected results: Update statement fails to modify a row in the crafts table
-- Action:
UPDATE crafts SET selling_price = 4.60, manufacturing_cost = 10.32;
-- Test results: Error Code: 3819. Check constraint
'crafts_selling_price_gt_manufacturing_cost' is violated.
```




```
-- ------------------------------------------------------------------------
--                                  crafts_crafts_size
-- ------------------------------------------------------------------------
                                    ** Valid test **
-- Expected results: Insert statement add a row in the crafts table
-- Action:
INSERT INTO crafts
 VALUES (200001, 'Hat-Kors', 10.65, 3.80, 'xs', 'lightblue', 'Hat', 'classic', 'Nice hat
for cold weather');
-- Test results: 1 row Inserted
```

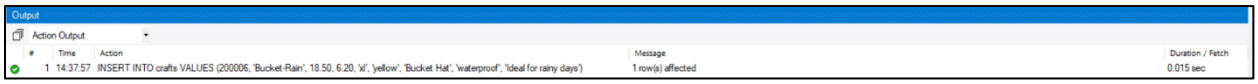
```
-- ------------------------------------------------------------------------
                                    ** Valid test **
-- Expected results: Insert statement add a row in the crafts table
-- Action:
INSERT INTO crafts
VALUES (200002, 'Capri-Pop', 12.35, 4.20, 's', 'navy', 'Capri', 'stylish', 'Perfect for a
day at the beach');
-- Test results: 1 row Inserted
```

```
-- ------------------------------------------------------------------------
                                    ** Valid test **
-- Expected results: Insert statement add a row in the crafts table
-- Action:
INSERT INTO crafts
VALUES (200003, 'Fedora-Sun', 15.80, 5.10, 'm', 'brown', 'Fedora', 'elegant', 'Great for
summer outings');
-- Test results: 1 row Inserted
```

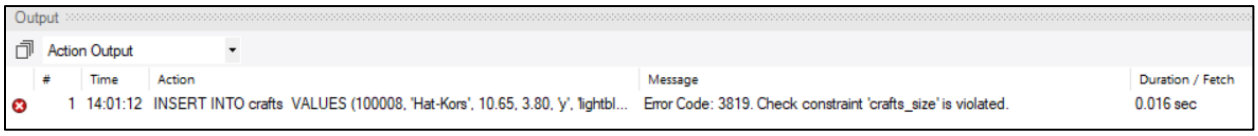


```
-- -----------------------------------------------------------------------------
--                                          ** Valid test **
-- Expected results: Insert statement add a row in the crafts table
-- Action:
INSERT INTO crafts
 VALUES (200004, 'Beanie-Cozy', 9.95, 3.50, 'l', 'gray', 'Beanie', 'warm', 'Keeps you
warm during winter');
-- Test results: 1 row Inserted
```

```
-- -----------------------------------------------------------------------------
--                                          ** Valid test **
-- Expected results: Insert statement add a row in the crafts table
-- Action:
INSERT INTO crafts
VALUES (200006, 'Bucket-Rain', 18.50, 6.20, 'xl', 'yellow', 'Bucket Hat', 'waterproof',
'Ideal for rainy days');
-- Test results: 1 row Inserted
```



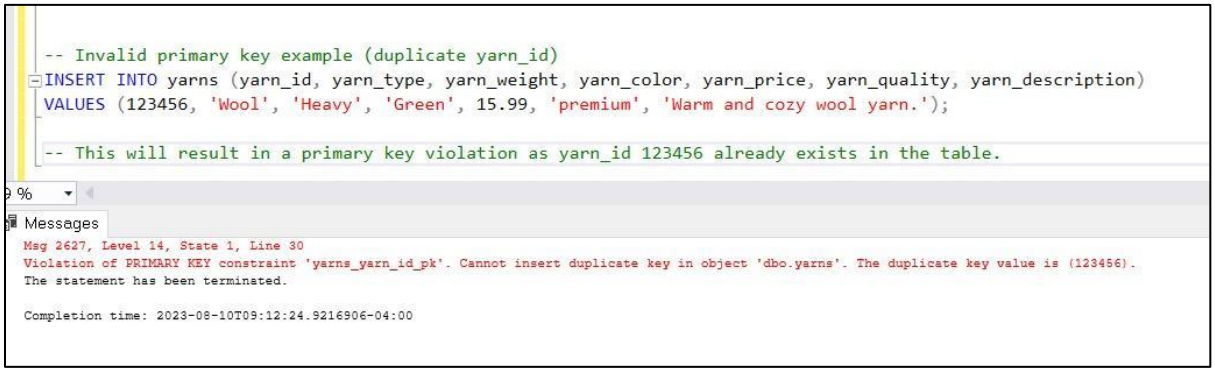

```
-- -----------------------------------------------------------------------------
                                       ** InValid test **
-- Expected results: Insert statement fails to add a row in the crafts table
-- Action:
INSERT INTO crafts
VALUES (100008, 'Hat-Kors', 10.65, 3.80, 'y', 'lightblue', 'Hat', 'classic', 'Nice hat
for cold weather');
-- Test results: Error Code: 3819. Check constraint 'crafts_size' is violated.
```



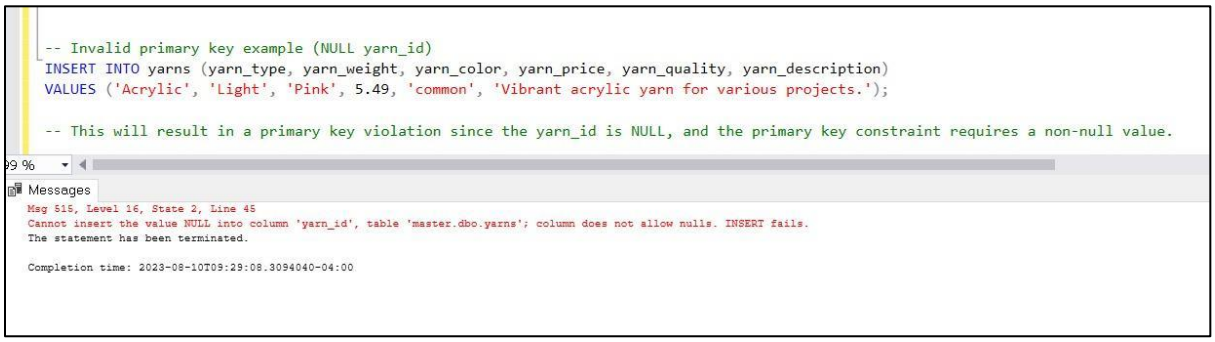
YARNS Table

```
-- ------------------------------------------------------------------------------------
                                    yarns_yarn_id_pk
-- ------------------------------------------------------------------------------------
                                    ** Valid Test **
--  Expected results: Insert statement add a row in the stores table
-- Action:

INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (123456, 'Cotton', 'Medium', 'Blue', 10.99, 'common', 'Soft and durable cotton
yarn.');

-- Test results: 1 row(s) affected
```

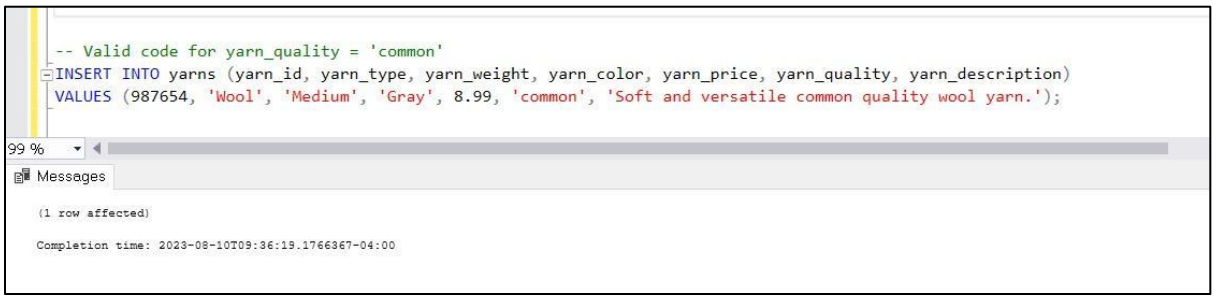
```
--  ------------------------------------------------------------------------------------
                                    ** Invalid Test **
--  Expected results:  Violation of PRIMARY KEY constraint The duplicate key value is
(123456).
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (123456, 'Wool', 'Heavy', 'Green', 15.99, 'premium', 'Warm and cozy wool yarn.');
-- Test results: The statement has been terminated.
```



```
-- ------------------------------------------------------------------------------------
                                    ** Invalid Test **
-- Expected results: Cannot insert the value NULL into column 'yarn_id'
-- Action:
INSERT INTO yarns (yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES ('Acrylic', 'Light', 'Pink', 5.49, 'common', 'Vibrant acrylic yarn for various
projects.');

-- Test results: The statement has been terminated.
```




```
--  ------------------------------------------------------------------------------------
                                    yarns_yarn_quality
--  ------------------------------------------------------------------------------------
                                    ** Valid Test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (987654, 'Wool', 'Medium', 'Gray', 8.99, 'common', 'Soft and versatile common
quality wool yarn.');

-- Test results: 1 row(s) affected
```




```
 -- ------------------------------------------------------------------------------------
                                    ** Invalid Test **
-- Expected results: The INSERT statement conflicted with the CHECK constraint
"yarns__yarn_quality"
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (555555, 'Cotton', 'Light', 'White', 6.99, 'commmon', 'Light and soft cotton
yarn.');
-- Test results: The statement has been terminated.
```

```
-- Invalid code for yarn_quality = 'common' (typo in value)
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality, yarn_description)
VALUES (555555, 'Cotton', 'Light', 'White', 6.99, 'commmon', 'Light and soft cotton yarn.');
```

99 %

Messages

```
Msg 547, Level 16, State 0, Line 63
The INSERT statement conflicted with the CHECK constraint "yarns__yarn_quality". The conflict occurred in database "master", table "dbo.yarns", column 'yarn_quality'.
The statement has been terminated.

Completion time: 2023-08-10T09:36:51.7128667-04:00
```

```
-- ----------------------------------------------------------------------------------
                                    ** Valid Test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (876543, 'Silk', 'Light', 'Purple', 25.99, 'rare', 'Luxurious and exquisite rare
quality silk yarn.');

-- Test results: 1 row(s) affected
```

```
-- Valid code for yarn_quality = 'rare'
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality, yarn_description)
VALUES (876543, 'Silk', 'Light', 'Purple', 25.99, 'rare', 'Luxurious and exquisite rare quality silk yarn.');
```

99 %

Messages

```
(1 row affected)

Completion time: 2023-08-10T09:37:19.0839698-04:00
```

```
-- ----------------------------------------------------------------------------------
                                    ** Invalid Test **
-- Expected results: The INSERT statement conflicted with the CHECK constraint
"yarns__yarn_quality"
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (666666, 'Wool', 'Medium', 'Brown', 14.99, 'raare', 'Warm and rare quality wool
yarn.');
-- Test results: The statement has been terminated.
```

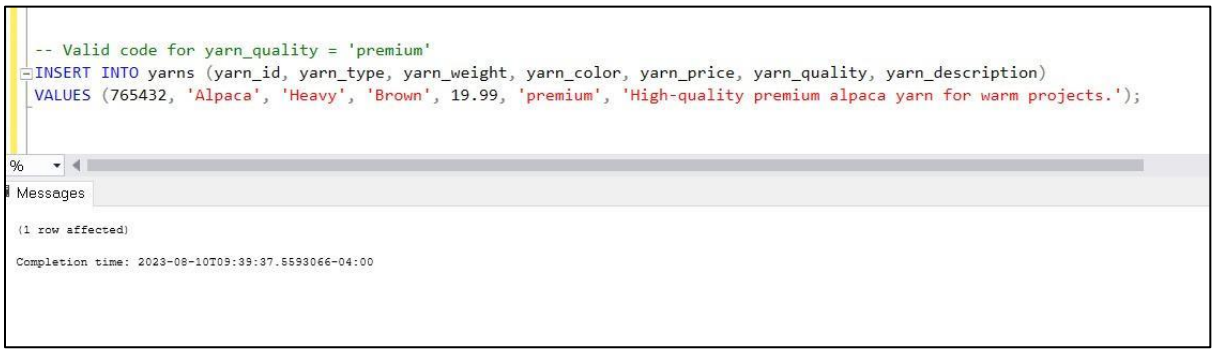
```
-- Invalid code for yarn_quality = 'rare' (typo in value)
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality, yarn_description)
VALUES (666666, 'Wool', 'Medium', 'Brown', 14.99, 'raare', 'Warm and rare quality wool yarn.');
```

9 %

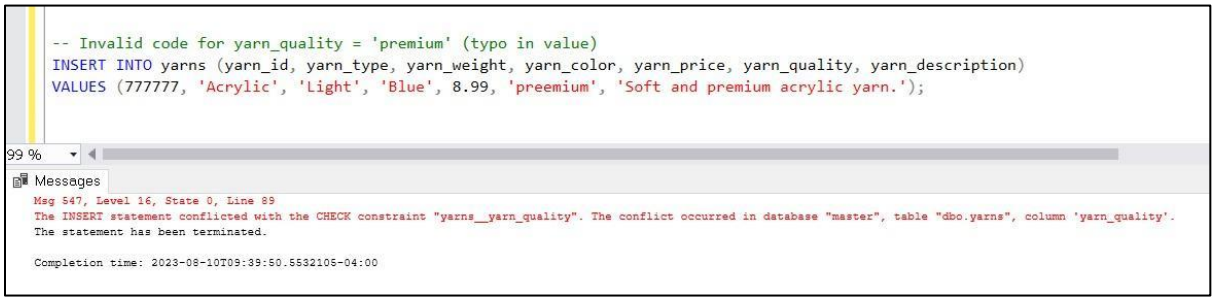
Messages

```
Msg 547, Level 16, State 0, Line 75
The INSERT statement conflicted with the CHECK constraint "yarns__yarn_quality". The conflict occurred in database "master", table "dbo.yarns", column 'yarn_quality'.
The statement has been terminated.

Completion time: 2023-08-10T09:37:36.8950300-04:00
```

```
-- ------------------------------------------------------------------------------
                                    ** Valid Test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (765432, 'Alpaca', 'Heavy', 'Brown', 19.99, 'premium', 'High-quality premium
alpaca yarn for warm projects.');
-- Test results: 1 row(s) affected
```

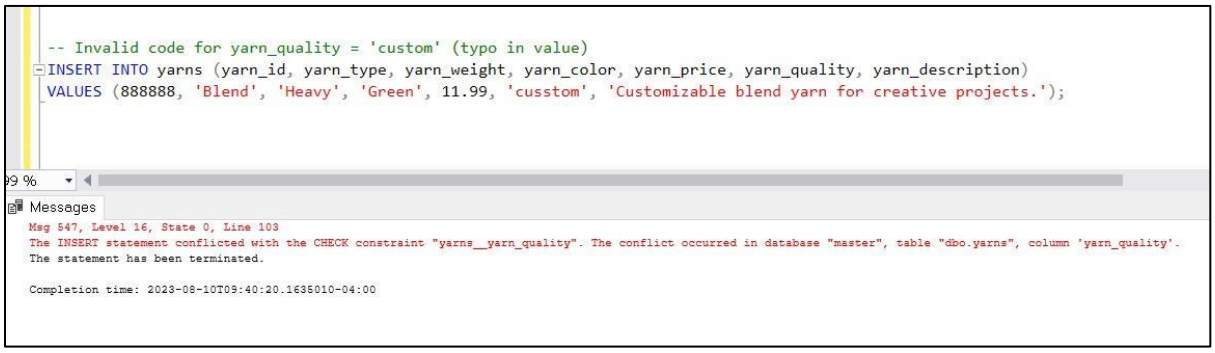



```
-- ------------------------------------------------------------------------------
                                    ** Invalid Test **
-- Expected results: The INSERT statement conflicted with the CHECK constraint
"yarns__yarn_quality"
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (777777, 'Acrylic', 'Light', 'Blue', 8.99, 'preemium', 'Soft and premium acrylic
yarn.');
-- Test results: The statement has been terminated.
```




```
-- ------------------------------------------------------------------------------
                                    ** Valid Test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (654321, 'Blend', 'Medium', 'Multicolor', 12.99, 'custom', 'Customizable blend
yarn for unique creations.');
-- Test results: 1 row(s) affected
```

```
-- ------------------------------------------------------------------------------------
                                    ** Invalid Test **
-- Expected results: The INSERT statement conflicted with the CHECK constraint
"yarns__yarn_quality"
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (888888, 'Blend', 'Heavy', 'Green', 11.99, 'cusstom', 'Customizable blend yarn for
creative projects.');
-- Test results: The statement has been terminated.
```




```
-- ------------------------------------------------------------------------------------
                                    yarns_yarn_price
-- ------------------------------------------------------------------------------------
                                    ** Valid Test **
-- Expected results: Insert statement add a row in the stores table
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (373737, 'Wool', 'Medium', 'Gray', 8.99, 'common', 'Soft and warm wool yarn.');
-- Test results: 1 row(s) affected
```

```
-- Valid code for yarn_price (greater than 0)
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality, yarn_description)
VALUES (373737, 'Wool', 'Medium', 'Gray', 8.99, 'common', 'Soft and warm wool yarn.');
```

99 %

Messages

```
(1 row affected)

Completion time: 2023-08-10T09:42:55.7680188-04:00
```

```
-- ----------------------------------------------------------------------------------------
                                    ** Invalid Test **
-- Expected results: The INSERT statement conflicted with the CHECK constraint
"yarns_yarn_price".
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (393939, 'Cotton', 'Heavy', 'Green', -5.99, 'common', 'Durable cotton yarn.');
-- Test results: The statement has been terminated.
```

```
-- Invalid code for yarn_price (negative value)
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality, yarn_description)
VALUES (393939, 'Cotton', 'Heavy', 'Green', -5.99, 'common', 'Durable cotton yarn.');
```

99 %

Messages

```
Msg 547, Level 16, State 0, Line 164
The INSERT statement conflicted with the CHECK constraint "yarns_yarn_price". The conflict occurred in database "master", table "dbo.yarns", column 'yarn_price'.
The statement has been terminated.

Completion time: 2023-08-10T09:43:18.6442274-04:00
```

```
-- ----------------------------------------------------------------------------------------
                                    ** Invalid Test **
-- Expected results: The INSERT statement conflicted with the CHECK constraint
"yarns_yarn_price".
-- Action:
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
VALUES (383838, 'Acrylic', 'Light', 'Red', 0.00, 'premium', 'Vibrant acrylic yarn.');--
Test results: The statement has been terminated.
```

```
-- Invalid code for yarn_price (equal to 0)
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality, yarn_description)
VALUES (383838, 'Acrylic', 'Light', 'Red', 0.00, 'premium', 'Vibrant acrylic yarn.');
```

99 %

Messages

```
Msg 547, Level 16, State 0, Line 156
The INSERT statement conflicted with the CHECK constraint "yarns_yarn_price". The conflict occurred in database "master", table "dbo.yarns", column 'yarn_price'.
The statement has been terminated.

Completion time: 2023-08-10T09:43:11.3425260-04:00
```

DML

```sql
-- Insert statements JOBS

INSERT INTO jobs (job_id, job_title)
VALUES
    (301, 'Sales Associate'),
    (302, 'Marketing Specialist'),
    (303, 'Financial Analyst'),
    (304, 'HR Manager'),
    (305, 'IT Technician'),
    (306, 'Operations Manager'),
    (307, 'R&D Scientist'),
    (308, 'Representative'),
    (309, 'Quality Analyst'),
    (310, 'Logistics Coordinator'),
    (311, 'Software Developer'),
    (312, 'Graphic Designer'),
    (313, 'Research Analyst'),
    (314, 'Product Manager'),
    (315, 'Data Analyst');

-- Insert statements ZIPS
INSERT INTO zips (zip_code, city, province, country)
VALUES
    ('V6B 1A1', 'Vancouver', 'British Columbia', 'Canada'),
    ('T2H M1C', 'Calgary', 'Alberta', 'Canada'),
    ('T2H 0K8', 'Winnipeg', 'Manitoba', 'Canada'),
    ('M5V 3L9', 'Toronto', 'Ontario', 'Canada'),
    ('H2Y 2H3', 'Montreal', 'Quebec', 'Canada'),
    ('B3J 1N4', 'Halifax', 'Nova Scotia', 'Canada'),
    ('A1B 2C3', 'Mississauga', 'Ontario', 'Canada'),
    ('E1C 4R8', 'Moncton', 'New Brunswick', 'Canada'),
    ('K1A 0B1', 'Ottawa', 'Ontario', 'Canada'),
    ('S4P 3V6', 'Regina', 'Saskatchewan', 'Canada');

-- Insert statements CRAFTS
INSERT INTO crafts (craft_id, craft_name, selling_price, manufacturing_cost, size, color,
craft_type, fit, craft_description)
VALUES
    (301, 'Knitted Scarf', 24.99, 10.50, 'm', 'Blue', 'Accessory', 'One Size', 'Warm and
stylish scarf.'),
    (302, 'Crochet Blanket', 89.50, 45.75, 'xl', 'White', 'Home Decor', 'Oversized',
'Cozy blanket for any room.'),
    (303, 'Embroidered Pillow', 29.75, 14.25, 's', 'Green', 'Home Decor', 'Standard',
'Decorative pillow with intricate embroidery.'),
    (304, 'Wooden Coasters', 12.99, 6.50, 's', 'Natural', 'Home Decor', 'Standard', 'Set
of wooden coasters for drinks.'),
    (305, 'Knitted Beanie', 15.25, 8.75, 'm', 'Grey', 'Accessory', 'One Size', 'Warm
beanie for cold days.'),
    (306, 'Handmade Earrings', 19.99, 9.50, 's', 'Multicolor', 'Jewelry', 'Standard',
'Unique earrings crafted with care.'),
    (307, 'Ceramic Mug', 8.50, 4.25, 'm', 'Blue', 'Home Decor', 'Standard', 'Stylish
ceramic mug for your favorite drinks.'),
    (308, 'Embroidered Tote Bag', 34.99, 18.50, 'l', 'Pink', 'Accessory', 'Oversized',
'Spacious tote bag with beautiful embroidery.'),
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    (309, 'Handmade Soap', 7.25, 3.50, 's', 'Various', 'Bath and Body', 'Standard',
'Natural and fragrant handmade soap.'),
    (310, 'Painted Canvas', 49.50, 28.75, 'l', 'Various', 'Art', 'Oversized', 'Vibrant
painted canvas for your walls.'),
    (311, 'Beaded Bracelet', 12.99, 5.75, 's', 'Gold', 'Jewelry', 'Standard', 'Elegant
bracelet with intricate beadwork.'),
    (312, 'Wooden Wall Clock', 29.75, 15.25, 'm', 'Brown', 'Home Decor', 'Standard',
'Functional and decorative wooden wall clock.'),
    (313, 'Knitted Baby Booties', 18.50, 7.99, 'xs', 'Pink', 'Baby', 'Newborn', 'Soft and
cute booties for babies.'),
    (314, 'Hand-Painted Mug', 14.99, 6.75, 'm', 'Purple', 'Home Decor', 'Standard', 'Mug
with artistic hand-painted design.'),
    (315, 'Embroidered Hat', 17.25, 9.99, 'm', 'Black', 'Accessory', 'One Size', 'Stylish
hat with detailed embroidery.'),
    (316, 'Clay Sculpture', 54.99, 32.50, 'l', 'Various', 'Art', 'Oversized', 'Unique
clay sculpture for display.'),
    (317, 'Printed Notebook', 9.50, 3.99, 's', 'Patterned', 'Stationery', 'Standard',
'Notebook with creative printed cover.'),
    (318, 'Handmade Necklace', 28.99, 14.50, 'm', 'Silver', 'Jewelry', 'One Size',
'Necklace with handmade pendant.'),
    (319, 'Candle Holder', 22.25, 10.99, 'm', 'Metallic', 'Home Decor', 'Standard',
'Decorative candle holder for ambiance.'),
    (320, 'Crochet Hat', 16.75, 8.25, 'm', 'Brown', 'Accessory', 'One Size', 'Cozy
crochet hat for colder days.'),
    (321, 'Custom Keychain', 8.99, 4.25, 's', 'Customizable', 'Accessories', 'Standard',
'Keychain with personalized design.'),
    (322, 'Greeting Card', 5.50, 2.50, 's', 'Various', 'Stationery', 'Standard',
'Artistic greeting card for special occasions.'),
    (323, 'Macrame Plant Hanger', 19.75, 11.50, 'm', 'Natural', 'Home Decor', 'One Size',
'Hanging plant hanger with macrame design.'),
    (324, 'Hand-Painted Scarf', 28.99, 15.75, 'm', 'Colorful', 'Accessory', 'One Size',
'Vibrant scarf with hand-painted design.'),
    (325, 'Beaded Anklet', 9.99, 4.75, 's', 'Turquoise', 'Jewelry', 'Standard', 'Dainty
anklet with colorful beads.'),
    (326, 'Embroidered Napkins', 12.25, 5.99, 's', 'White', 'Home Decor', 'Standard',
'Set of napkins with delicate embroidery.'),
    (327, 'Knitted Baby Blanket', 36.50, 19.75, 'l', 'Pastel', 'Baby', 'Oversized', 'Soft
and cuddly blanket for infants.'),
    (328, 'Hand-Painted Planter', 14.99, 7.50, 'm', 'Terracotta', 'Home Decor',
'Standard', 'Plant pot with artistic hand-painted design.'),
    (329, 'Braided Bracelet', 10.75, 4.99, 's', 'Brown', 'Jewelry', 'Standard', 'Bracelet
with intricate braided pattern.'),
    (330, 'Crochet Coasters', 8.50, 3.99, 's', 'Multicolor', 'Home Decor', 'Standard',
'Set of colorful crochet coasters.'),
    (331, 'Handmade Bookmark', 4.99, 1.75, 's', 'Patterned', 'Stationery', 'Standard',
'Bookmark with unique handmade design.'),
    (332, 'Wooden Jewelry Box', 26.25, 12.99, 'm', 'Natural', 'Home Decor', 'Standard',
'Jewelry box with wooden finish.'),
    (333, 'Embroidered Pouch', 15.99, 7.50, 's', 'Blue', 'Accessory', 'Standard', 'Small
pouch with elegant embroidery.'),
    (334, 'Printed Tote Bag', 18.75, 9.99, 'l', 'Patterned', 'Accessory', 'Oversized',
'Tote bag with creative printed design.'),
    (335, 'Handmade Coasters', 14.50, 6.99, 's', 'Various', 'Home Decor', 'Standard',
'Set of handmade decorative coasters.');

-- Insert Statements YARNS
INSERT INTO yarns (yarn_id, yarn_type, yarn_weight, yarn_color, yarn_price, yarn_quality,
yarn_description)
```

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VALUES
    (601, 'Acrylic', 'Worsted', 'Blue', 9.99, 'common', 'A versatile and affordable yarn
for various projects.'),
    (602, 'Cotton', 'Sport', 'White', 12.50, 'common', 'Breathable and soft cotton yarn
for lightweight garments.'),
    (603, 'Wool', 'Bulky', 'Grey', 15.75, 'common', 'Warm and cozy wool yarn perfect for
cold-weather projects.'),
    (604, 'Alpaca', 'Fingering', 'Brown', 18.99, 'common', 'Luxuriously soft alpaca yarn
suitable for delicate items.'),
    (605, 'Silk', 'Lace', 'Purple', 24.50, 'rare', 'Smooth and elegant silk yarn for
sophisticated projects.'),
    (606, 'Cashmere', 'Worsted', 'Beige', 34.99, 'rare', 'Exquisite cashmere yarn known
for its luxurious feel.'),
    (607, 'Mohair', 'Sport', 'Pink', 22.75, 'rare', 'Fluffy mohair yarn with a unique
texture and appearance.'),
    (608, 'Bamboo', 'DK', 'Green', 11.25, 'premium', 'Eco-friendly bamboo yarn with a
silky touch.'),
    (609, 'Merino Wool', 'Fingering', 'Red', 16.50, 'premium', 'Soft and versatile merino
wool yarn for various projects.'),
    (610, 'Linen', 'Worsted', 'Natural', 14.50, 'premium', 'Durable and cool linen yarn
perfect for summer wear.'),
    (611, 'Sparkle', 'Lace', 'Silver', 9.99, 'common', 'Yarn with added sparkle for
festive and eye-catching projects.'),
    (612, 'Tweed', 'Bulky', 'Multicolor', 11.75, 'common', 'Textured tweed yarn for
rustic and cozy creations.'),
    (613, 'Variegated', 'DK', 'Rainbow', 13.50, 'common', 'Yarn with multicolored
variations for vibrant projects.'),
    (614, 'Chenille', 'Worsted', 'Gold', 14.99, 'common', 'Plush and velvety chenille
yarn for soft and warm items.'),
    (615, 'Metallic', 'Sport', 'Black', 10.25, 'common', 'Yarn with metallic accents for
a touch of glamour.'),
    (616, 'Gradient', 'Fingering', 'Ombre', 17.50, 'rare', 'Yarn that transitions
smoothly between gradient colors.'),
    (617, 'Lace', 'Lace', 'Ivory', 8.75, 'common', 'Delicate and intricate lace yarn for
elegant projects.'),
    (618, 'Velvet', 'DK', 'Deep Blue', 19.99, 'rare', 'Luxurious velvet yarn with a plush
texture.'),
    (619, 'Striped', 'Worsted', 'Stripes', 12.99, 'common', 'Yarn with striped patterns
for fun and colorful creations.'),
    (620, 'Fluffy', 'Bulky', 'Pastel', 15.25, 'common', 'Fluffy and soft yarn perfect for
cozy accessories.'),
    (621, 'Recycled', 'Sport', 'Earth Tones', 11.50, 'premium', 'Yarn made from recycled
materials, eco-friendly choice.'),
    (622, 'Angora', 'Fingering', 'Cream', 21.50, 'rare', 'Silky and warm angora yarn for
luxurious projects.'),
    (623, 'Tencel', 'DK', 'Teal', 14.25, 'premium', 'Sustainable tencel yarn with a
smooth and shiny finish.'),
    (624, 'Hemp', 'Worsted', 'Natural', 9.75, 'premium', 'Durable and eco-friendly hemp
yarn for versatile projects.'),
    (625, 'Nylon', 'Sport', 'Neon Pink', 8.99, 'common', 'Strong and resilient nylon yarn
suitable for various applications.'),
    (626, 'Ribbon', 'Bulky', 'Rainbow', 7.50, 'common', 'Flat ribbon-like yarn for
creative and decorative projects.'),
    (627, 'Organic', 'Fingering', 'Earth Tones', 16.99, 'premium', 'Certified organic
yarn for environmentally conscious crafting.'),
    (628, 'Jute', 'DK', 'Rust', 10.99, 'premium', 'Natural and rustic jute yarn');

-- Insert statements DEPARTMENTS
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INSERT INTO departments (department_id, department_name, department_phone,
department_email, department_budget, department_description, manager_id)
VALUES
    (101, 'Sales', '1234567890', 'sales@example.com', 500000.00, 'Responsible for sales
operations', NULL),
    (102, 'Marketing', '9876543210', 'marketing@example.com', 350000.00, 'Handles
marketing campaigns', NULL),
    (103, 'Finance', '5551234567', 'finance@example.com', 800000.00, 'Manages financial
operations', NULL),
    (104, 'Human Resources', '7778889999', 'hr@example.com', 600000.00, 'Responsible for
HR activities', NULL),
    (105, 'IT', '1112223333', 'it@example.com', 750000.00, 'Manages information
technology', NULL),
    (106, 'Operations', '4445556666', 'operations@example.com', 450000.00, 'Handles day-
to-day operations', NULL),
    (107, 'Research and Development', '7775558888', 'rnd@example.com', 900000.00,
'Focuses on research and development', NULL),
    (108, 'Customer Service', '3334445555', 'customerservice@example.com', 300000.00,
'Provides customer support', NULL),
    (109, 'Quality Assurance', '8889991111', 'qa@example.com', 300000.00, 'Ensures
product quality', NULL),
    (110, 'Logistics', '6667778888', 'logistics@example.com', 550000.00, 'Handles supply
chain and logistics', NULL);

-- Insert statements STORES
INSERT INTO stores (store_id, store_name, phone_number, email, website, address,
zip_code, manager_id)
VALUES
    (101, 'Craft Haven', '1234567890', 'info@crafthaven.com', 'www.crafthaven.com', '456
Main St', 'V6B 1A1', NULL),
    (102, 'Crafty Corner', '9876543210', 'contact@craftycorner.com', NULL, '789 Elm St',
'T2H 0K8', NULL),
    (103, 'Yarn World', '5551234567', 'sales@yarnworld.com', 'www.yarnworld.com', '123
Oak Ave', 'M5V 3L9', NULL),
    (104, 'Artistic Crafts', '7778889999', 'info@artisticcrafts.com',
'www.artisticcrafts.com', '456 Pine Rd', 'H2Y 2H3', NULL),
    (105, 'Creative Creations', '1112223333', 'contact@creativecreations.com', NULL, '789
Cedar Ln', 'V6B 1A1', NULL);

-- Insert stements EMPLOYEES
INSERT INTO employees (employee_id, first_name, last_name, date_of_birth, address,
contact_number, email, hire_date, salary, emp_status, manager_id, store_id,
department_id, job_id)
VALUES
    (201, 'John', 'Doe', '1985-03-15', '123 Main St', 1234567890, 'john.doe@example.com',
'2020-07-15', 60000.00, 'Active', NULL, 101, 101, 301),
    (202, 'Jane', 'Smith', '1990-09-20', '456 Elm St', 9876543210,
'jane.smith@example.com', '2018-04-10', 75000.00, 'Active', 201, 102, 102, 302),
    (203, 'Michael', 'Johnson', '1988-12-10', '789 Oak Ave', 5551234567,
'michael@example.com', '2019-02-25', 90000.00, 'Active', 201, 103, 103, 303),
    (204, 'Emily', 'Williams', '1995-07-08', '567 Pine Rd', 7778889999,
'emilyw@example.com', '2022-01-05', 55000.00, 'Active', 202, 104, 104, 304),
    (205, 'William', 'Brown', '1983-11-25', '890 Cedar Ln', 1112223333,
'wbrown@example.com', '2021-09-12', 80000.00, 'Active', NULL, 105, 105, 305),
    (206, 'Olivia', 'Miller', '1992-06-18', '234 Birch Dr', 4445556666,
'oliviam@example.com', '2023-03-30', 70000.00, 'Active', 203, 101, 106, 306),
    (207, 'Ethan', 'Davis', '1987-03-29', '789 Maple St', 7775558888,
'ethand@example.com', '2022-11-20', 85000.00, 'Active', 203, 102, 107, 307),
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    (208, 'Sophia', 'Wilson', '1999-04-12', '345 Oak Ave', 3334445555,
'sophiaw@example.com', '2020-06-08', 60000.00, 'Active', 204, 103, 108, 308),
    (209, 'Aiden', 'Anderson', '1994-09-03', '456 Pine Rd', 8889991111,
'aidena@example.com', '2017-08-03', 65000.00, 'Active', 204, 104, 109, 309),
    (210, 'Mia', 'Martinez', '2000-01-22', '567 Cedar Ln', 6667778888,
'miam@example.com', '2023-05-10', 75000.00, 'Active', 205, 105, 110, 310),
    (211, 'Noah', 'Taylor', '1991-08-11', '678 Elm St', 2223334444,
'noah.taylor@example.com', '2019-11-02', 70000.00, 'Active', 205, 101, 101, 301),
    (212, 'Ava', 'Anderson', '1998-03-02', '789 Oak Ave', 7778889990,
'ava.anderson@example.com', '2022-02-15', 55000.00, 'Active', 206, 102, 101, 301),
    (213, 'Liam', 'Wilson', '1990-12-17', '890 Pine Rd', 5556667777, 'liamw@example.com',
'2021-03-18', 85000.00, 'Active', 206, 103, 101, 301),
    (214, 'Emma', 'Garcia', '1996-07-09', '123 Cedar Ln', 1112223330,
'emma.garcia@example.com', '2020-09-09', 60000.00, 'Active', 207, 104, 101, 301),
    (215, 'Isabella', 'Harris', '1993-10-05', '234 Maple St', 3334445550,
'isabella@example.com', '2023-01-28', 70000.00, 'Active', 207, 105, 101, 301);

-- Insert statements CUSTOMERS
INSERT INTO customers (customer_id, first_name, last_name, date_of_birth, email, gender,
contact_number, address, shipping_address, billing_address, favorite_craft, zip_code,
preferred_sales_rep)
VALUES
    (1, 'John', 'Doe', '1990-05-15', 'john.doe@example.com', 'M', '1234567890', '123 Main
St', '123 Main St', NULL, 301, 'V6B 1A1', NULL),
    (2, 'Jane', 'Smith', '1985-09-20', 'jane.smith@example.com', 'F', '9876543210', '456
Elm St', '456 Elm St', '789', 302, 'M5V 3L9', 201),
    (3, 'Michael', 'Johnson', '1993-02-10', 'michael@example.com', 'M', '5551234567',
'789 Oak Ave', '789 Oak Ave', '234', 303, 'V6B 1A1', NULL),
    (4, 'Emily', 'Williams', '2000-07-08', 'emilyw@example.com', 'F', '7778889999', '567
Pine Rd', '567 Pine Rd', '567', 304, 'M5V 3L9', 202),
    (5, 'William', 'Brown', '1982-11-25', 'wbrown@example.com', 'M', '1112223333', '890
Cedar Ln', '890 Cedar Ln', NULL, 305, 'T2H 0K8', NULL),
    (6, 'Olivia', 'Miller', '1991-06-18', 'oliviam@example.com', 'F', '4445556666', '234
Birch Dr', '234 Birch Dr', '123', 306, 'V6B 1A1', 206),
    (7, 'Ethan', 'Davis', '1988-03-29', 'ethand@example.com', 'M', '7775558888', '789
Maple St', '789 Maple St', NULL, 307, 'T2H 0K8', NULL),
    (8, 'Sophia', 'Wilson', '2002-04-12', 'sophiaw@example.com', 'F', '3334445555', '345
Oak Ave', '345 Oak Ave', '890', 308, 'T2H 0K8', 207),
    (9, 'Aiden', 'Anderson', '1997-09-03', 'aidena@example.com', 'M', '8889991111', '456
Pine Rd', '456 Pine Rd', '456', 309, 'T2H 0K8', 208),
    (10, 'Mia', 'Martinez', '2004-01-22', 'miam@example.com', 'F', '6667778888', '567
Cedar Ln', '567 Cedar Ln', '678', 310, 'M5V 3L9', 209),
    (11, 'Noah', 'Taylor', '1995-08-11', 'noah.taylor@example.com', 'M', '2223334444',
'678 Elm St', '678 Elm St', '901', 311, 'M5V 3L9', NULL),
    (12, 'Ava', 'Anderson', '2001-03-02', 'ava.anderson@example.com', 'F', '7778809999',
'789 Oak Ave', '789 Oak Ave', NULL, 312, 'H2Y 2H3', 210),
    (13, 'Liam', 'Wilson', '1989-12-17', 'liamw@example.com', 'M', '5556667777', '890
Pine Rd', '890 Pine Rd', '234', 313, 'H2Y 2H3', NULL),
    (14, 'Emma', 'Garcia', '2003-07-09', 'emma.garcia@example.com', 'F', '1112203333',
'123 Cedar Ln', '123 Cedar Ln', '567', 314, 'H2Y 2H3', 211),
    (15, 'Isabella', 'Harris', '1998-10-05', 'isabella@example.com', 'F', '3334045555',
'234 Maple St', '234 Maple St', '890', 315, 'H2Y 2H3', NULL);
```

```sql
-- Insert statements ORDERS
INSERT INTO orders (order_id, order_date, shipped_date, shipped_status, customer_id,
employee_id, return_period)
VALUES
    (1001, '2022-08-01', '2022-08-05', 'Shipped', 1, 201, '30 days'),
    (1002, '2022-09-02', '2022-09-06', 'Shipped', 2, 202, '15 days'),
    (1003, '2022-10-03', '2022-10-07', 'Shipped', 3, 203, '30 days'),
    (1004, '2022-11-04', '2022-11-08', 'Shipped', 4, 204, '15 days'),
    (1005, '2022-12-05', '2022-12-09', 'Shipped', 5, 205, '30 days'),
    (1006, '2023-01-06', '2023-01-10', 'Shipped', 6, 206, '15 days'),
    (1007, '2023-02-07', '2023-02-11', 'Shipped', 7, 207, '30 days'),
    (1008, '2023-03-08', '2023-03-12', 'Shipped', 8, 208, '15 days'),
    (1009, '2023-04-09', '2023-04-13', 'Shipped', 9, 209, '30 days'),
    (1010, '2023-05-10', '2023-05-14', 'Shipped', 10, 210, '15 days'),
    (1011, '2023-06-11', '2023-06-15', 'Shipped', 11, 211, '30 days'),
    (1012, '2023-07-12', '2023-07-16', 'Shipped', 12, 212, '15 days'),
    (1013, '2023-08-13', '2023-08-17', 'Shipped', 13, 213, '30 days'),
    (1014, '2023-09-14', '2023-09-18', 'Shipped', 14, 214, '15 days'),
    (1015, '2023-10-15', '2023-10-19', 'Shipped', 15, 215, '30 days'),
    (1016, '2023-11-16', '2023-11-20', 'Shipped', 1, 201, '15 days'),
    (1017, '2023-12-17', '2023-12-21', 'Shipped', 2, 202, '30 days'),
    (1018, '2024-01-18', '2024-01-22', 'Shipped', 3, 203, '15 days'),
    (1019, '2024-02-19', '2024-02-23', 'Shipped', 4, 204, '30 days'),
    (1020, '2024-03-20', '2024-03-24', 'Shipped', 5, 205, '15 days'),
    (1021, '2024-04-21', '2024-04-25', 'Shipped', 6, 206, '30 days'),
    (1022, '2024-05-22', '2024-05-26', 'Shipped', 7, 207, '15 days'),
    (1023, '2024-06-23', '2024-06-27', 'Shipped', 8, 208, '30 days'),
    (1024, '2024-07-24', '2024-07-28', 'Shipped', 9, 209, '15 days'),
    (1025, '2024-08-25', '2024-08-29', 'Shipped', 10, 210, '30 days'),
    (1026, '2024-09-26', '2024-09-30', 'Shipped', 11, 211, '15 days'),
    (1027, '2024-10-27', '2024-10-31', 'Shipped', 12, 212, '30 days'),
    (1028, '2024-11-28', '2024-12-01', 'Shipped', 13, 213, '15 days'),
    (1029, '2024-12-29', '2025-01-02', 'Shipped', 14, 214, '30 days'),
    (1030, '2025-01-30', '2025-02-03', 'Shipped', 15, 215, '15 days');

-- Insert statements WAREHOUSES
INSERT INTO warehouses (warehouse_id, warehouse_name, address, capacity, zip_code)
VALUES
    (501, 'Central Warehouse', '123 Main St', 100000.00, 'V6B 1A1'),
    (502, 'North Warehouse', '456 Elm St', 750000.00, 'T2H 0K8'),
    (503, 'South Warehouse', '789 Oak Ave', 500000.00, 'M5V 3L9'),
    (504, 'East Warehouse', '567 Pine Rd', 800000.00, 'H2Y 2H3'),
    (505, 'West Warehouse', '890 Cedar Ln', 600000.00, 'V6B 1A1'),
    (506, 'Downtown Warehouse', '234 Birch Dr', 450000.00, 'T2H 0K8'),
    (507, 'Uptown Warehouse', '789 Maple St', 550000.00, 'M5V 3L9'),
    (508, 'Suburb Warehouse', '345 Oak Ave', 700000.00, 'H2Y 2H3'),
    (509, 'Metro Warehouse', '456 Pine Rd', 850000.00, 'V6B 1A1'),
    (510, 'Rural Warehouse', '567 Cedar Ln', 400000.00, 'T2H 0K8');

-- Insert statements INVENTORIES
INSERT INTO inventories (warehouse_id, craft_id, quantity, update_date)
VALUES
    (501, 301, 500, '2023-08-17'),
    (502, 302, 700, '2023-08-17'),
    (503, 303, 350, '2023-08-17'),
    (504, 304, 900, '2023-08-17'),
    (505, 305, 600, '2023-08-17'),
    (506, 306, 400, '2023-08-17'),
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    (507, 307, 550, '2023-08-17'),
    (508, 308, 720, '2023-08-17'),
    (509, 309, 420, '2023-08-17'),
    (510, 310, 300, '2023-08-17'),
    (501, 311, 450, '2023-08-17'),
    (502, 312, 680, '2023-08-17'),
    (503, 313, 320, '2023-08-17'),
    (504, 314, 780, '2023-08-17'),
    (505, 315, 540, '2023-08-17'),
    (506, 316, 370, '2023-08-17'),
    (507, 317, 600, '2023-08-17'),
    (508, 318, 710, '2023-08-17'),
    (509, 319, 390, '2023-08-17'),
    (510, 320, 270, '2023-08-17'),
    (501, 321, 420, '2023-08-17'),
    (502, 322, 640, '2023-08-17'),
    (503, 323, 310, '2023-08-17'),
    (504, 324, 820, '2023-08-17'),
    (505, 325, 580, '2023-08-17'),
    (506, 326, 350, '2023-08-17'),
    (507, 327, 590, '2023-08-17'),
    (508, 328, 760, '2023-08-17'),
    (509, 329, 430, '2023-08-17'),
    (510, 330, 290, '2023-08-17'),
    (501, 331, 470, '2023-08-17'),
    (502, 332, 720, '2023-08-17'),
    (503, 333, 340, '2023-08-17'),
    (504, 334, 870, '2023-08-17'),
    (505, 335, 620, '2023-08-17'),
    (506, 327, 410, '2023-08-17'),
    (508, 327, 560, '2023-08-17'),
    (508, 335, 790, '2023-08-17'),
    (509, 331, 400, '2023-08-17'),
    (510, 324, 250, '2023-08-17');

-- Insert statements CRAFTS_ORDERS
INSERT INTO crafts_orders (craft_id, order_id, quantity)
VALUES
    (301, 1001, 3),
    (302, 1001, 1),
    (305, 1002, 2),
    (310, 1003, 1),
    (307, 1003, 4),
    (312, 1004, 2),
    (314, 1005, 3),
    (311, 1006, 1),
    (316, 1007, 1),
    (319, 1008, 2),
    (324, 1008, 1),
    (330, 1009, 4),
    (331, 1009, 1),
    (301, 1010, 2),
    (308, 1011, 1),
    (318, 1012, 1),
    (322, 1012, 3),
    (325, 1013, 2),
    (326, 1014, 4),
    (335, 1015, 1),
```

```
    (314, 1015, 2),
    (330, 1016, 3),
    (306, 1017, 1),
    (307, 1017, 2),
    (328, 1018, 1),
    (333, 1019, 2),
    (308, 1020, 2),
    (303, 1021, 3),
    (314, 1021, 1),
    (320, 1022, 2),
    (311, 1023, 1),
    (328, 1024, 1),
    (318, 1024, 2),
    (327, 1025, 1),
    (325, 1029, 3),
    (312, 1027, 2),
    (317, 1028, 1),
    (331, 1029, 1),
    (333, 1029, 1),
    (309, 1030, 4),
    (306, 1021, 2),
    (304, 1022, 3),
    (326, 1023, 1),
    (332, 1024, 2),
    (315, 1024, 1),
    (328, 1025, 1),
    (314, 1025, 2),
    (325, 1026, 3),
    (331, 1026, 1),
    (301, 1027, 2),
    (317, 1029, 1),
    (329, 1029, 2);

-- Insert statements CRAFTS_YARNS
INSERT INTO crafts_yarns (craft_id, yarn_id, quantity)
VALUES
    (301, 601, 5),
    (301, 602, 3),
    (302, 602, 2),
    (303, 603, 4),
    (304, 604, 2),
    (305, 601, 3),
    (305, 603, 2),
    (306, 602, 4),
    (307, 604, 2),
    (308, 601, 3),
    (309, 603, 2),
    (310, 601, 4),
    (310, 604, 1),
    (311, 602, 2),
    (312, 603, 3),
    (313, 601, 4),
    (313, 604, 2),
    (314, 601, 3),
    (314, 603, 2),
    (315, 602, 4);
```

```sql
-- Insert statements WAREHOUSES_STORES
INSERT INTO warehouses_stores (warehouse_id, store_id)
VALUES
    (501, 101),
    (501, 102),
    (502, 103),
    (503, 104),
    (504, 105),
    (505, 101),
    (505, 102),
    (506, 103),
    (507, 104),
    (508, 105);
```

SQL Statements

1. Retrieve the CUSTOMERS that live in Toronto, over 18 years old and have purchased a total amount greater than or equal to 10 dollars.

```
CREATE OR REPLACE VIEW promotion_in_mississauga AS
       SELECT cu.email – SUM(cr.selling_price)
       FROM customers AS cu
              INNER JOIN orders USING (customer_id)
              INNER JOIN zips AS z USING (zip_code)
              INNER JOIN crafts_orders USING (order_id)
              INNER JOIN crafts AS cr USING (craft_id)
       WHERE ((YEAR(CURRENT_DATE)) - YEAR(cu.date_of_birth) >= 18)  AND (LOWER(z.city) =
       'toronto')
       GROUP BY cu.email
       HAVING (SUM(cr.selling_price) > 10);
```

2. Retrieve the total sales amount by location of all orders for the past 6 months to know which city has sold more crafts.

```
SELECT z.city, SUM(cr.selling_price)
FROM customers
              INNER JOIN orders AS o USING (customer_id)
              INNER JOIN zips AS z USING (zip_code)
              INNER JOIN crafts_orders USING (order_id)
              INNER JOIN crafts AS cr USING (craft_id)
WHERE (TIMESTAMPDIFF(MONTH, o.order_date, CURRENT_DATE) >= 6)
GROUP BY z.city;
```

3. Create a view that shows the yarns that are mostly used by calculating the crafts ordered multiplied by the quantity of the crafts sold.

```
CREATE VIEW most_ordered_yarns AS
SELECT
    Y.yarn_id,
    Y.yarn_type,
    Y.yarn_color,
    Y.yarn_description,
    COALESCE((
        SELECT SUM(CO.quantity * CY.quantity)
        FROM crafts_orders CO
        JOIN crafts_yarns CY ON CO.craft_id = CY.craft_id
        WHERE CY.yarn_id = Y.yarn_id
    ), 'Not used yet') AS total_ordered_quantity
FROM yarns Y;
```

4. List the total sales of each employee that is Sales Representatives.

```
CREATE VIEW Employee_sales AS
SELECT
    E.employee_id,
    E.first_name,
    E.last_name,
    (
        SELECT COALESCE(SUM(CO.quantity * C.selling_price), 0)
        FROM crafts_orders CO
        JOIN crafts C ON CO.craft_id = C.craft_id
        JOIN orders O ON CO.order_id = O.order_id
        WHERE O.employee_id = E.employee_id
    ) AS total_sales_amount
FROM employees E
WHERE E.job_id = 301; -- Job IDs Sales Representatives (301)
```

5. Retrieve the customers and its favorite craft with the highest selling price.

```
CREATE OR REPLACE VIEW highest_selling_favorite_craft AS
       SELECT CONCAT(c.first_name,' ', c.last_name) AS customer_name,
              cr.craft_name AS favorite_craft,
              cr.selling_price
       FROM customers c
              LEFT JOIN crafts cr ON c.favorite_craft = cr.craft_id
       WHERE cr.selling_price = (SELECT MAX(selling_price) FROM crafts);
```

6. Retrieve the list of crafts along with the total quantity available in each warehouse.

```
CREATE OR REPLACE VIEW craft_total_quantity AS
       SELECT c.craft_name,
              w.warehouse_name,
              COALESCE(SUM(i.quantity), 0) AS total_quantity
       FROM crafts c
       CROSS JOIN warehouses w
       LEFT JOIN inventories i ON c.craft_id = i.craft_id AND w.warehouse_id =
       i.warehouse_id
       GROUP BY c.craft_id, w.warehouse_id;
```

7. Retrieve how many craft items are available and how many have been ordered, helping track craft supplies.

```
CREATE VIEW CraftInventorySummary AS
       SELECT c.craft_id,
              c.craft_name,
              i.quantity AS inventory_quantity,
              COALESCE(SUM(co.quantity), 0) AS total_ordered_quantity
       FROM crafts c
       LEFT JOIN inventories i ON c.craft_id = i.craft_id
       LEFT JOIN crafts_orders co ON c.craft_id = co.craft_id
       GROUP BY c.craft_id, c.craft_name, i.quantity;
```

```sql
8. Retrieve the list of employees with their department.

CREATE VIEW EmployeeDepartmentSummary AS
	SELECT e.employee_id,
		e.first_name,
		e.last_name,
		d.department_id,
		d.department_name
	FROM employees e
	LEFT JOIN departments d ON e.department_id = d.department_id;

9. Retrieve the list of employees and the quantity of craft sold.

SELECT e.employee_id, CONCAT(e.first_name, ' ', e.last_name) AS "Full Name",
	co.quantity,
	co.craft_id
FROM employees AS e
	JOIN orders AS q USING (employee_id)
	JOIN crafts_orders AS co USING(order_id);

10. warehouse with highest capacity in a specific province

CREATE VIEW highest_warehouse_capacity AS
SELECT w.warehouse_id, w.warehouse_name, w.address, w.capacity, z.zip_code, z.city,
z.province, z.country
FROM warehouses w
JOIN zips z ON w.zip_code = z.zip_code
WHERE z.province = 'Ontario'
AND w.capacity = (
    SELECT MAX(capacity)
    FROM warehouse_details
);

11. Retrieve warehouse details with the capacity in a specific city

SELECT w.warehouse_id, w.warehouse_name, w.address, w.capacity, z.zip_code, z.city,
z.province, z.country
FROM warehouses w
	JOIN zips z ON w.zip_code = z.zip_code;
WHERE city = 'Toronto';

12. Retrieve the number of warehouses per province

SELECT z.province, COUNT(w.warehouse_id) AS "Number of warehouses"
FROM warehouses AS w
	INNER JOIN zips AS z USING (zip_code)
GROUP BY z.province;
```