Alfred Ashley F. Andrion Information Management

Summative Assessment

IM# 1

COMPANY Hopping

• Project Context

Many businesses still need to manually manage their inventory, which can lead to operational challenges such as an incorrect listing of products due to miscommunication between the business owner and supplier. Their systems still use manual order processing, which only automatically sends invoice orders to suppliers, resulting in a lot of time and effort spent manually processing orders. Lastly, these systems require a separate communication system to handle business transactions, which can take time and effort.

My friend founded the online clothing store VultureRockPH at the beginning of 2018. He developed the website through Shopify because he had no prior experience with web programming and instead relied on drag-and-drop design. The problem is that even though it is a website, he does the transactions manually, like making the invoice, reaching out to the customer whenever he needs to confirm payment, and the like through social media platforms or phone calls. He is also unsure when contacting his supplier every time his products run out because it is always possible that the supplier does not have any available stock of the product he needs. Then an idea came to my mind, "why don't I ask him if there are other problems I could analyze and could be the basis of my project." Therefore, I contacted him through discord, where he is usually online. Other than the problems mentioned above, he said that he does the inventory manually, and his supplier cannot directly view the things within the website because he is the only one who has access, which is why he always reaches out when he needs to. With the issues mentioned above in mind, I asked him if I could use his problems as a springboard for developing an inventory management system that could be integrated into any business using his apparel website as the groundwork. He agreed, so I thought about creating a simple database to record the suppliers' information and the products he wanted to surveil. The supplier can directly add products and information, and the admin (owner of the business) can monitor it along with the supplier. Whenever the quantity of the products is low, they can add more while lessening the hassle of contacting the supplier directly/manually. That practice can be normalized if they agree to monitor the inventory regularly.

The objective of this project is to create an inventory management website in PHP so that and connect it through the Xampp database. The database would be composed of 3 tables, tbl_supplier, tbl_products, and tbl_category. under tbl_suppler, it has columns for supplier_id, company_name, user_name, user_password, user_address, contact_info. Under tbl_products, it has columns for prod_id, prod_name, prod_category, supplier_id, prod_price, prod_quantity. and lastly under tbl_category, prod_category and prod_id. The database will have a login page for the supplier and the admin, where they will be redirected to separate pages, "Admin Screen" and "Supplier Screen." The Admin Screen will allow the admin to view the list of suppliers and products, and perform simple CRUD operations on the data within the database. The Supplier

Screen will only allow the supplier to add products and perform CRUD operations on a selected product within the table. The system will also include a logout function on both interfaces.

• Project Goals and Objectives

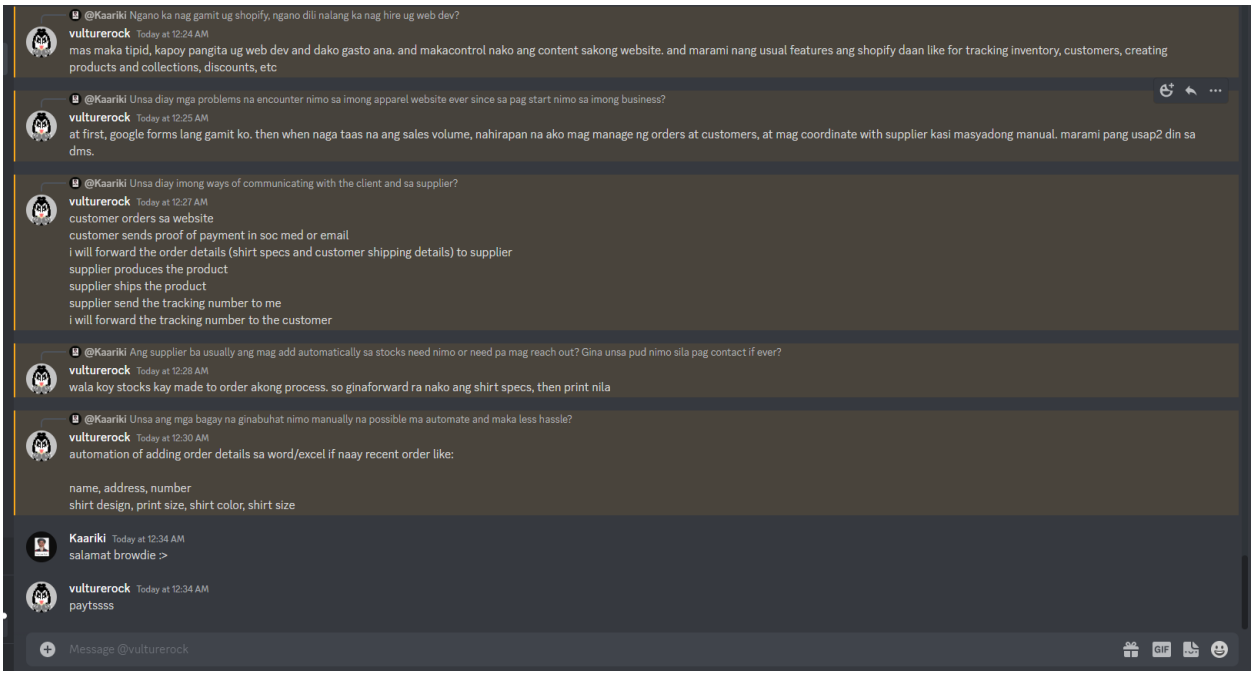
The project seeks to address the operational issues mentioned above using a computerized system. To be more precise, this project's aims are:

1. To create and put into practice a user-friendly interface.

2. To create a thorough inventory management program incorporating CRUD features for integration into existing systems.

3. To improve overall inventory and inventory-related management tasks.

• Documentation Images



Some of our conversations where done in a voice call and have not recorded it so the only thing that I can document is the chat.

IM#2

Business Rules or Business Requirements

Product Validation: The product ID must be unique and linked to a valid product.

Product Price Validation: The price of a product must be a positive, non-zero value.

Product Quantity Validation: The quantity of a product must be a positive, non-zero value.

Supplier-Product Link Validation: Each product must be linked to a valid supplier.

Supplier Validation: The supplier ID must be unique and linked to a valid supplier.

Supplier Address Validation: The supplier address must be a valid address format.

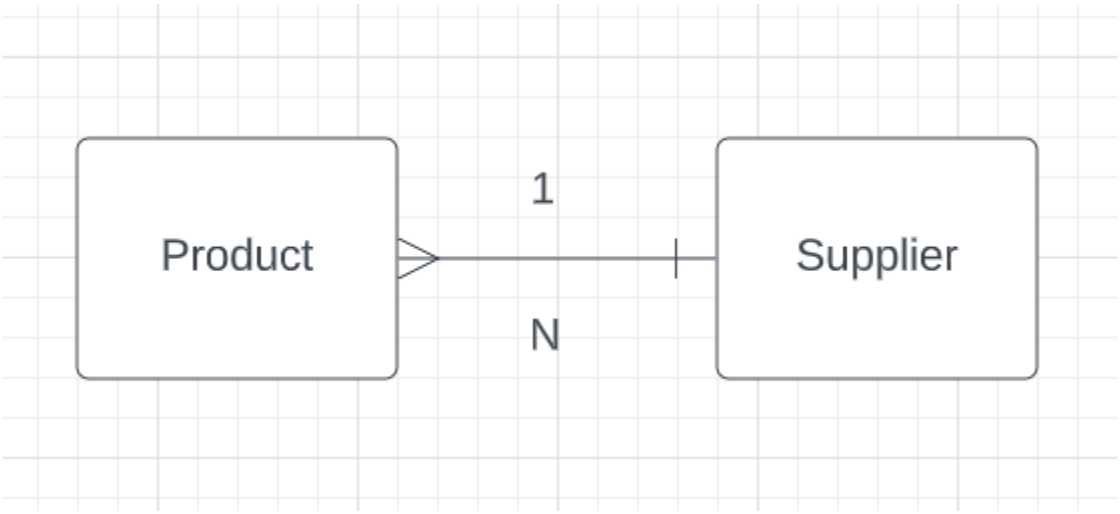
Supplier Contact Information Validation: The supplier contact information must be a valid contact information format.

Supplier Password Validation: The supplier password must be a secure password.

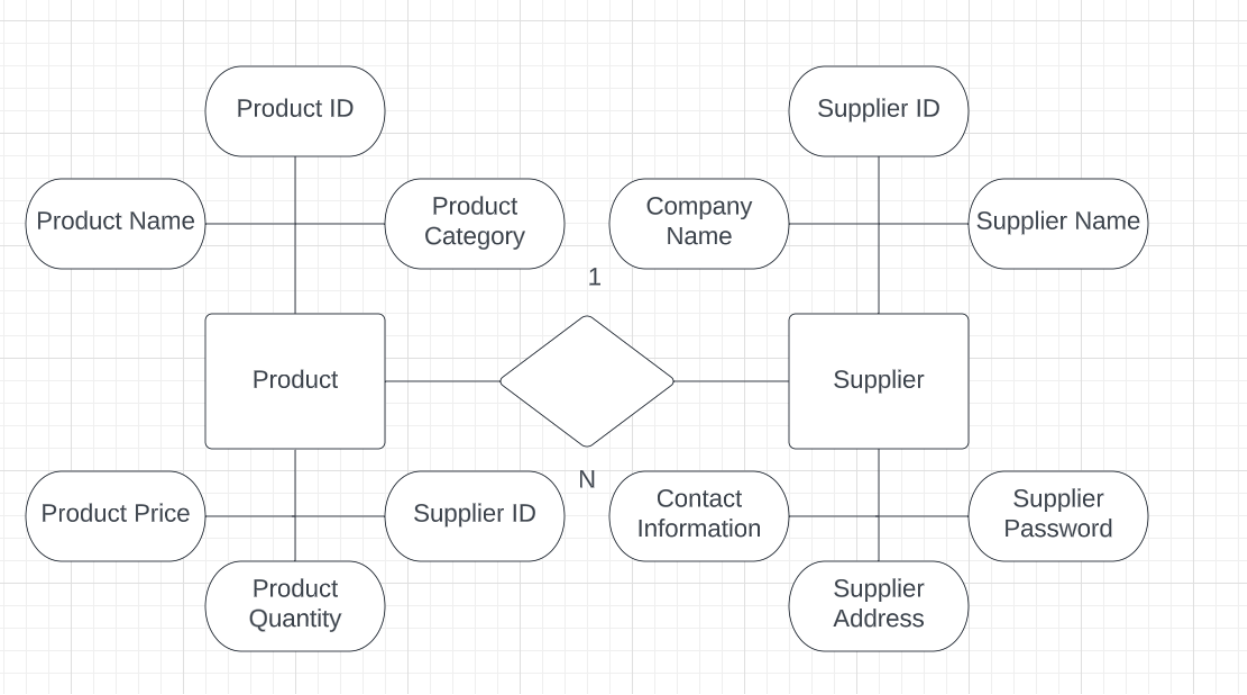
Supplier Name Validation: The supplier name must be a non-empty string.

Company Name Validation: The company name must be a non-empty string.

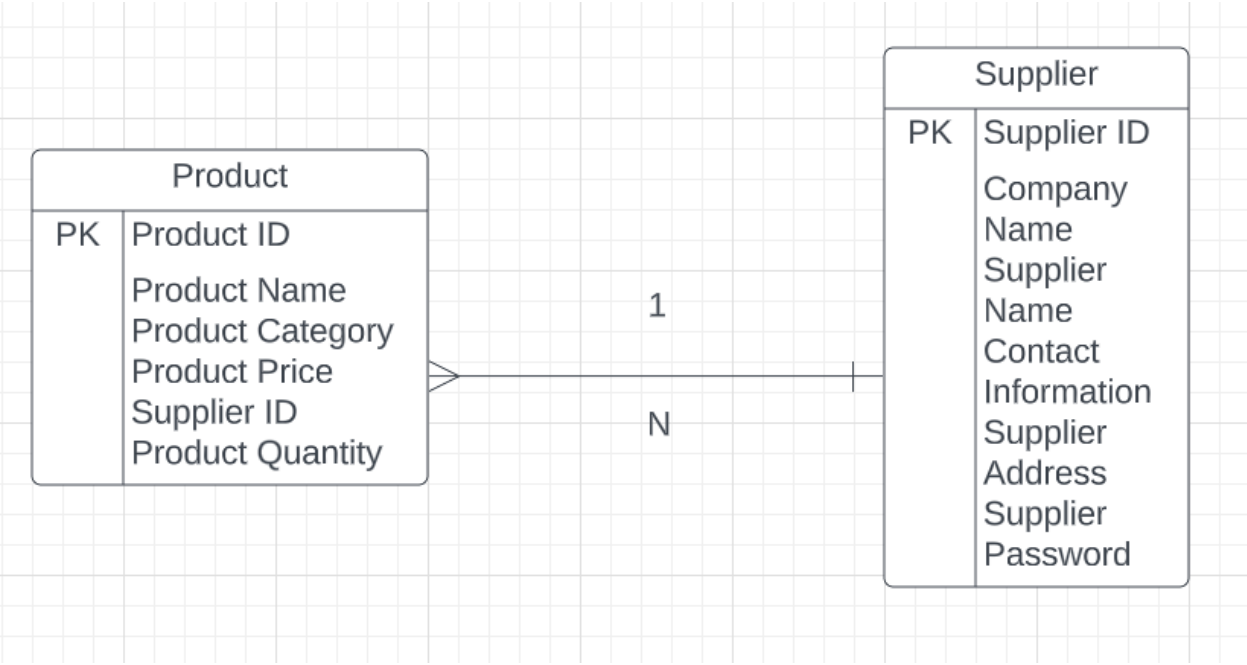
IM#3 – Data Models



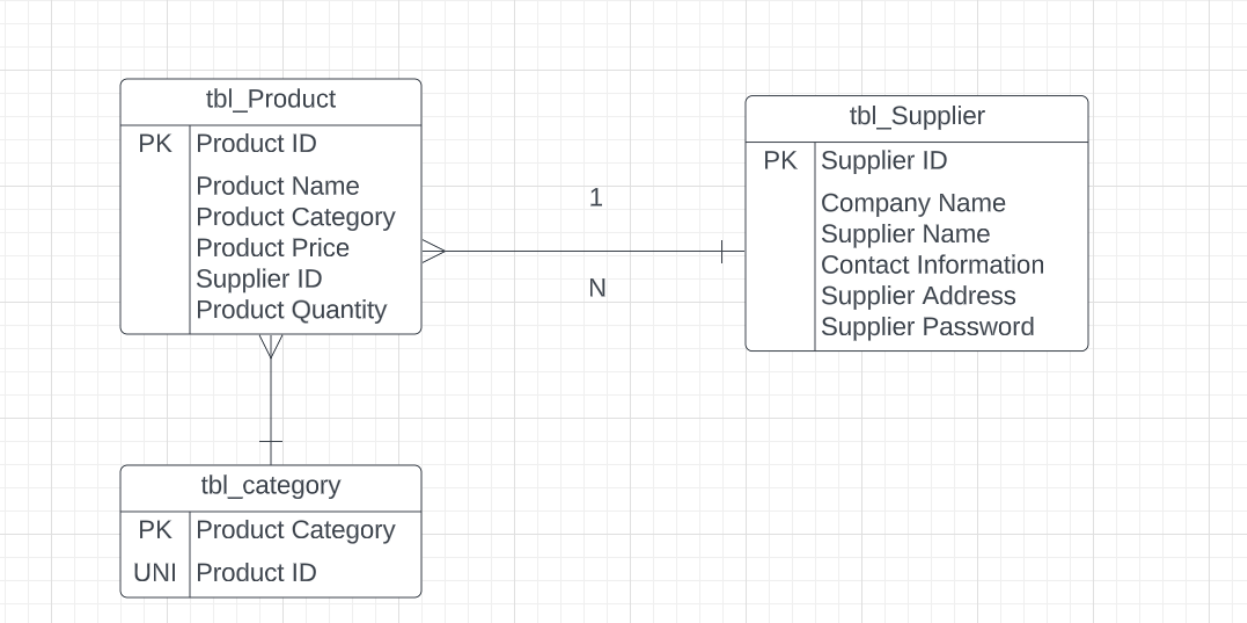
IM#4 ERD CHEN MODEL



IM#5 ERD Crow's Foot Model



IM#6 Normalization



IM#7.1 Data Definition Language (DDL)

CREATE with Primary Key and Foreign Key

```
MariaDB [db_andrion_m3project]> CREATE TABLE tbl_supplier (
    ->   supplier_id int(12) PRIMARY KEY,
    ->   company_name varchar(255),
    ->   user_name varchar(255),
    ->   user_password varchar(255),
    ->   user_address text,
    ->   contact_info varchar(255)
    -> );
Query OK, 0 rows affected (0.017 sec)
```

```
MariaDB [db_andrion_m3project]> CREATE TABLE tbl_category (
    ->   prod_category varchar(255) PRIMARY KEY,
    ->   prod_id int(5) UNIQUE
    -> );
Query OK, 0 rows affected (0.014 sec)
```

```
MariaDB [db_andrion_m3project]> CREATE TABLE tbl_product (
    ->   prod_id int(12) PRIMARY KEY,
    ->   prod_name char(50),
    ->   prod_category varchar(255),
    ->   supplier_id int(12),
    ->   prod_price float(10,2),
    ->   product_quantity int(4),
    ->   FOREIGN KEY (prod_category) REFERENCES tbl_category(prod_category),
    ->   FOREIGN KEY (supplier_id) REFERENCES tbl_supplier(supplier_id)
    -> );
Query OK, 0 rows affected (0.015 sec)
```

Alter

```
MariaDB [db_andrion_m3project]> ALTER TABLE tbl_product MODIFY product_quantity int(6);
Query OK, 0 rows affected (0.008 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Since I have already placed key constraints within the tables, I would need to edit it first so I can drop an existing table therefore that has constraints, so I decided to make use of a different table just to show the command “drop” and “truncate”.

```
MariaDB [db_andrion_m3project]> CREATE TABLE tbl_test (
    ->   id INT PRIMARY KEY AUTO_INCREMENT,
    ->   name VARCHAR(255),
    ->   email VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.015 sec)
```

Drop

```
MariaDB [db_andrion_m3project]> CREATE TABLE tbl_test (
    ->   id INT PRIMARY KEY AUTO_INCREMENT,
    ->   name VARCHAR(255),
    ->   email VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.012 sec)
```

```
MariaDB [db_andrion_m3project]> drop table tbl_test;
Query OK, 0 rows affected (0.009 sec)
```

Truncate

```
MariaDB [db_andrion_m3project]> INSERT INTO tbl_test (name, email)
    -> VALUES ('John Doe', 'john.doe@example.com');
Query OK, 1 row affected (0.005 sec)
```

```
MariaDB [db_andrion_m3project]> truncate table tbl_test;
Query OK, 0 rows affected (0.017 sec)
```

IM#7.2 Data Dictionary

```
MariaDB [db_andrion_m3project]> desc tbl_supplier;
+---------------+--------------+------+-----+---------+-------+
| Field         | Type         | Null | Key | Default | Extra |
+---------------+--------------+------+-----+---------+-------+
| supplier_id   | int(12)      | NO   | PRI | NULL    |       |
| company_name  | varchar(255) | YES  |     | NULL    |       |
| user_name     | varchar(255) | YES  |     | NULL    |       |
| user_password | varchar(255) | YES  |     | NULL    |       |
| user_address  | text         | YES  |     | NULL    |       |
| contact_info  | varchar(255) | YES  |     | NULL    |       |
+---------------+--------------+------+-----+---------+-------+
6 rows in set (0.003 sec)

MariaDB [db_andrion_m3project]> desc tbl_product;
+------------------+--------------+------+-----+---------+-------+
| Field            | Type         | Null | Key | Default | Extra |
+------------------+--------------+------+-----+---------+-------+
| prod_id          | int(12)      | NO   | PRI | NULL    |       |
| prod_name        | char(50)     | YES  |     | NULL    |       |
| prod_category    | varchar(255) | YES  | MUL | NULL    |       |
| supplier_id      | int(12)      | YES  | MUL | NULL    |       |
| prod_price       | float(10,2)  | YES  |     | NULL    |       |
| product_quantity | int(6)       | YES  |     | NULL    |       |
+------------------+--------------+------+-----+---------+-------+
6 rows in set (0.003 sec)

MariaDB [db_andrion_m3project]> desc tbl_category;
+---------------+--------------+------+-----+---------+-------+
| Field         | Type         | Null | Key | Default | Extra |
+---------------+--------------+------+-----+---------+-------+
| prod_category | varchar(255) | NO   | PRI | NULL    |       |
| prod_id       | int(5)       | YES  | UNI | NULL    |       |
+---------------+--------------+------+-----+---------+-------+
2 rows in set (0.003 sec)
```

IM#7.3 Data Manipulation Language (DML)
tbl_category

INSERT

```
MariaDB [db_andrion_m3project]> INSERT INTO tbl_category (prod_category, prod_id) VALUES ('Toys', 1);
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_category (prod_category, prod_id) VALUES ('Cars', 2);
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_category (prod_category, prod_id) VALUES ('Bikes', 3);
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_category (prod_category, prod_id) VALUES ('Food', 4);
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_category (prod_category, prod_id) VALUES ('Drinks', 5);
Query OK, 1 row affected (0.005 sec)
```

UPDATE

```
MariaDB [db_andrion_m3project]> update tbl_category set prod_category='Hoodies' where prod_id=1;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> update tbl_category set prod_category='Tshirts' where prod_id=2;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> update tbl_category set prod_category=' Longsleeves' where prod_id=3;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> update tbl_category set prod_category='Polos' where prod_id=4;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> update tbl_category set prod_category='Sleeveless' where prod_id=5;
Query OK, 1 row affected (0.004 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

SELECT

```
MariaDB [db_andrion_m3project]> SELECT prod_category, prod_id
    -> FROM tbl_category
    -> WHERE prod_id = 1;
+---------------+---------+
| prod_category | prod_id |
+---------------+---------+
| Hoodies       |       1 |
+---------------+---------+
1 row in set (0.003 sec)

MariaDB [db_andrion_m3project]>
MariaDB [db_andrion_m3project]> SELECT prod_category, prod_id
    -> FROM tbl_category
    -> WHERE prod_id = 2;
+---------------+---------+
| prod_category | prod_id |
+---------------+---------+
| Tshirts       |       2 |
+---------------+---------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> SELECT prod_category, prod_id
    -> FROM tbl_category
    -> WHERE prod_id = 3;
+---------------+---------+
| prod_category | prod_id |
+---------------+---------+
|  Longsleeves  |       3 |
+---------------+---------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> SELECT prod_category, prod_id
    -> FROM tbl_category
    -> WHERE prod_id = 4;
+---------------+---------+
| prod_category | prod_id |
+---------------+---------+
| Polos         |       4 |
+---------------+---------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> SELECT prod_category, prod_id
    -> FROM tbl_category
    -> WHERE prod_id = 5;
+---------------+---------+
| prod_category | prod_id |
+---------------+---------+
| Sleeveless    |       5 |
+---------------+---------+
1 row in set (0.000 sec)
```

DELETE

```
MariaDB [db_andrion_m3project]> DELETE FROM tbl_category WHERE prod_id = 1;
Query OK, 1 row affected (0.004 sec)

MariaDB [db_andrion_m3project]> DELETE FROM tbl_category WHERE prod_id = 2;
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> DELETE FROM tbl_category WHERE prod_id = 3;
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> DELETE FROM tbl_category WHERE prod_id = 4;
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> DELETE FROM tbl_category WHERE prod_id = 5;
Query OK, 1 row affected (0.003 sec)
```

tbl_supplier

INSERT

```
MariaDB [db_andrion_m3project]> INSERT INTO tbl_supplier (supplier_id, company_name, user_name, user_password, user_address, contact_info)
    -> VALUES (1, 'Company 1', 'username1', 'password1', 'Address 1', 'Contact Info 1');
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_supplier (supplier_id, company_name, user_name, user_password, user_address, contact_info)
    -> VALUES (2, 'Company 2', 'username2', 'password2', 'Address 2', 'Contact Info 2');
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_supplier (supplier_id, company_name, user_name, user_password, user_address, contact_info)
    -> VALUES (3, 'Company 3', 'username3', 'password3', 'Address 3', 'Contact Info 3');
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]>
MariaDB [db_andrion_m3project]> INSERT INTO tbl_supplier (supplier_id, company_name, user_name, user_password, user_address, contact_info)
    -> VALUES (4, 'Company 4', 'username4', 'password4', 'Address 4', 'Contact Info 4');
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_supplier (supplier_id, company_name, user_name, user_password, user_address, contact_info)
    -> VALUES (5, 'Company 5', 'username5', 'password5', 'Address 5', 'Contact Info 5');
Query OK, 1 row affected (0.003 sec)
```

UPDATE

```
MariaDB [db_andrion_m3project]> UPDATE tbl_supplier SET company_name = 'New Company Name 1', user_address = 'New Address 1' WHERE supplier_id = 1;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> UPDATE tbl_supplier SET company_name = 'New Company Name 2', user_address = 'New Address 2' WHERE supplier_id = 2;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> UPDATE tbl_supplier SET company_name = 'New Company Name 3', user_address = 'New Address 3' WHERE supplier_id = 3;
Query OK, 1 row affected (0.003 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> UPDATE tbl_supplier SET company_name = 'New Company Name 4', user_address = 'New Address 4' WHERE supplier_id = 4;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> UPDATE tbl_supplier SET company_name = 'New Company Name 5', user_address = 'New Address 5' WHERE supplier_id = 5;
Query OK, 1 row affected (0.004 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

SELECT

```
MariaDB [db_andrion_m3project]> select company_name, user_address from tbl_supplier where supplier_id=1;
+--------------------+---------------+
| company_name       | user_address  |
+--------------------+---------------+
| New Company Name 1 | New Address 1 |
+--------------------+---------------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> select company_name, user_address from tbl_supplier where supplier_id=2;
+--------------------+---------------+
| company_name       | user_address  |
+--------------------+---------------+
| New Company Name 2 | New Address 2 |
+--------------------+---------------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> select company_name, user_address from tbl_supplier where supplier_id=3;
+--------------------+---------------+
| company_name       | user_address  |
+--------------------+---------------+
| New Company Name 3 | New Address 3 |
+--------------------+---------------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> select company_name, user_address from tbl_supplier where supplier_id=4;
+--------------------+---------------+
| company_name       | user_address  |
+--------------------+---------------+
| New Company Name 4 | New Address 4 |
+--------------------+---------------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> select company_name, user_address from tbl_supplier where supplier_id=5;
+--------------------+---------------+
| company_name       | user_address  |
+--------------------+---------------+
| New Company Name 5 | New Address 5 |
+--------------------+---------------+
1 row in set (0.000 sec)
```

DELETE

```
MariaDB [db_andrion_m3project]> DELETE FROM tbl_supplier WHERE  supplier_id = 1;
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> DELETE FROM tbl_supplier WHERE  supplier_id = 2;
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> DELETE FROM tbl_supplier WHERE  supplier_id = 3;
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> DELETE FROM tbl_supplier WHERE  supplier_id = 4;
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> DELETE FROM tbl_supplier WHERE  supplier_id = 5;
Query OK, 1 row affected (0.005 sec)
```

tbl_product

INSERT

```
MariaDB [db_andrion_m3project]> INSERT INTO tbl_product (prod_id, prod_name, prod_category, supplier_id, prod_price, product_quantity) VALUES (1, 'Product 1', 'Hoodies', 1, 10.50, 20);
Query OK, 1 row affected (0.004 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_product (prod_id, prod_name, prod_category, supplier_id, prod_price, product_quantity) VALUES (2, 'Product 2', 'Tshirts', 2, 20.00, 15);
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_product (prod_id, prod_name, prod_category, supplier_id, prod_price, product_quantity) VALUES (3, 'Product 3', 'Longsleeves', 3, 30.00, 25);
Query OK, 1 row affected (0.002 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_product (prod_id, prod_name, prod_category, supplier_id, prod_price, product_quantity) VALUES (4, 'Product 4', 'Polos', 4, 10.50, 20);
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> INSERT INTO tbl_product (prod_id, prod_name, prod_category, supplier_id, prod_price, product_quantity) VALUES (5, 'Product 5', 'Sleeveless', 5, 10.50, 20);
Query OK, 1 row affected (0.005 sec)
```

UPDATE

```
MariaDB [db_andrion_m3project]> UPDATE tbl_product
    -> SET prod_name = 'New Product 1', prod_price = 40.00
    -> WHERE prod_id = 1;
Query OK, 1 row affected (0.003 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> UPDATE tbl_product
    -> SET prod_name = 'New Product 1', prod_price = 50.00
    -> WHERE prod_id = 2;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> UPDATE tbl_product
    -> SET prod_name = 'New Product 1', prod_price = 60.00
    -> WHERE prod_id = 3;
Query OK, 1 row affected (0.003 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> UPDATE tbl_product
    -> SET prod_name = 'New Product 1', prod_price = 70.00
    -> WHERE prod_id = 4;
Query OK, 1 row affected (0.003 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [db_andrion_m3project]> UPDATE tbl_product
    -> SET prod_name = 'New Product 1', prod_price = 80.00
    -> WHERE prod_id = 5;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

SELECT

```
MariaDB [db_andrion_m3project]> select prod_name, prod_category, supplier_id, product_quantity from tbl_product where prod_id=1;
+--------------+---------------+-------------+------------------+
| prod_name    | prod_category | supplier_id | product_quantity |
+--------------+---------------+-------------+------------------+
| New Product 1 | Hoodies       |           1 |               20 |
+--------------+---------------+-------------+------------------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> select prod_name, prod_category, supplier_id, product_quantity from tbl_product where prod_id=2;
+--------------+---------------+-------------+------------------+
| prod_name    | prod_category | supplier_id | product_quantity |
+--------------+---------------+-------------+------------------+
| New Product 1 | Tshirts       |           2 |               15 |
+--------------+---------------+-------------+------------------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> select prod_name, prod_category, supplier_id, product_quantity from tbl_product where prod_id=3;
+--------------+---------------+-------------+------------------+
| prod_name    | prod_category | supplier_id | product_quantity |
+--------------+---------------+-------------+------------------+
| New Product 1 | Longsleeves   |           3 |               25 |
+--------------+---------------+-------------+------------------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> select prod_name, prod_category, supplier_id, product_quantity from tbl_product where prod_id=4;
+--------------+---------------+-------------+------------------+
| prod_name    | prod_category | supplier_id | product_quantity |
+--------------+---------------+-------------+------------------+
| New Product 1 | Polos         |           4 |               20 |
+--------------+---------------+-------------+------------------+
1 row in set (0.000 sec)

MariaDB [db_andrion_m3project]> select prod_name, prod_category, supplier_id, product_quantity from tbl_product where prod_id=5;
+--------------+---------------+-------------+------------------+
| prod_name    | prod_category | supplier_id | product_quantity |
+--------------+---------------+-------------+------------------+
| New Product 1 | Sleeveless    |           5 |               20 |
+--------------+---------------+-------------+------------------+
1 row in set (0.000 sec)
```

DELETE

```
MariaDB [db_andrion_m3project]> delete from tbl_product where prod_id=1;
Query OK, 1 row affected (0.002 sec)

MariaDB [db_andrion_m3project]> delete from tbl_product where prod_id=2;
Query OK, 1 row affected (0.003 sec)

MariaDB [db_andrion_m3project]> delete from tbl_product where prod_id=3;
Query OK, 1 row affected (0.005 sec)

MariaDB [db_andrion_m3project]> delete from tbl_product where prod_id=4;
Query OK, 1 row affected (0.002 sec)

MariaDB [db_andrion_m3project]> delete from tbl_product where prod_id=5;
Query OK, 1 row affected (0.005 sec)
```

IM#7.4 Simple Queries

1. INSERT into SELECT.

```
MariaDB [db_andrion_m3project]> INSERT INTO tbl_product (prod_id, prod_name, prod_category, supplier_id, prod_price, product_quantity)
    -> SELECT 6, 'New Product', 'Hoodies', 1, 19.99, 50
    -> FROM tbl_supplier
    -> WHERE company_name = 'Company 1';
Query OK, 1 row affected (0.004 sec)
Records: 1  Duplicates: 0  Warnings: 0
```

```
MariaDB [db_andrion_m3project]> INSERT INTO tbl_category (prod_category, prod_id)
    -> SELECT 'New Tees', 6
    -> FROM tbl_product
    -> where prod_name= 'New Product';
Query OK, 1 row affected (0.003 sec)
Records: 1  Duplicates: 0  Warnings: 0
```

2. SELECT using each aggregate function {MIN, MAX, SUM, AVG, COUNT, DISTINCT}.

MIN

```
MariaDB [db_andrion_m3project]> SELECT MIN(prod_price) as min_price
    -> FROM tbl_product;
+-----------+
| min_price |
+-----------+
|     10.50 |
+-----------+
1 row in set (0.002 sec)
```

```
MariaDB [db_andrion_m3project]> select min(product_quantity) as min_quantity from tbl_product;
+--------------+
| min_quantity |
+--------------+
|           15 |
+--------------+
1 row in set (0.000 sec)
```

MAX

```
MariaDB [db_andrion_m3project]> SELECT MAX(product_quantity) as max_quantity
    -> FROM tbl_product;
+--------------+
| max_quantity |
+--------------+
|           50 |
+--------------+
1 row in set (0.003 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT MAX(prod_price)
    -> FROM tbl_product;
+-----------------+
| MAX(prod_price) |
+-----------------+
|           30.00 |
+-----------------+
1 row in set (0.000 sec)
```

SUM

```
MariaDB [db_andrion_m3project]> SELECT supplier_id, SUM(prod_price * product_quantity) as total_sales
    -> FROM tbl_product
    -> GROUP BY supplier_id;
+-------------+-------------+
| supplier_id | total_sales |
+-------------+-------------+
|           1 |     1209.50 |
|           2 |      300.00 |
|           3 |      750.00 |
|           4 |      210.00 |
|           5 |      210.00 |
+-------------+-------------+
5 rows in set (0.004 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT SUM(product_quantity)
    -> FROM tbl_product;
+------------------------+
| SUM(product_quantity) |
+------------------------+
|                    150 |
+------------------------+
1 row in set (0.000 sec)
```

AVG

```
MariaDB [db_andrion_m3project]> SELECT AVG(prod_price) as avg_price
    -> FROM tbl_product;
+------------+
| avg_price |
+------------+
| 16.915000 |
+------------+
1 row in set (0.002 sec)
```

```
MariaDB [db_andrion_m3project]> select avg(product_quantity) as average_quantity from tbl_product;
+------------------+
| average_quantity |
+------------------+
|          25.0000 |
+------------------+
1 row in set (0.002 sec)
```

COUNT

```
MariaDB [db_andrion_m3project]> SELECT COUNT(DISTINCT supplier_id) as num_suppliers
    -> FROM tbl_product;
+---------------+
| num_suppliers |
+---------------+
|             5 |
+---------------+
1 row in set (0.003 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT COUNT(prod_id)
    -> FROM tbl_product;
+----------------+
| COUNT(prod_id) |
+----------------+
|              6 |
+----------------+
1 row in set (0.000 sec)
```

DISTINCT

```
MariaDB [db_andrion_m3project]> SELECT DISTINCT prod_category
    -> FROM tbl_product;
+---------------+
| prod_category |
+---------------+
| Hoodies       |
| Longsleeves   |
| Polos         |
| Sleeveless    |
| Tshirts       |
+---------------+
5 rows in set (0.004 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT DISTINCT supplier_id
    -> FROM tbl_product;
+-------------+
| supplier_id |
+-------------+
|           1 |
|           2 |
|           3 |
|           4 |
|           5 |
+-------------+
5 rows in set (0.000 sec)
```

3. SELECT…WHERE data filter. Relational Operators {<,>,=,<> or !=}, Logical Operators {AND, OR, NOT}, other command filters {IN, BETWEEN, LIKE, LIMIT, IS NULL}.
Relational Operators:

<

```
MariaDB [db_andrion_m3project]> select *from tbl_product where prod_price < 50;
+---------+-------------+---------------+-------------+------------+------------------+
| prod_id | prod_name   | prod_category | supplier_id | prod_price | product_quantity |
+---------+-------------+---------------+-------------+------------+------------------+
|       1 | Product 1   | Hoodies       |           1 |      10.50 |               20 |
|       2 | Product 2   | Tshirts       |           2 |      20.00 |               15 |
|       3 | Product 3   | Longsleeves   |           3 |      30.00 |               25 |
|       4 | Product 4   | Polos         |           4 |      10.50 |               20 |
|       5 | Product 5   | Sleeveless    |           5 |      10.50 |               20 |
|       6 | New Product | Hoodies       |           1 |      19.99 |               50 |
+---------+-------------+---------------+-------------+------------+------------------+
6 rows in set (0.002 sec)
```

```
MariaDB [db_andrion_m3project]> select *from tbl_product where product_quantity < 30;
+---------+-----------+---------------+-------------+------------+------------------+
| prod_id | prod_name | prod_category | supplier_id | prod_price | product_quantity |
+---------+-----------+---------------+-------------+------------+------------------+
|       1 | Product 1 | Hoodies       |           1 |      10.50 |               20 |
|       2 | Product 2 | Tshirts       |           2 |      20.00 |               15 |
|       3 | Product 3 | Longsleeves   |           3 |      30.00 |               25 |
|       4 | Product 4 | Polos         |           4 |      10.50 |               20 |
|       5 | Product 5 | Sleeveless    |           5 |      10.50 |               20 |
+---------+-----------+---------------+-------------+------------+------------------+
5 rows in set (0.000 sec)
```

>

```
MariaDB [db_andrion_m3project]> SELECT *
    -> FROM tbl_product
    -> WHERE prod_price > 50;
Empty set (0.004 sec)
```

```
MariaDB [db_andrion_m3project]> select *from tbl_product where product_quantity > 30
    -> ;
+---------+-------------+---------------+-------------+------------+------------------+
| prod_id | prod_name   | prod_category | supplier_id | prod_price | product_quantity |
+---------+-------------+---------------+-------------+------------+------------------+
|       6 | New Product | Hoodies       |           1 |      19.99 |               50 |
+---------+-------------+---------------+-------------+------------+------------------+
1 row in set (0.000 sec)
```

=

```
MariaDB [db_andrion_m3project]> SELECT *
    -> FROM tbl_product
    -> WHERE prod_category = 'Hoodies';
+---------+-------------+---------------+-------------+------------+------------------+
| prod_id | prod_name   | prod_category | supplier_id | prod_price | product_quantity |
+---------+-------------+---------------+-------------+------------+------------------+
|       1 | Product 1   | Hoodies       |           1 |      10.50 |               20 |
|       6 | New Product | Hoodies       |           1 |      19.99 |               50 |
+---------+-------------+---------------+-------------+------------+------------------+
2 rows in set (0.004 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT *
    -> FROM tbl_product
    -> WHERE prod_category = 'Polos';
+---------+-----------+---------------+-------------+------------+------------------+
| prod_id | prod_name | prod_category | supplier_id | prod_price | product_quantity |
+---------+-----------+---------------+-------------+------------+------------------+
|       4 | Product 4 | Polos         |           4 |      10.50 |               20 |
+---------+-----------+---------------+-------------+------------+------------------+
1 row in set (0.000 sec)
```

<> Or !=

```
MariaDB [db_andrion_m3project]> SELECT *
    -> FROM tbl_product
    -> WHERE prod_price != 10.00;
+---------+-------------+---------------+-------------+------------+------------------+
| prod_id | prod_name   | prod_category | supplier_id | prod_price | product_quantity |
+---------+-------------+---------------+-------------+------------+------------------+
|       1 | Product 1   | Hoodies       |           1 |      10.50 |               20 |
|       2 | Product 2   | Tshirts       |           2 |      20.00 |               15 |
|       3 | Product 3   | Longsleeves   |           3 |      30.00 |               25 |
|       4 | Product 4   | Polos         |           4 |      10.50 |               20 |
|       5 | Product 5   | Sleeveless    |           5 |      10.50 |               20 |
|       6 | New Product | Hoodies       |           1 |      19.99 |               50 |
+---------+-------------+---------------+-------------+------------+------------------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT prod_name, prod_price
    -> FROM tbl_product
    -> WHERE supplier_id != 3;
+-------------+------------+
| prod_name   | prod_price |
+-------------+------------+
| Product 1   |      10.50 |
| Product 2   |      20.00 |
| Product 4   |      10.50 |
| Product 5   |      10.50 |
| New Product |      19.99 |
+-------------+------------+
5 rows in set (0.003 sec)
```

Logical Operators:

AND

```
MariaDB [db_andrion_m3project]> SELECT prod_name, prod_price
    -> FROM tbl_product
    -> WHERE supplier_id = 2 AND prod_price > 20.00;
Empty set (0.004 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT company_name, contact_info
    -> FROM tbl_supplier
    -> WHERE user_address LIKE '%Address 1%' AND user_name = 'username1';
+--------------+----------------+
| company_name | contact_info   |
+--------------+----------------+
| Company 1    | Contact Info 1 |
+--------------+----------------+
1 row in set (0.001 sec)
```

OR

```
MariaDB [db_andrion_m3project]> SELECT prod_name, prod_price
    -> FROM tbl_product
    -> WHERE prod_category = 'Hoodies' OR prod_category = 'Polos';
+-------------+------------+
| prod_name   | prod_price |
+-------------+------------+
| Product 1   |      10.50 |
| Product 4   |      10.50 |
| New Product |      19.99 |
+-------------+------------+
3 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT company_name, user_address
    -> FROM tbl_supplier
    -> WHERE user_address LIKE '%Address 2%' OR user_address LIKE '%Adress 3%';
+--------------+--------------+
| company_name | user_address |
+--------------+--------------+
| Company 2    | Address 2    |
+--------------+--------------+
1 row in set (0.000 sec)
```

NOT

```
MariaDB [db_andrion_m3project]> SELECT prod_name, prod_price
    -> FROM tbl_product
    -> WHERE NOT prod_price >= 10.00;
Empty set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT supplier_id, company_name
    -> FROM tbl_supplier
    -> WHERE NOT user_address LIKE '%Adress 1%';
+-------------+--------------+
| supplier_id | company_name |
+-------------+--------------+
|           1 | Company 1    |
|           2 | Company 2    |
|           3 | Company 3    |
|           4 | Company 4    |
|           5 | Company 5    |
+-------------+--------------+
5 rows in set (0.000 sec)
```

Command Filters:

IN

```
MariaDB [db_andrion_m3project]> SELECT prod_id, prod_name, prod_price
    -> FROM tbl_product
    -> WHERE prod_category IN ('Hoodies', 'Polos');
+---------+-------------+------------+
| prod_id | prod_name   | prod_price |
+---------+-------------+------------+
|       1 | Product 1   |      10.50 |
|       4 | Product 4   |      10.50 |
|       6 | New Product |      19.99 |
+---------+-------------+------------+
3 rows in set (0.004 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT supplier_id, company_name, contact_info
    -> FROM tbl_supplier
    -> WHERE supplier_id IN (1, 5, 3);
+-------------+--------------+----------------+
| supplier_id | company_name | contact_info   |
+-------------+--------------+----------------+
|           1 | Company 1    | Contact Info 1 |
|           3 | Company 3    | Contact Info 3 |
|           5 | Company 5    | Contact Info 5 |
+-------------+--------------+----------------+
3 rows in set (0.000 sec)
```

Between

```
MariaDB [db_andrion_m3project]> SELECT * FROM tbl_product
    -> WHERE prod_price BETWEEN 50 AND 100;
Empty set (0.003 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT prod_name, prod_price FROM tbl_product
    -> WHERE prod_price BETWEEN 1 AND 30;
+-------------+------------+
| prod_name   | prod_price |
+-------------+------------+
| Product 1   |      10.50 |
| Product 2   |      20.00 |
| Product 3   |      30.00 |
| Product 4   |      10.50 |
| Product 5   |      10.50 |
| New Product |      19.99 |
+-------------+------------+
6 rows in set (0.000 sec)
```

Like

```
MariaDB [db_andrion_m3project]> SELECT company_name, user_address FROM tbl_supplier
    -> WHERE user_address LIKE '%Address 1%';
+--------------+--------------+
| company_name | user_address |
+--------------+--------------+
| Company 1    | Address 1    |
+--------------+--------------+
1 row in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT * FROM tbl_product
    -> WHERE prod_name LIKE '%Hoodies%';
Empty set (0.000 sec)
```

Limit

```
MariaDB [db_andrion_m3project]> SELECT *
    -> FROM tbl_product
    -> LIMIT 3;
+---------+-----------+---------------+-------------+------------+------------------+
| prod_id | prod_name | prod_category | supplier_id | prod_price | product_quantity |
+---------+-----------+---------------+-------------+------------+------------------+
|       1 | Product 1 | Hoodies       |           1 |      10.50 |               20 |
|       2 | Product 2 | Tshirts       |           2 |      20.00 |               15 |
|       3 | Product 3 | Longsleeves   |           3 |      30.00 |               25 |
+---------+-----------+---------------+-------------+------------+------------------+
3 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> select *from tbl_category limit 2;
+---------------+---------+
| prod_category | prod_id |
+---------------+---------+
| Hoodies       |       1 |
| Tshirts       |       2 |
+---------------+---------+
2 rows in set (0.000 sec)
```

Is Null

```
MariaDB [db_andrion_m3project]> SELECT *
    -> FROM tbl_product
    -> WHERE prod_price IS NULL;
Empty set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT *
    -> FROM tbl_product
    -> WHERE product_quantity IS NULL;
Empty set (0.000 sec)
```

4. SELECT…WHERE data sorting/organizing. ORDER BY, GROUP BY, HAVING.

ORDER BY

```
MariaDB [db_andrion_m3project]> SELECT company_name, contact_info
    -> FROM tbl_supplier
    -> WHERE user_address LIKE '%Address 1%'
    -> ORDER BY company_name DESC;
+--------------+----------------+
| company_name | contact_info   |
+--------------+----------------+
| Company 1    | Contact Info 1 |
+--------------+----------------+
1 row in set (0.002 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT supplier_id, company_name
    -> FROM tbl_supplier
    -> WHERE user_address LIKE '%Address 2%'
    -> ORDER BY company_name DESC;
+-------------+--------------+
| supplier_id | company_name |
+-------------+--------------+
|           2 | Company 2    |
+-------------+--------------+
1 row in set (0.001 sec)
```

GROUP BY

```
MariaDB [db_andrion_m3project]> SELECT supplier_id, SUM(product_quantity)
    -> FROM tbl_product
    -> WHERE prod_price > 50
    -> GROUP BY supplier_id;
Empty set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT supplier_id, SUM(prod_price)
    -> FROM tbl_product
    -> WHERE product_quantity > 10
    -> GROUP BY supplier_id;
+-------------+-----------------+
| supplier_id | SUM(prod_price) |
+-------------+-----------------+
|           1 |           30.49 |
|           2 |           20.00 |
|           3 |           30.00 |
|           4 |           10.50 |
|           5 |           10.50 |
+-------------+-----------------+
5 rows in set (0.000 sec)
```

HAVING

```
MariaDB [db_andrion_m3project]> SELECT user_name, SUM(prod_price) as total_sales
    -> FROM tbl_product
    -> INNER JOIN tbl_supplier ON tbl_product.supplier_id = tbl_supplier.supplier_id
    -> GROUP BY user_name
    -> HAVING SUM(prod_price) > 1000;
Empty set (0.002 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT prod_id, SUM(prod_price)
    -> FROM tbl_product
    -> GROUP BY prod_id
    -> HAVING SUM(prod_price) < 50;
+---------+-----------------+
| prod_id | SUM(prod_price) |
+---------+-----------------+
|       1 |           10.50 |
|       2 |           20.00 |
|       3 |           30.00 |
|       4 |           10.50 |
|       5 |           10.50 |
|       6 |           19.99 |
+---------+-----------------+
6 rows in set (0.000 sec)
```

IM#7.5 Complex Queries

1. Combine any SQL commands based on your previous knowledge.

```
MariaDB [db_andrion_m3project]> SELECT
    ->     tbl_category.prod_category,
    ->     SUM(tbl_product.prod_price * tbl_product.product_quantity) AS total_sales
    -> FROM
    ->     tbl_category
    ->     JOIN tbl_product ON tbl_category.prod_id = tbl_product.prod_id
    -> GROUP BY
    ->     tbl_category.prod_category
    -> HAVING
    ->     total_sales > 100
    -> ORDER BY
    ->     total_sales DESC;
+---------------+-------------+
| prod_category | total_sales |
+---------------+-------------+
| New Tees      |      999.50 |
| Longsleeves   |      750.00 |
| Tshirts       |      300.00 |
| Hoodies       |      210.00 |
| Polos         |      210.00 |
| Sleeveless    |      210.00 |
+---------------+-------------+
6 rows in set (0.001 sec)
```

```
MariaDB [db_andrion_m3project]> select *from tbl_product where prod_id<>2 and supplier_id between 2 and 5;
+---------+-----------+---------------+-------------+------------+------------------+
| prod_id | prod_name | prod_category | supplier_id | prod_price | product_quantity |
+---------+-----------+---------------+-------------+------------+------------------+
|       3 | Product 3 | Longsleeves   |           3 |      30.00 |               25 |
|       4 | Product 4 | Polos         |           4 |      10.50 |               20 |
|       5 | Product 5 | Sleeveless    |           5 |      10.50 |               20 |
+---------+-----------+---------------+-------------+------------+------------------+
3 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> select count(product_quantity) from tbl_product where supplier_id between 1 and 3;
+------------------------+
| count(product_quantity) |
+------------------------+
|                      4 |
+------------------------+
1 row in set (0.000 sec)
```

2. Perform subquery to any of your tables. Like using an aggregate function and/or combing data or information of two or more tables.

```
MariaDB [db_andrion_m3project]> SELECT tbl_product.prod_name, tbl_category.prod_category
    -> FROM tbl_product
    -> INNER JOIN tbl_category
    -> ON tbl_product.prod_category = tbl_category.prod_category
    -> WHERE tbl_product.prod_price = (SELECT MAX(prod_price)
    ->                                 FROM tbl_product);
+-----------+---------------+
| prod_name | prod_category |
+-----------+---------------+
| Product 3 | Longsleeves   |
+-----------+---------------+
1 row in set (0.005 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT supplier_id,
    ->        (SELECT AVG(prod_price)
    ->         FROM tbl_product
    ->         WHERE tbl_product.supplier_id = tbl_supplier.supplier_id) AS avg_product_price
    -> FROM tbl_supplier;
+-------------+--------------------+
| supplier_id | avg_product_price |
+-------------+--------------------+
|           1 |          15.245000 |
|           2 |          20.000000 |
|           3 |          30.000000 |
|           4 |          10.500000 |
|           5 |          10.500000 |
+-------------+--------------------+
5 rows in set (0.004 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_product.prod_name, tbl_product.prod_price, tbl_supplier.company_name
    -> FROM tbl_product
    -> INNER JOIN tbl_supplier
    -> ON tbl_product.supplier_id = tbl_supplier.supplier_id
    -> ;
+-------------+------------+--------------+
| prod_name   | prod_price | company_name |
+-------------+------------+--------------+
| Product 1   |      10.50 | Company 1    |
| Product 2   |      20.00 | Company 2    |
| Product 3   |      30.00 | Company 3    |
| Product 4   |      10.50 | Company 4    |
| Product 5   |      10.50 | Company 5    |
| New Product |      19.99 | Company 1    |
+-------------+------------+--------------+
6 rows in set (0.000 sec)
```

IM#8 – Advanced SQL: Joins and Views

Provide [atleast 5 of each] a screenshot of your queries invoked based on the following query specifications:

OUTER JOINS - LEFT JOIN

```
MariaDB [db_andrion_m3project]> SELECT tbl_product.prod_name, tbl_supplier.company_name
    -> FROM tbl_product
    -> LEFT JOIN tbl_supplier
    -> ON tbl_product.supplier_id = tbl_supplier.supplier_id;
+-------------+--------------+
| prod_name   | company_name |
+-------------+--------------+
| Product 1   | Company 1    |
| Product 2   | Company 2    |
| Product 3   | Company 3    |
| Product 4   | Company 4    |
| Product 5   | Company 5    |
| New Product | Company 1    |
+-------------+--------------+
6 rows in set (0.002 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_category.prod_category, tbl_product.prod_name, tbl_product.prod_price
    -> FROM tbl_category
    -> LEFT JOIN tbl_product
    -> ON tbl_category.prod_id = tbl_product.prod_id;
+---------------+-------------+------------+
| prod_category | prod_name   | prod_price |
+---------------+-------------+------------+
| Hoodies       | Product 1   |      10.50 |
| Tshirts       | Product 2   |      20.00 |
| Longsleeves   | Product 3   |      30.00 |
| Polos         | Product 4   |      10.50 |
| Sleeveless    | Product 5   |      10.50 |
| New Tees      | New Product |      19.99 |
+---------------+-------------+------------+
6 rows in set (0.001 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_product.prod_name, tbl_product.prod_price, tbl_supplier.user_name
    -> FROM tbl_product
    -> LEFT JOIN tbl_supplier
    -> ON tbl_product.supplier_id = tbl_supplier.supplier_id;
+-------------+------------+-----------+
| prod_name   | prod_price | user_name |
+-------------+------------+-----------+
| Product 1   |      10.50 | username1 |
| Product 2   |      20.00 | username2 |
| Product 3   |      30.00 | username3 |
| Product 4   |      10.50 | username4 |
| Product 5   |      10.50 | username5 |
| New Product |      19.99 | username1 |
+-------------+------------+-----------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_category.prod_category, SUM(tbl_product.product_quantity) as total_quantity
    -> FROM tbl_category
    -> LEFT JOIN tbl_product
    -> ON tbl_category.prod_id = tbl_product.prod_id
    -> GROUP BY tbl_category.prod_category;
+---------------+----------------+
| prod_category | total_quantity |
+---------------+----------------+
| Hoodies       |             20 |
| Longsleeves   |             25 |
| New Tees      |             50 |
| Polos         |             20 |
| Sleeveless    |             20 |
| Tshirts       |             15 |
+---------------+----------------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_supplier.company_name, tbl_product.prod_name, tbl_product.prod_price
    -> FROM tbl_supplier
    -> LEFT JOIN tbl_product
    -> ON tbl_supplier.supplier_id = tbl_product.supplier_id;
+--------------+-------------+------------+
| company_name | prod_name   | prod_price |
+--------------+-------------+------------+
| Company 1    | Product 1   |      10.50 |
| Company 1    | New Product |      19.99 |
| Company 2    | Product 2   |      20.00 |
| Company 3    | Product 3   |      30.00 |
| Company 4    | Product 4   |      10.50 |
| Company 5    | Product 5   |      10.50 |
+--------------+-------------+------------+
6 rows in set (0.000 sec)
```

OUTER JOINS - RIGHT JOIN

```
MariaDB [db_andrion_m3project]> SELECT tbl_product.prod_name, tbl_supplier.company_name
    -> FROM tbl_product
    -> RIGHT JOIN tbl_supplier
    -> ON tbl_product.supplier_id = tbl_supplier.supplier_id;
+-------------+--------------+
| prod_name   | company_name |
+-------------+--------------+
| Product 1   | Company 1    |
| New Product | Company 1    |
| Product 2   | Company 2    |
| Product 3   | Company 3    |
| Product 4   | Company 4    |
| Product 5   | Company 5    |
+-------------+--------------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_category.prod_category, tbl_product.prod_name, tbl_product.prod_price
    -> FROM tbl_category
    -> RIGHT JOIN tbl_product
    -> ON tbl_category.prod_id = tbl_product.prod_id;
+--------------+------------+------------+
| prod_category | prod_name   | prod_price |
+--------------+------------+------------+
| Hoodies       | Product 1   |      10.50 |
| Tshirts       | Product 2   |      20.00 |
| Longsleeves   | Product 3   |      30.00 |
| Polos         | Product 4   |      10.50 |
| Sleeveless    | Product 5   |      10.50 |
| New Tees      | New Product |      19.99 |
+--------------+------------+------------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_product.prod_name, tbl_product.prod_price, tbl_supplier.user_name
    -> FROM tbl_product
    -> RIGHT JOIN tbl_supplier
    -> ON tbl_product.supplier_id = tbl_supplier.supplier_id;
+-------------+------------+-----------+
| prod_name   | prod_price | user_name |
+-------------+------------+-----------+
| Product 1   |      10.50 | username1 |
| New Product |      19.99 | username1 |
| Product 2   |      20.00 | username2 |
| Product 3   |      30.00 | username3 |
| Product 4   |      10.50 | username4 |
| Product 5   |      10.50 | username5 |
+-------------+------------+-----------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_category.prod_category, SUM(tbl_product.product_quantity) as total_quantity
    -> FROM tbl_category
    -> RIGHT JOIN tbl_product
    -> ON tbl_category.prod_id = tbl_product.prod_id
    -> GROUP BY tbl_category.prod_category;
+--------------+----------------+
| prod_category | total_quantity |
+--------------+----------------+
| Hoodies       |             20 |
| Longsleeves   |             25 |
| New Tees      |             50 |
| Polos         |             20 |
| Sleeveless    |             20 |
| Tshirts       |             15 |
+--------------+----------------+
6 rows in set (0.004 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_supplier.company_name, tbl_product.prod_name, tbl_product.prod_price
    -> FROM tbl_supplier
    -> RIGHT JOIN tbl_product
    -> ON tbl_supplier.supplier_id = tbl_product.supplier_id;
+--------------+-------------+------------+
| company_name | prod_name   | prod_price |
+--------------+-------------+------------+
| Company 1    | Product 1   |      10.50 |
| Company 2    | Product 2   |      20.00 |
| Company 3    | Product 3   |      30.00 |
| Company 4    | Product 4   |      10.50 |
| Company 5    | Product 5   |      10.50 |
| Company 1    | New Product |      19.99 |
+--------------+-------------+------------+
6 rows in set (0.000 sec)
```

INNER JOIN

```
MariaDB [db_andrion_m3project]> SELECT tbl_product.prod_name, tbl_category.prod_category, tbl_product.prod_price
    -> FROM tbl_product
    -> INNER JOIN tbl_category
    -> ON tbl_product.prod_id = tbl_category.prod_id;
+-------------+---------------+------------+
| prod_name   | prod_category | prod_price |
+-------------+---------------+------------+
| Product 1   | Hoodies       |      10.50 |
| Product 2   | Tshirts       |      20.00 |
| Product 3   | Longsleeves   |      30.00 |
| Product 4   | Polos         |      10.50 |
| Product 5   | Sleeveless    |      10.50 |
| New Product | New Tees      |      19.99 |
+-------------+---------------+------------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_supplier.company_name, tbl_product.prod_name, tbl_product.prod_price
    -> FROM tbl_supplier
    -> INNER JOIN tbl_product
    -> ON tbl_supplier.supplier_id = tbl_product.supplier_id
    -> ;
+--------------+-------------+------------+
| company_name | prod_name   | prod_price |
+--------------+-------------+------------+
| Company 1    | Product 1   |      10.50 |
| Company 2    | Product 2   |      20.00 |
| Company 3    | Product 3   |      30.00 |
| Company 4    | Product 4   |      10.50 |
| Company 5    | Product 5   |      10.50 |
| Company 1    | New Product |      19.99 |
+--------------+-------------+------------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_product.prod_name, tbl_supplier.user_name, tbl_supplier.contact_info
    -> FROM tbl_product
    -> INNER JOIN tbl_supplier
    -> ON tbl_product.supplier_id = tbl_supplier.supplier_id
    -> ;
+-------------+-----------+---------------+
| prod_name   | user_name | contact_info  |
+-------------+-----------+---------------+
| Product 1   | username1 | Contact Info 1 |
| Product 2   | username2 | Contact Info 2 |
| Product 3   | username3 | Contact Info 3 |
| Product 4   | username4 | Contact Info 4 |
| Product 5   | username5 | Contact Info 5 |
| New Product | username1 | Contact Info 1 |
+-------------+-----------+---------------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_category.prod_category, AVG(tbl_product.prod_price) as avg_price
    -> FROM tbl_category
    -> INNER JOIN tbl_product
    -> ON tbl_category.prod_id = tbl_product.prod_id
    -> GROUP BY tbl_category.prod_category
    -> ;
+---------------+-----------+
| prod_category | avg_price |
+---------------+-----------+
| Hoodies       | 10.500000 |
| Longsleeves   | 30.000000 |
| New Tees      | 19.990000 |
| Polos         | 10.500000 |
| Sleeveless    | 10.500000 |
| Tshirts       | 20.000000 |
+---------------+-----------+
6 rows in set (0.000 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT tbl_supplier.company_name, SUM(tbl_product.product_quantity) as total_quantity
    -> FROM tbl_supplier
    -> INNER JOIN tbl_product
    -> ON tbl_supplier.supplier_id = tbl_product.supplier_id
    -> GROUP BY tbl_supplier.company_name
    -> ;
+--------------+----------------+
| company_name | total_quantity |
+--------------+----------------+
| Company 1    |             70 |
| Company 2    |             15 |
| Company 3    |             25 |
| Company 4    |             20 |
| Company 5    |             20 |
+--------------+----------------+
5 rows in set (0.000 sec)
```

Views

```
MariaDB [db_andrion_m3project]> CREATE VIEW vw_product_info AS
    -> SELECT tbl_product.prod_id, tbl_product.prod_name, tbl_category.prod_category, tbl_product.prod_price, tbl_supplier.company_name
    -> FROM tbl_product
    -> INNER JOIN tbl_category
    -> ON tbl_product.prod_id = tbl_category.prod_id
    -> INNER JOIN tbl_supplier
    -> ON tbl_product.supplier_id = tbl_supplier.supplier_id
    -> ;
Query OK, 0 rows affected (0.007 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT * FROM vw_product_info
    -> WHERE prod_price > 50
    -> ;
Empty set (0.002 sec)
```

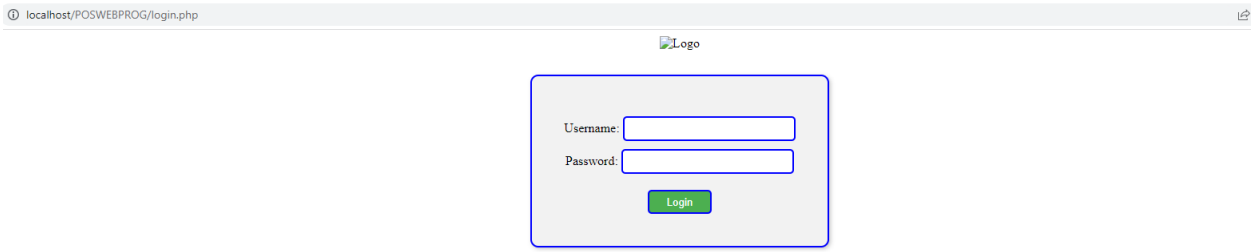
```
MariaDB [db_andrion_m3project]> CREATE VIEW vw_average_price AS
    -> SELECT tbl_category.prod_category, AVG(tbl_product.prod_price) as avg_price
    -> FROM tbl_category
    -> INNER JOIN tbl_product
    -> ON tbl_category.prod_id = tbl_product.prod_id
    -> GROUP BY tbl_category.prod_category
    -> ;
Query OK, 0 rows affected (0.002 sec)
```

```
MariaDB [db_andrion_m3project]> SELECT * FROM vw_average_price
    -> WHERE avg_price > 100
    -> ;
Empty set (0.002 sec)
```

```
MariaDB [db_andrion_m3project]> CREATE VIEW vw_supplier_info AS
    -> SELECT tbl_supplier.supplier_id, tbl_supplier.company_name, SUM(tbl_product.product_quantity) as total_quantity
    -> FROM tbl_supplier
    -> INNER JOIN tbl_product
    -> ON tbl_supplier.supplier_id = tbl_product.supplier_id
    -> GROUP BY tbl_supplier.supplier_id, tbl_supplier.company_name
    -> ;
Query OK, 0 rows affected (0.002 sec)
```

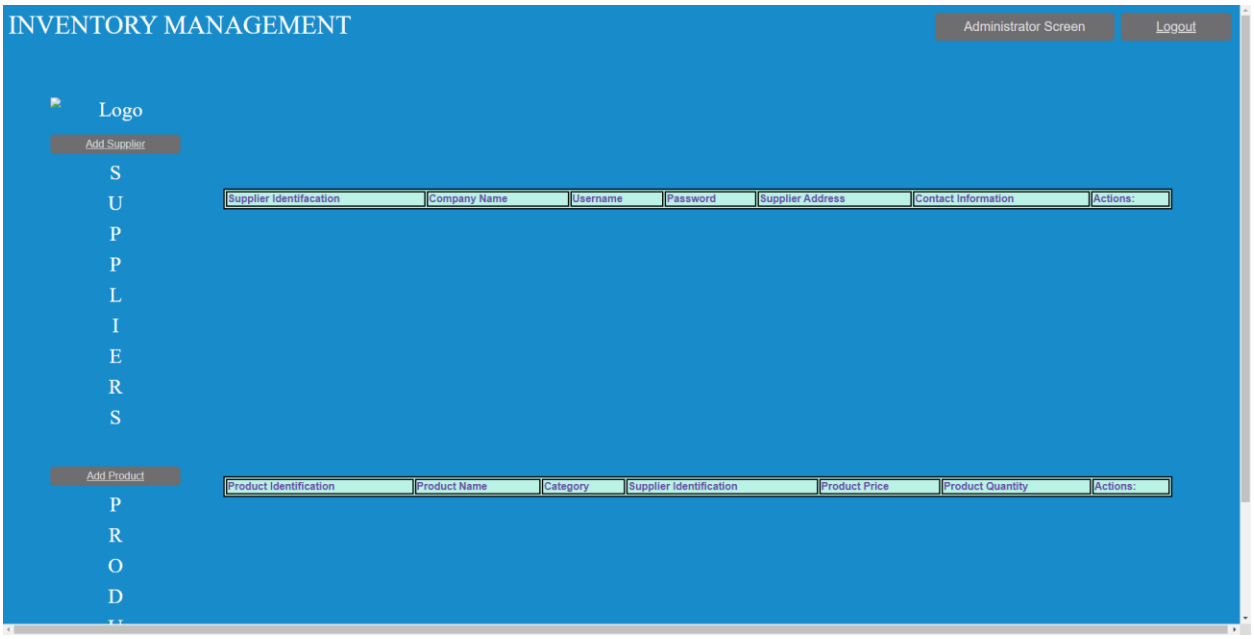
IM#9 Project Prototype

LOG IN PAGE



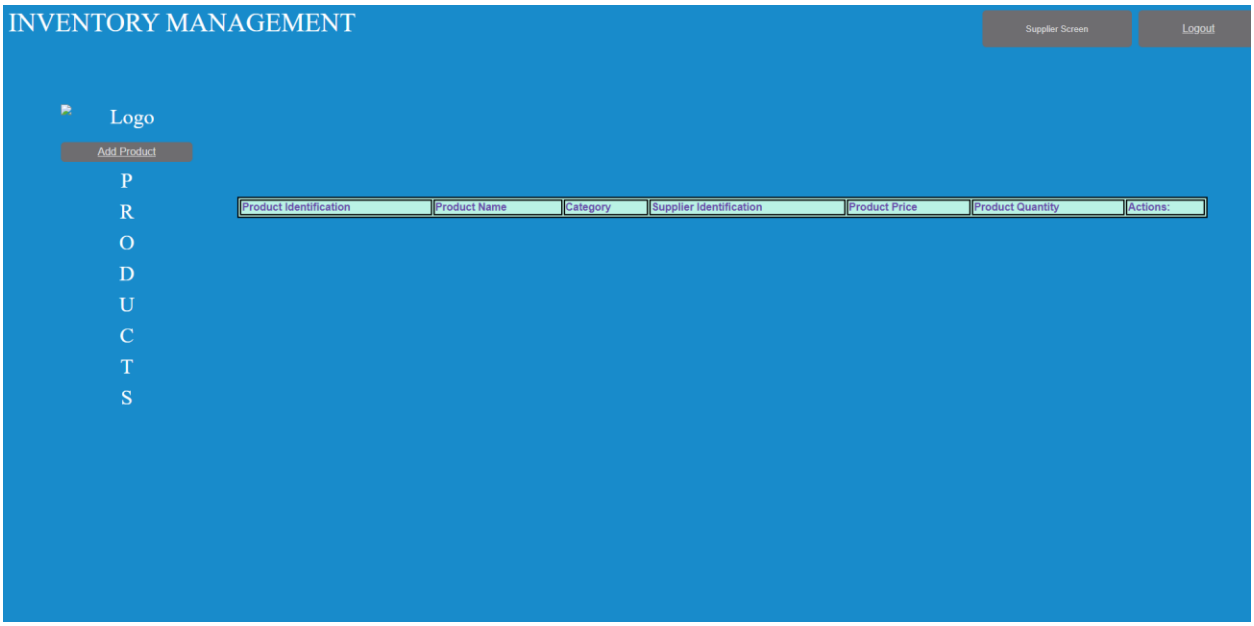
In logging in, the user admin and user supplier have different interfaces.

ADMIN SCREEN INTERFACE



In the admin screen interface, the admin can add the supplier and edit the supplier's information and add/edit/delete products. The products also added by the suppliers will reflect in the admin screen.

SUPPLIER SCREEN INTERFACE



On the other hand, when the supplier logins, the supplier would only show an add product button and when the supplier already add a product he/she can edit or delete it.

Note: both user admin and supplier can click the "Logout" button on the upper right of the screen.