Allyson Villaflor
Patricia Gruezo
Group 11: Team We11ness
Project Step 6 (Portfolio)

Project Title: We11ness: A health and wellness e-commerce database
URL: flip3.engr.oregonstate.edu:19091/

I) Executive Summary

1. Added more attributes necessary to keep track of inventory and customer data.
2. Updated datatypes for prices and totalSpentYTD from int to decimal.
3. Added auto_increment to Orders.orderID and OrderDetails.orderDetailsID
4. Updated ERD to match the database outline.
5. Changed annual sales from 500 to 1000 sales a year and added an average order value of $50.
6. Reviewed naming inconsistency (i.e capitalization) to ensure consistency throughout. Simplified FK's (i.e. Orders.orderID to orderID).
7. Removed attribute totalSpendYTD under Customers.
8. Updated zipCode datatype from varchar(50) to int.
9. Updated UI to allow all attributes of an entity to be added.
10. Added auto_increment to categoryID in Categories, customerID in Customers and orderID in Orders table.
11. Updated UI to have dropdowns for IDs instead of an input field.
12. Added option to search by productID and productName on Products page.
13. Updated UI and DML and replaced column names to use aliases.
14. Updated buttons to be more interactive when the user hovers or clicks on it to make it clear to the user that a change has been made.
15. Added brief instructions on how to edit an order so it is clear to the user how to edit an order.
16. Updated all forms so the page refreshes automatically when a new data is added, edited or deleted.
17. Added update form on Order Details page to meet project requirement of being able to update FKs in intersection table.
18. Changed categoryID FK in Products table to NULL to meet project requirements of NULLABLE relationship.

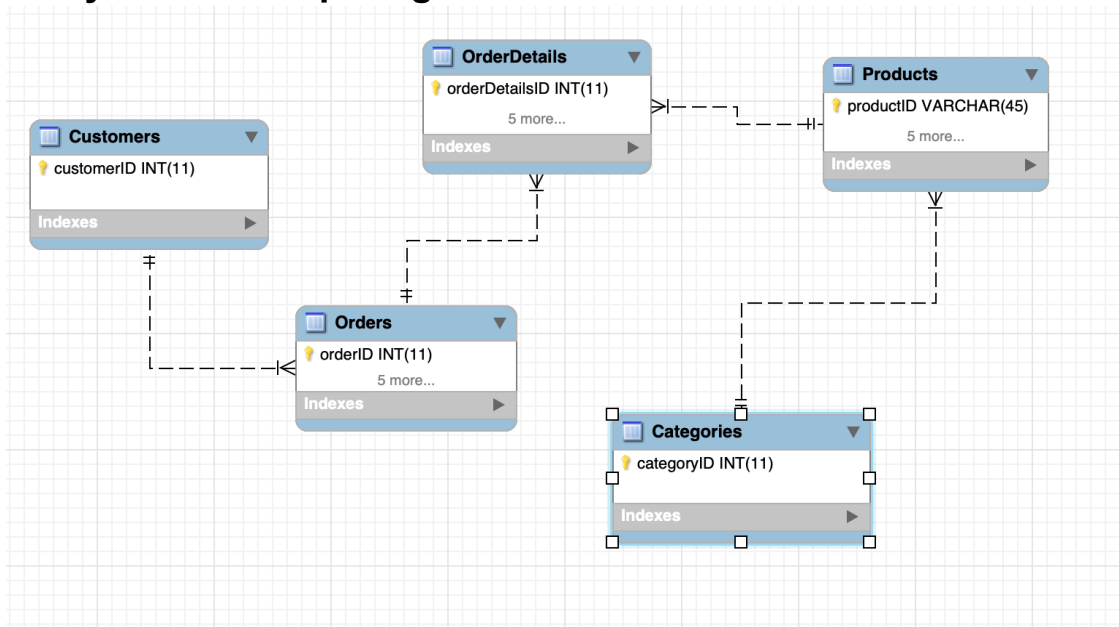# II) Project Outline and Database Outline

I. Overview

We11ness is an online lifestyle brand that sells health and wellness products. We11ness offers five product categories, which are divided into Food and Drink, Vitamins and Supplements, Immunity, Fitness, and Beauty. We11ness makes 1000 sales per year and has 150 products available on its website, of which there are 25 products per category. The average order value for each sale is about $50. A database-driven website will record *Orders* of *Products* to *Customers* and will help We11ness keep track of its inventory and customer data as well as prevent data duplicates.
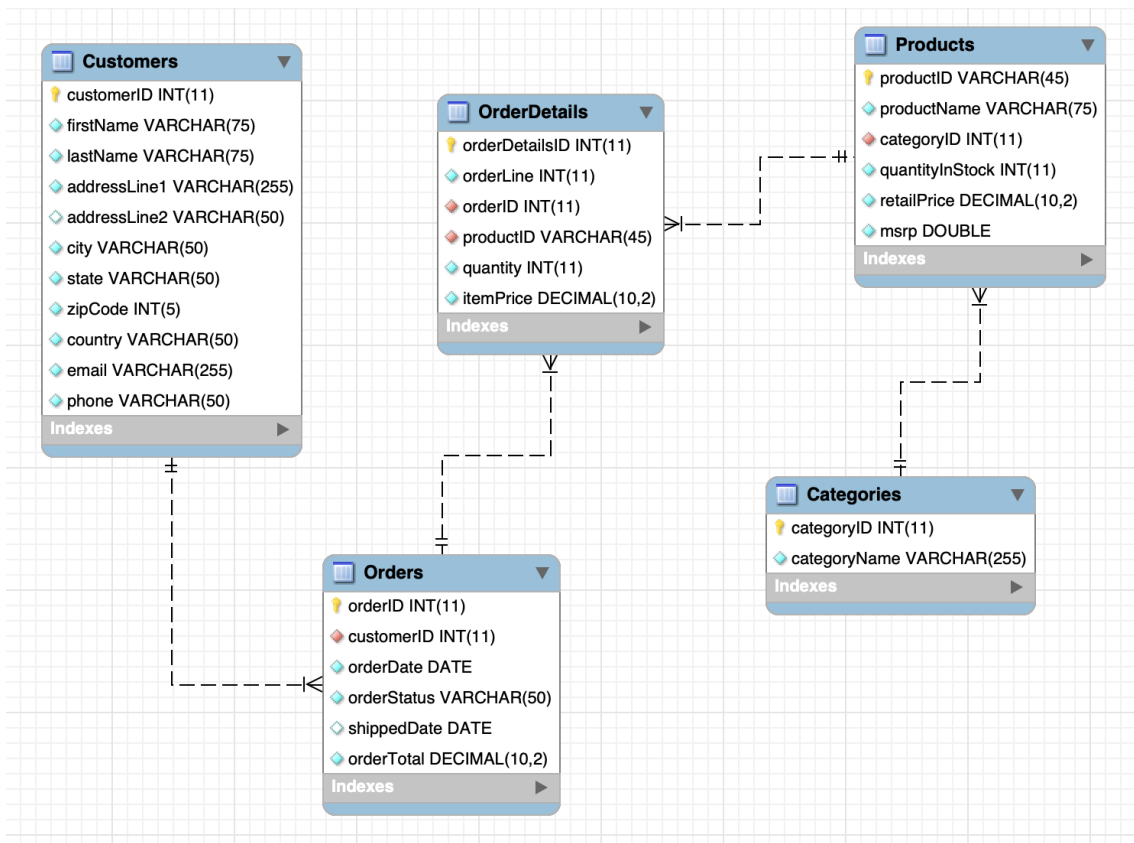
II. Database Outline

- **Customers**: Records details of customers who purchase products from the website. A customer can place multiple orders.
    - customerID: int(11), PK, unique, not NULL, auto_increment
    - firstName: varchar(75), not NULL
    - lastName: varchar(75), not NULL
    - addressLine1: varchar(255), not NULL
    - addressLine2: varchar(50), NULL
    - city: varchar(50), not NULL
    - state: varchar(50), not NULL
    - zipCode: int(5), not NULL
    - country: varchar(50), not NULL
    - email: varchar(255), not NULL
    - phone: varchar(50), not NULL
    - Relationship: 1:M relationship between Customers and Orders with customerID as a FK inside of Orders

- **Orders**: Records details of a customer's order when they place an order from the website. An order can contain multiple products.
    - orderID: int(11), PK, unique, not NULL, auto_increment
    - customerID: int(11), FK, not NULL
    - orderDate: date, not NULL
    - orderStatus: varchar(50), not NULL
    - shippedDate: date, NULL
    - orderTotal: decimal(10,2), not NULL
    - Relationship:
        - M:N relationship with Products facilitated through an intersection table that holds orderID as FK

■ 1:M relationship between Orders and OrderDetails with orderID as a FK inside of OrderDetails

● **OrderDetails**: Records details about the Order. Also serves as an intersection table that holds two foreign keys to facilitate M:N relationship between Orders and Products.
  ○ orderDetailsID: int(11), PK, not NULL, auto_increment
  ○ orderLine: int(11), not NULL
  ○ orderID: int(11), FK, not NULL
  ○ productID: varchar(45), FK, not NULL
  ○ quantity: int(11), not NULL
  ○ itemPrice: decimal(10,2), not NULL
  ○ Relationship: holds two foreign keys that facilitate M:N relationship between Orders and Products.

● **Products**: Record details of products available to be purchased on the website. A product can be in multiple orders.
  ○ productID: varchar(45), PK, unique, not NULL
  ○ productName: varchar(75), not NULL
  ○ categoryID: int(11), FK, NULL
  ○ quantityInStock: int(11), not NULL
  ○ retailPrice: decimal(10,2), not NULL
  ○ msrp: double, not NULL
  ○ Relationship:
    ■ M:N relationship with Orders facilitated through an intersection table that holds productID as FK
    ■ 1:M relationship between Products and OrderDetails with productID as a FK inside of OrderDetails

● **Categories**: Record categories for each product. Categories can have multiple products but a product only belongs to 1 category or to no category.
  ○ categoryID: int(11), PK, not NULL, auto_increment
  ○ categoryName: varchar(255), not NULL
  ○ Relationship: 1:M relationship between Category and Products with categoryID as a FK inside of Products

Entity-Relationship Diagram

OrderDetails
- orderDetailsID INT(11)
- 5 more...
- Indexes

Products
- productID VARCHAR(45)
- 5 more...
- Indexes

Customers
- customerID INT(11)
- Indexes

Orders
- orderID INT(11)
- 5 more...
- Indexes

Categories
- categoryID INT(11)
- Indexes

Schema

Customers
- customerID INT(11)
- firstName VARCHAR(75)
- lastName VARCHAR(75)
- addressLine1 VARCHAR(255)
- addressLine2 VARCHAR(50)
- city VARCHAR(50)
- state VARCHAR(50)
- zipCode INT(5)
- country VARCHAR(50)
- email VARCHAR(255)
- phone VARCHAR(50)
- Indexes

OrderDetails
- orderDetailsID INT(11)
- orderLine INT(11)
- orderID INT(11)
- productID VARCHAR(45)
- quantity INT(11)
- itemPrice DECIMAL(10,2)
- Indexes

Products
- productID VARCHAR(45)
- productName VARCHAR(75)
- categoryID INT(11)
- quantityInStock INT(11)
- retailPrice DECIMAL(10,2)
- msrp DOUBLE
- Indexes

Categories
- categoryID INT(11)
- categoryName VARCHAR(255)
- Indexes

Orders
- orderID INT(11)
- customerID INT(11)
- orderDate DATE
- orderStatus VARCHAR(50)
- shippedDate DATE
- orderTotal DECIMAL(10,2)
- Indexes

Sample Data

Customers

customerID	firstName	lastName	addressLine1	addressLine2	city	state	zipCode	country	email	phone
10000	Georgia	Curtis	7633 Sunset St	null	Ralston	NB	68127	USA	gcurtis@example.com	(489) 330-2385
10001	Craig	Fuller	5648 Se Taylor St	Apt E104	Portland	OR	97215	USA	craigfuller@example.com	(282) 455-6568
10002	Savannah	Pearson	7409 Brown Terrance	Unit 3	Nashville	TN	37209	USA	savpearson@example.com	(412) 238-5190
10003	Ricky	Harris	3239 Nowlin Rd	null	Kennesaw	GA	30144	USA	ricky.harris@example.com	(353) 758-1008
10004	Gail	Hudson	1313 Valwood Pkwy	null	Carrollton	TX	75006	USA	gail_hudson10@example.com	(292) 314-6801

Order

orderID	customerID	orderDate	orderStatus	shippedDate	orderTotal
100	10000	1/13/23	Shipped	1/15/23	$63.00
101	10001	1/15/23	Shipped	1/17/23	$49.00
102	10002	1/21/23	Shipped	1/23/23	$93.00
103	10003	2/2/23	Processing	null	$55.00
104	10004	2/5/23	Processing	null	$94.00

OrderDetails

orderDetailsID	orderLine	orderID	productID	quantity	itemPrice
1	1	100	FD001	1	$18.00
2	2	100	BE001	1	$45.00
3	1	101	FI001	1	$49.00
4	1	102	FD001	1	$18.00
5	2	102	VS001	2	$15.00
6	3	102	BE001	1	$45.00

Products

productID	productName	categoryID	quantityInStock	retailPrice	msrp
FD001	Plant Based Energy Bites	1	499	$18.00	$9.00
VS001	Daily Multivatimin	2	382	$15.00	$7.50
IM001	Immunity Wellness Shot	3	250	$10.00	$5.00
FI001	Balance Blocks	4	238	$49.00	$24.50
BE001	Glycolic Acid Overnight Glow Peel	5	170	$45.00	$22.50
W001	Wellness Essentials	null	120	$79.00	$39.50

Categories

categoryID	categoryName
1	Food and Drink
2	Vitamins and Supplements
3	Immunity
4	Fitness
5	Beauty

UI Screenshots with Informative Titles

Customers

DISPLAY/READ Customers

Customers

ID	NAME	ADDRESS	CITY	STATE	ZIP CODE	COUNTRY	EMAIL	PHONE
10000	Georgia Curtis	7633 Sunset St	Ralston	NE	68127	USA	gcurtis@example.com	489-330-2385
10001	Craig Fuller	5648 Se Taylor St Apt E104	Portland	OR	97215	USA	craigfuller@example.com	282-455-6568
10002	Savannah Pearson	7409 Brown Terrance Unit 3	Nashville	TN	37209	USA	savpearson@example.com	412-238-5190
10003	Ricky Harris	3239 Nowlin Rd	Kennesaw	GA	30144	USA	ricky.harris@example.com	353-758-1008
10004	Gail Hudson	1313 Valwood Pkwy	Carrollton	TX	75006	USA	gail_hudson10@example.com	292-314-6801

DISPLAY/READ Customers (Dynamic dropdown for customer name)

Search by Customer Name

Customer Name:

Select Customer Name ▲▼

Submit   Reset

ADD/INSERT New Customer

Add Customers

First Name:

First Name

Last Name:

Last Name

Address Line 1:

Street Address

Address Line 2:

Optional: Apt or Unit #

City:

City

State:

State

Zip Code:

Zip Code

Country:

Country

Email:

Email

Phone:

555-123-4567

Submit

Orders

M:N Delete Implemented: Using ON DELETE CASCADE, when an order is deleted, it is also deleted from the Order Details table.

DISPLAY/READ and DELETE Orders (M:N Delete)

Orders

ID	NAME	ORDER DATE	ORDER STATUS	SHIPPED DATE	TOTAL	DELETE
100	Georgia Curtis	2023-01-13	Shipped	2023-01-15	63	Delete
101	Craig Fuller	2023-01-15	Shipped	2023-01-17	49	Delete
102	Savannah Pearson	2023-01-21	Shipped	2023-01-23	93	Delete
103	Ricky Harris	2023-02-02	Processing		55	Delete
104	Gail Hudson	2023-02-05	New		94	Delete

DISPLAY/READ Orders (Dynamic dropdown for FK-customer id)

Search Order by Customer Name

Customer Name:

Select Customer Name ▾

Submit   Reset

ADD/INSERT an Order (Dynamic dropdown for FK-customer id)

Add Orders

Customer Name:

| Customer Name | ⇕ |

Order Date:

06/10/2023

Order Status:

| Select Order Status | ⇕ |

Shipped Date:

06/10/2023

Total:

$

Submit

UPDATE an Order (Dynamic dropdown for order id & FK-customer id)

Update An Order

To edit an order, please select Order ID from the dropdown

Order ID:

| Select Order ID | ⇕ |

Customer Name:

| Select Customer Name | ⇕ |

Order Date:

06/10/2023

Order Status:

| Select Order Status | ⇕ |

Shipped Date:

06/10/2023

Order Total:

$

Submit

Order Details (Intersection Table)

M:N Update: A user can update the orderID and productID (updating foreign key in an intersection table).

DISPLAY/READ Order Details

Order Details

ID	ORDER LINE	ORDER ID	PRODUCT	QUANTITY	ITEM PRICE
1	1	100	Plant Based Energy Bites	1	18
2	2	100	Glycolic Acid Overnight Glow Peel	1	45
3	1	101	Balance Blocks	1	49
4	1	102	Plant Based Energy Bites	1	18
5	2	102	Daily Multivitamin	2	15
6	3	102	Glycolic Acid Overnight Glow Peel	1	45

ADD/INSERT Order Details (Dynamic dropdown for FK-order id and FK-product id)

Add Order Details

Order Line:

Order Line: ex. 1

Order ID:

Select Order ID

Product Name:

Select Product Name

Quantity:

Quantity

Item Price:

$

Submit

UPDATE Order Details (<mark>MN Update;</mark> Dynamic dropdown for FK-order ID and FK-product id)

Update Order Details

Order Details ID:

Select Order Detail ID ▲▼

Order Line:

Order Line: ex: 1 ▲▼

Order ID:

Select Order ID ▲▼

Product Name:

Select Product Name ▲▼

Quantity:

Quantity ▲▼

Item Price:

$

Submit

Products

M:N Delete Implemented: USING ON DELETE CASCADE, when a product is deleted, it is deleted from the Order Details table.

Nullable Relationship: Foreign key categoryID can be NULL

DISPLAY and DELETE Products (M:N Delete)

Products

ID	PRODUCT NAME	CATEGORY NAME	QUANTITY IN STOCK	RETAIL PRICE	MSRP	DELETE
BE001	Glycolic Acid Overnight Glow Peel	Beauty	170	45	22.5	Delete
FD001	Plant Based Energy Bites	Food and Drink	499	18	9	Delete
FI001	Balance Blocks	Fitness	238	49	24.5	Delete
IM001	Immunity Wellness Shot	Immunity	250	10	5	Delete
VS001	Daily Multivitamin		382	15	7.5	Delete
W001	Wellness Essential		212	35	17.5	Delete

DISPLAY Products (Dynamic dropdown for product name)

Search by Product Name

Product Name:

Select Product Name ⏷

Submit   Reset

ADD/INSERT Products (Dynamic dropdown for FK-category id; Category name can be NULL)

Add Product

Product ID:

    ID

Product Name:

    Product Name

Category Name:

    Select Category Name   ⇕

Quantity In Stock:

    Quantity   ⇕

Retail Price:

    $

MSRP:

    $

    Submit

UPDATE Products (<mark>NULLABLE Relationship</mark>; Dynamic dropdown for FK-category id)

Update Product's Category

Product Name:

    Select Product Name   ⇕

Category Name:

    Select Category   ⇕

    Submit

Categories

DISPLAY Categories

Categories

ID	CATEGORY NAME
1	Food and Drink
2	Vitamins and Supplements
3	Immunity
4	Fitness
5	Beauty

DISPLAY Categories (Dynamic dropdown for category name)

Search by Category

Look up a Category:

Select a Category ⇅

Submit   Reset

ADD/INSERT Categories

Add Category

Category Name:

Category Name

Submit