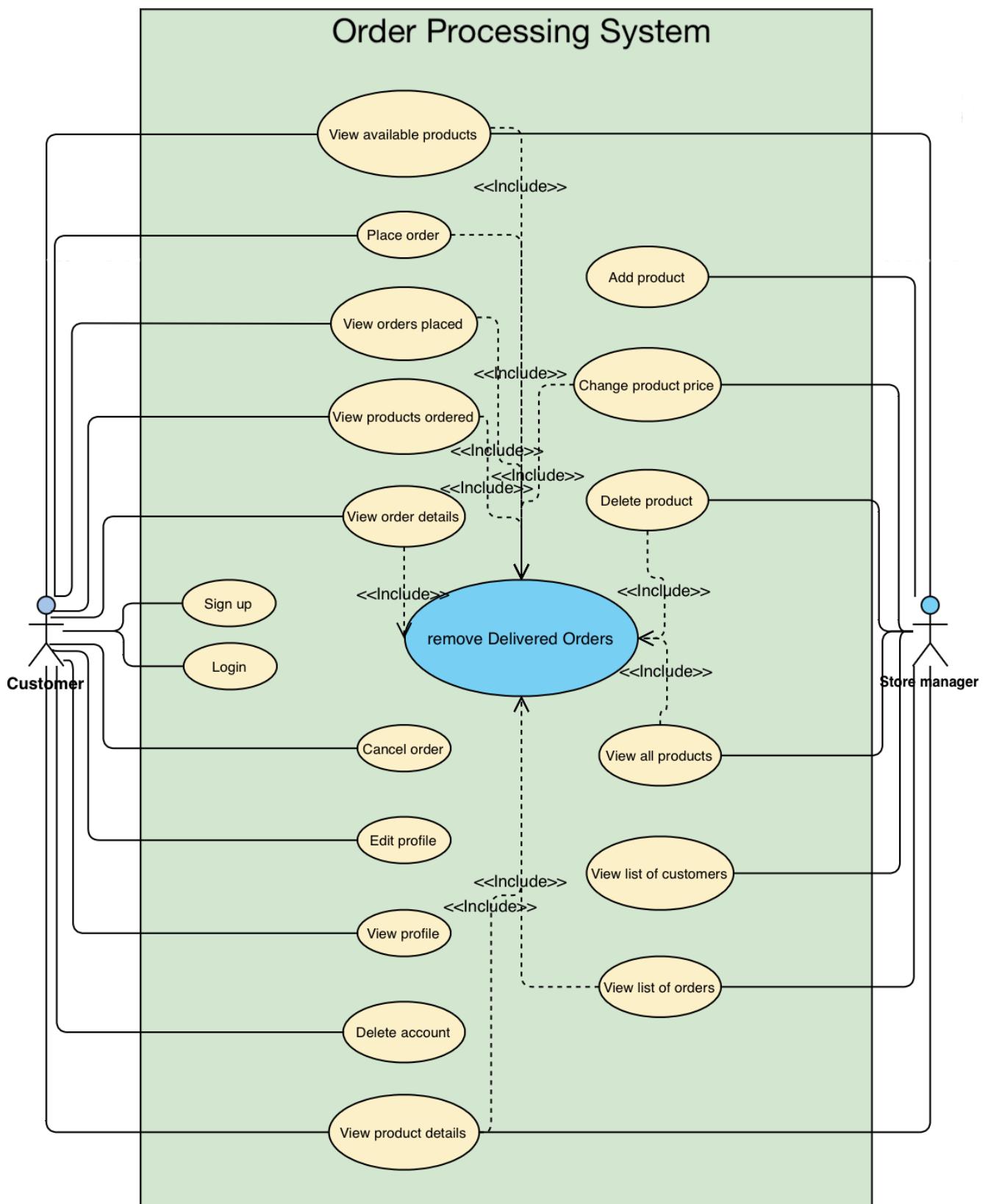


Order Processing System

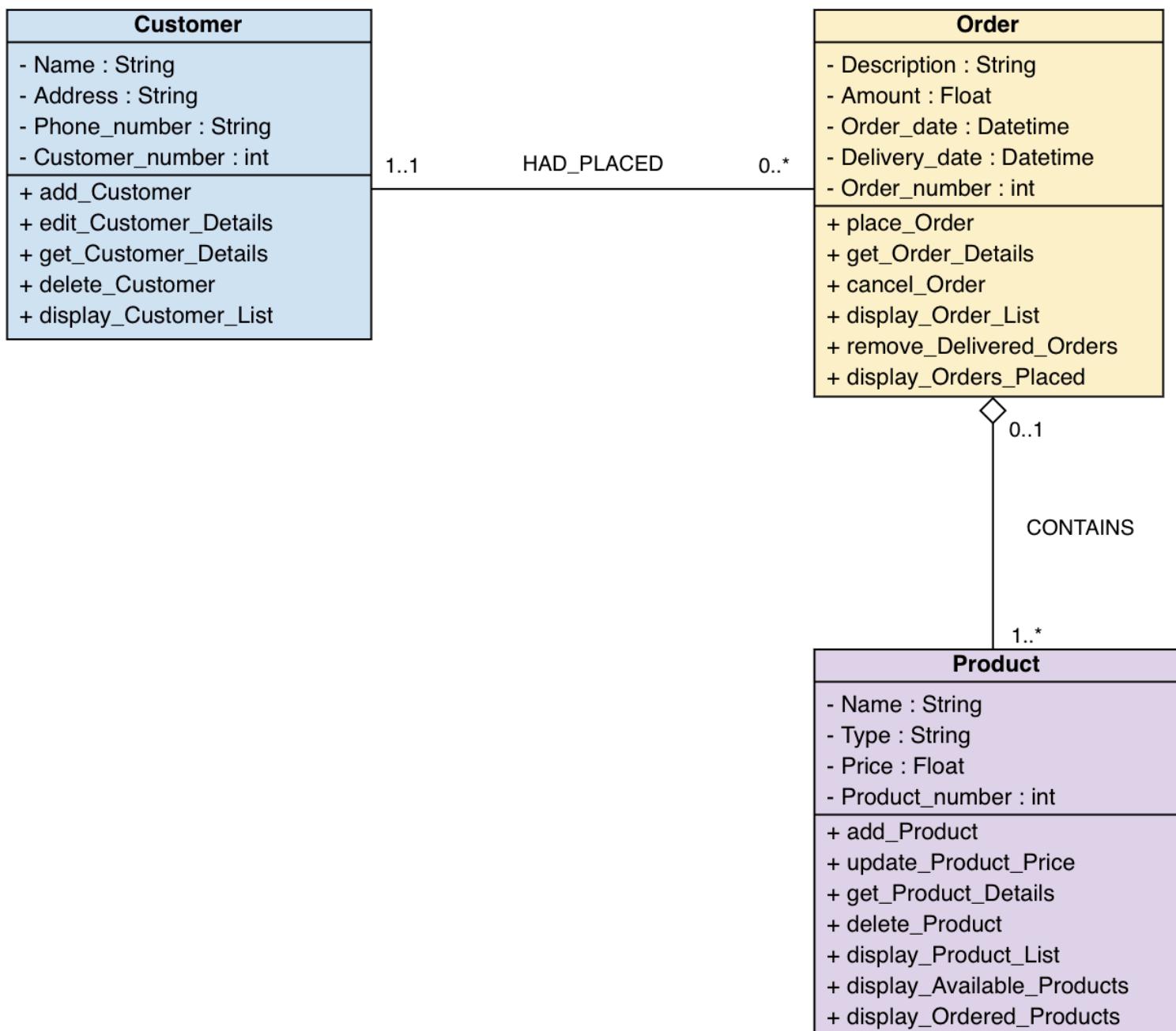
Name - Riddhi Chatterjee
Roll Number - IMT2020094

Use Case Diagram:

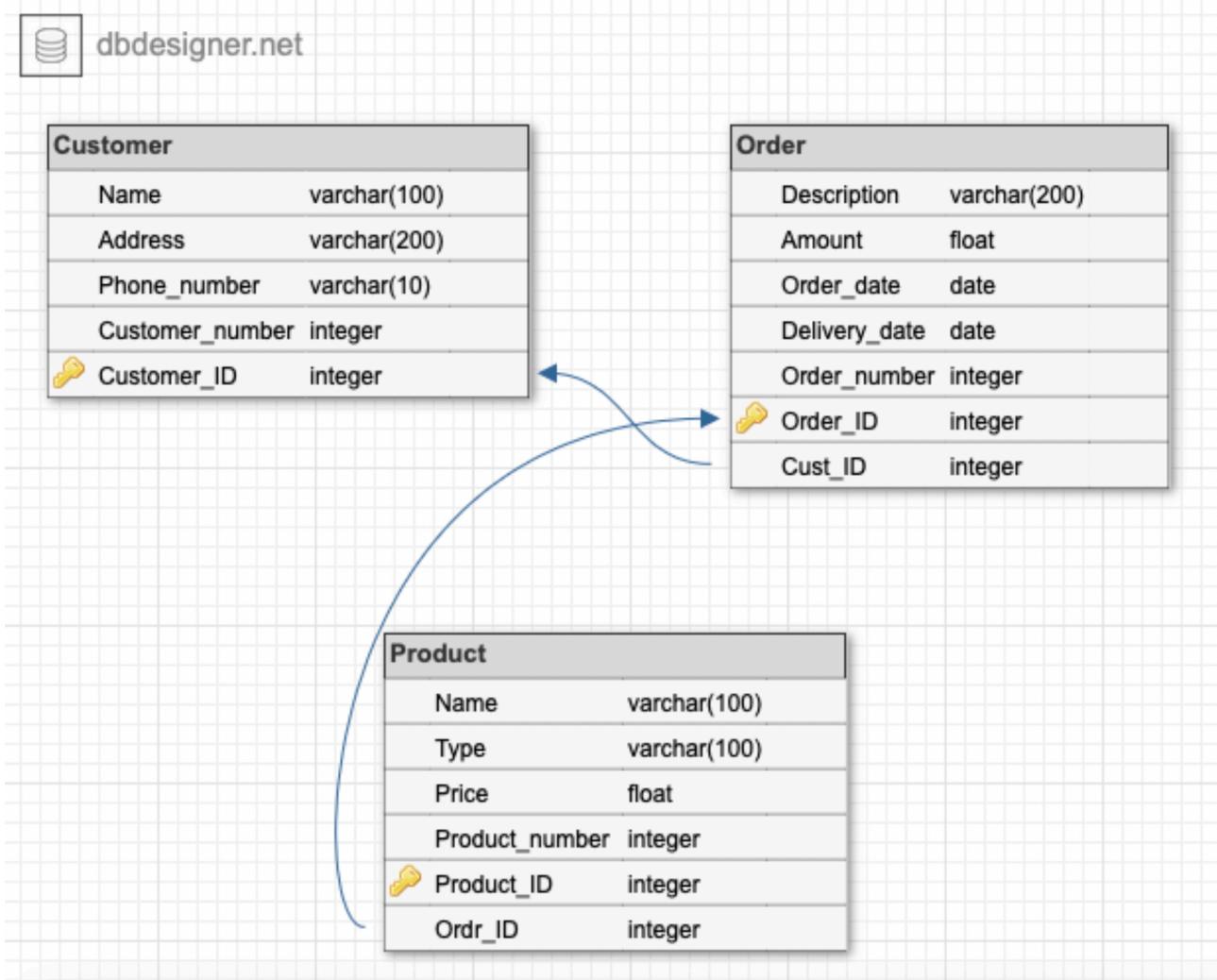


UML Class Diagram:

UML Class Diagram for Order Processing System



OR Mapping (DB Design):



Output Screenshots:

Main menu:

```
[riddhichatterjee@RIDDHI-MacBook-Pro session 10 % export CLASSPATH='/Users/riddhichatterjee/] [Semester4/ DataBase/ DataBase lab/session 10/mysql-connector-java-8.0.18.jar..'  
[riddhichatterjee@RIDDHI-MacBook-Pro session 10 % javac IMT2020094_menu_app.java ]  
[riddhichatterjee@RIDDHI-MacBook-Pro session 10 % java IMT2020094_menu_app ]  
Connecting to database...  
Creating statement...  
Welcome to the Order Processing System!  
  
Use the system as a:  
1. Customer  
2. Store Manager  
3. Exit  
  
ENTER YOUR CHOICE : [
```

Using the system as a customer:

1) Login failure because of wrong Customer_ID being entered:

```
Welcome to the Order Processing System!

Use the system as a:
1. Customer
2. Store Manager
3. Exit

ENTER YOUR CHOICE : 1

1.Sign up
2.Login

ENTER YOUR CHOICE : 2

Enter your Customer_ID : 1
Invalid Customer_ID! Try again!

Enter your Customer_ID : 2
Invalid Customer_ID! Try again!

Enter your Customer_ID : 5
Too many unsuccessfull attempts!
End of Code
riddhichatterjee@RIDDHIS-MacBook-Pro session 10 %
```

2) Signing up:

```
1.Sign up
2.Login

ENTER YOUR CHOICE : 1

Enter your name:
Riddhi Chatterjee
Enter your address:
Address1
Enter your phone number:
1234567890

Sign up was successfull!
Your Customer_ID is : 1

Choose one of the following options:
1.View available products
2.Place order
3.View orders placed (which are not yet delivered)
4.View products ordered (which are not yet delivered)
5.View order details
6.Cancel order
7.Edit profile
8.View profile
9.Delete account
10.View product details
11.Exit

ENTER YOUR CHOICE : 
```

3) Successful login:

```
1.Sign up
2.Login

ENTER YOUR CHOICE : 2

Enter your Customer_ID : 1
Login was successfull!

Choose one of the following options:
1.View available products
2.Place order
3.View orders placed (which are not yet delivered)
4.View products ordered (which are not yet delivered)
5.View order details
6.Cancel order
7.Edit profile
8.View profile
9.Delete account
10.View product details
11.Exit

ENTER YOUR CHOICE : 
```

4) Placing an order:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 2  
  
Enter the ID of the product you want to buy:  
5  
Do you want to buy more products? Enter Y/N:  
y  
Enter the ID of the product you want to buy:  
7  
Do you want to buy more products? Enter Y/N:  
n  
Enter order description:  
Prods5&7  
Enter the date when order is placed (in YYYY-MM-DD format):  
2022-04-20  
Your order will be delivered in 7 days!  
Please enter the appropriate delivery date (in YYYY-MM-DD format):  
2022-04-27  
Order was placed successfully!  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

5) Listing available products (Products with ID = 5 & ID = 7 are not displayed as they have been already ordered before):

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 1  
  
List of available products:  
  
Product_ID : 6  
Product_number : 2  
Name : Product2  
Type : Type1  
Price : 300.67  
Ordr_ID : null  
  
Product_ID : 8  
Product_number : 4  
Name : Product4  
Type : Type3  
Price : 456.78  
Ordr_ID : null  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

6) View orders placed:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 3  
  
List of orders which are not delivered yet:  
  
Order_ID : 1  
Order_number : 1  
Cust_ID : 1  
Description : Prods5&7  
Amount : 747.23  
Order_date : 2022-04-20  
Delivery_date : 2022-04-27  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

7) View products ordered:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 4  
  
List of ordered products which are not yet delivered:  
  
Product_ID : 5  
Product_number : 1  
Name : Product1  
Type : Type1  
Price : 200.45  
Ordr_ID : 1  
  
Product_ID : 7  
Product_number : 3  
Name : Product3  
Type : Type2  
Price : 546.78  
Ordr_ID : 1  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

8) View details of a particular order:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 5  
  
Enter the ID of the order:  
1  
The requested order details are:  
Order_ID : 1  
Order_number : 1  
Cust_ID : 1  
Description : Prods5&7  
Amount : 747.23  
Order_date : 2022-04-20  
Delivery_date : 2022-04-27  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

9) View details of a particular product:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 10  
  
Enter the ID of the product whose details are required:  
5  
The requested product details are:  
Product_ID : 5  
Product_number : 1  
Name : Product1  
Type : Type1  
Price : 200.45  
Ordr_ID : 1  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

10) Cancelling an order:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 6  
  
Enter the ID of the order:  
1  
The order was cancelled successfully!  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

11) The order was removed after we cancelled it:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 3  
  
List of orders which are not delivered yet:  
<Empty list>  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

12) Editing profile:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 7  
  
Please enter your new credentials  
Enter your name:  
Richick Talukdar  
Enter your address:  
Address2  
Enter your phone number:  
1234567890  
Your profile was edited successfully!  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

13) Viewing profile:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 8  
  
The requested customer details are:  
Customer_ID : 1  
Customer_number : 1  
Name : Richick Talukdar  
Address : Address2  
Phone_number : 1234567890  
  
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : ■
```

14) Deleting account:

```
Choose one of the following options:  
1.View available products  
2.Place order  
3.View orders placed (which are not yet delivered)  
4.View products ordered (which are not yet delivered)  
5.View order details  
6.Cancel order  
7.Edit profile  
8.View profile  
9.Delete account  
10.View product details  
11.Exit  
  
ENTER YOUR CHOICE : 9  
  
Your account was deleted successfully!  
End of Code  
riddhichatterjee@RIDDHIS-MacBook-Pro session 10 %
```

Using the system as the store manager:

1) Store manager's menu:

```
Use the system as a:  
1. Customer  
2. Store Manager  
3. Exit  
  
ENTER YOUR CHOICE : 2  
NOTE: This section of code could have asked for the Store manager's password.  
But this has not been done for ease of usage  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : ■
```

2) Adding a product:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 1  
  
Enter the name of the product:  
Product1  
Enter the type of the product:  
Type1  
Enter the price of the product:  
200.45  
Product was added successfully!  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : ■
```

3) The price of an ordered product can not be changed:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 2  
  
Enter the ID of the product:  
5  
Enter the new price of the product:  
700.56  
Something went wrong. Please try again...  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : ■
```

4) If a product is not ordered yet, then its price can be changed:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 2  
  
Enter the ID of the product:  
8  
Enter the new price of the product:  
1000.59  
The product's price was updated successfully!  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : ■
```

5) Viewing details of a particular product:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 3  
  
Enter the ID of the product:  
8  
The requested product details are:  
Product_ID : 8  
Product_number : 4  
Name : Product4  
Type : Type3  
Price : 1000.59  
Ordr_ID : null  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : ■
```

6) Viewing products which are available for buying:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 6  
  
List of available products:  
  
Product_ID : 6  
Product_number : 2  
Name : Product2  
Type : Type1  
Price : 300.67  
Ordr_ID : null  
  
Product_ID : 8  
Product_number : 4  
Name : Product4  
Type : Type3  
Price : 1000.59  
Ordr_ID : null  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : ■
```

7) Viewing list of all products:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 5  
  
List of products:  
  
Product_ID : 5  
Product_number : 1  
Name : Product1  
Type : Type1  
Price : 200.45  
Ordr_ID : 1  
  
Product_ID : 6  
Product_number : 2  
Name : Product2  
Type : Type1  
Price : 300.67  
Ordr_ID : null  
  
Product_ID : 7  
Product_number : 3  
Name : Product3  
Type : Type2  
Price : 546.78  
Ordr_ID : 1  
  
Product_ID : 8  
Product_number : 4  
Name : Product4  
Type : Type3  
Price : 1000.59  
Ordr_ID : null  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : █
```

8) An ordered product can not be deleted:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 4  
  
Enter the ID of the product:  
5  
Smomethng went wrong. Please try again...  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE :
```

9) If a product is not yet ordered then it can be deleted:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 4  
  
Enter the ID of the product:  
6  
The product was deleted successfully!  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE :
```

10) View list of customers:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 7  
  
List of Customers:  
  
Customer_ID : 1  
Customer_number : 1  
Name : Riddhi Chatterjee  
Address : Address1  
Phone_number : 1234567890  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : ■
```

11) View list of orders:

```
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 8  
  
List of orders:  
  
Order_ID : 1  
Order_number : 1  
Cust_ID : 1  
Description : Prods5&7  
Amount : 747.23  
Order_date : 2022-04-20  
Delivery_date : 2022-04-27  
  
Choose one of the following options:  
1.Add product  
2.Change product price  
3.View product details  
4.Delete product  
5.View all products  
6.View available products  
7.View list of customers  
8.View list of orders  
9.Exit  
  
ENTER YOUR CHOICE : 9  
  
End of Code  
riddhichatterjee@RIDDHI-MacBook-Pro:session 10 % ■
```

Notes & Instructions to run the code:

- Store the following files in your present working directory:
**IMT2020094_create.sql, IMT2020094_alter.sql, IMT2020094_drop.sql,
IMT2020094_menu_app.java, mysql-connector-java-8.0.18.jar**
- In the IMT2020094_menu_app.java file, in line no. 20 change the value of the variable “USER” to your appropriate username; and in line no. 21 change the value of the variable “PASS” to your password.
- In terminal, get into mysql command prompt using the command: “mysql -u root -p”. (Enter your mysql password for getting access).
- In the mysql command prompt, use command “source IMT2020094_create.sql;” to create the tables.
- Then use the command “source IMT2020094_alter.sql;” to add the appropriate foreign keys.
- Now quit from the mysql command prompt.
- Next, we have to set the value of CLASSPATH to the full path of the mysql-connector-java-8.0.18.jar file. I used the command “export CLASSPATH='/Users/riddhichatterjee/Semester4/DataBase/DataBase lab/session 10/mysql-connector-java-8.0.18.jar:.'” for doing this.
- Now use the command “javac IMT2020094_menu_app.java” to compile the code for the Order Processing System (menu driven application).
- Next use the command “java IMT2020094_menu_app” to run the code.
- At the end, we can again get into the mysql command prompt and use the command “source IMT2020094_drop.sql;” to drop the database.

Notes:

- This is the implementation of an Order Processing System.
- This system can be used by some Store Manager to keep track of the customers, the orders placed, and the products of the store.
- Once an order is delivered (i.e. when current date becomes \geq delivery date of the order), that particular order is removed from the Order table and all the products which were part of that order are removed from the Product table. This happens automatically when the customers or the store manager queries the data.
- If some customer cancels an order which has not been delivered yet, then that order is removed from the Order table, but the products which were part of that order are not removed from the Product table.