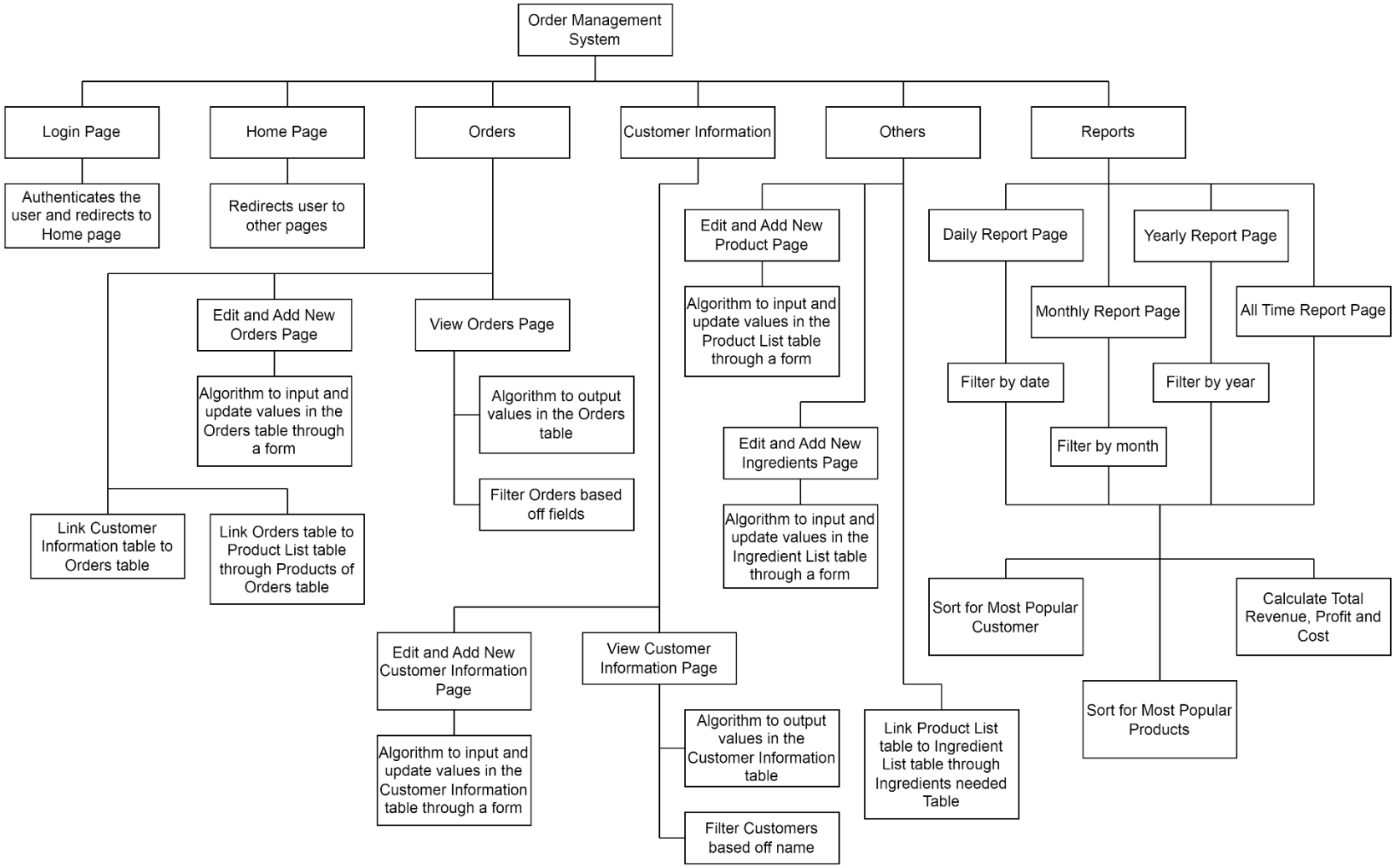
Criterion B: Design overview

Top down diagram



Module Description

1. **Login Page**

This page authenticates the user with the entering of a username and password, which enhances the security and privacy of information.

2. **Home Page**

It displays the buttons which redirects the user to the other pages of the program for easy navigation.

3. **Edit Orders Page**

The page allows users to edit orders and add new ones by entering the various fields of the order including the customer and products ordered.

4. **View Orders Page**

Orders are shown in descending order and supports filtering based off features such as customers. It also permits the viewing of orders in order of dates to be shipped, so that tracking of orders is made more efficient.

5. **Edit Customer Information Page**

This page lets the user edit and add new customers into the database by entering the customer's name, address, etc.

6. **View Customer Information Page**

Each customer is presented with their respective attributes, which can be filtered according to their names.

7. **Edit Products Page**

The page allows the user to edit and add new products including the number of ingredients required as well as its price, whilst acting as a product information page.

8. **Edit Ingredients Page**

It permits the editing and adding of new ingredients to be used in each product, containing its cost.

9. **Reports Page**

It presents the buttons that redirect to the more specific report pages.

10. **Daily Report Page**

This page reveals a report of the top 5 customers and products of a particular date.

11. **Monthly Report Page**

This page reveals a report of the top 5 customers and products of a particular month of a specified year.

12. **Yearly Report Page**

This page reveals a report of the top 5 customers and products of a particular year.

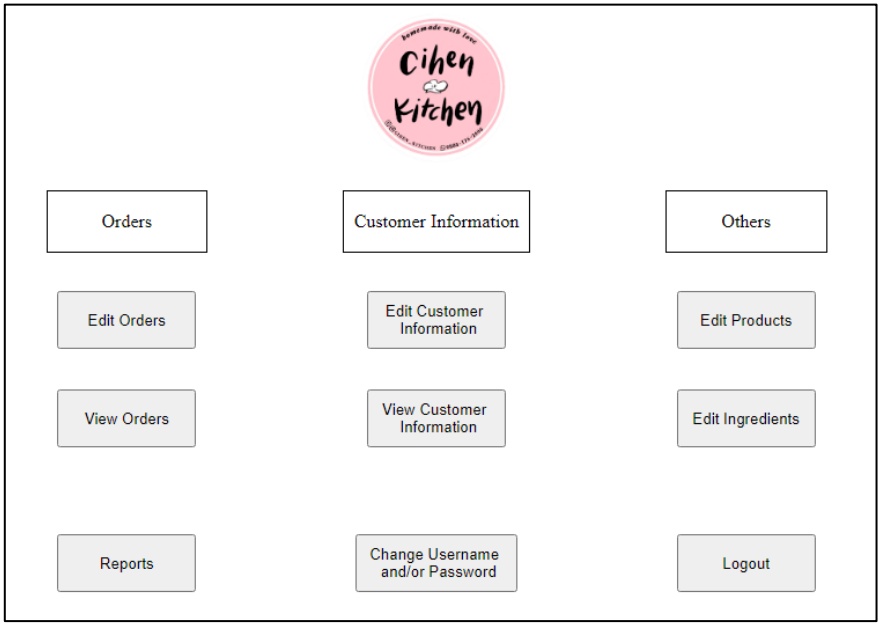
13. **All Time Report Page**

This page reveals a report of the top 5 customers and products of all time.

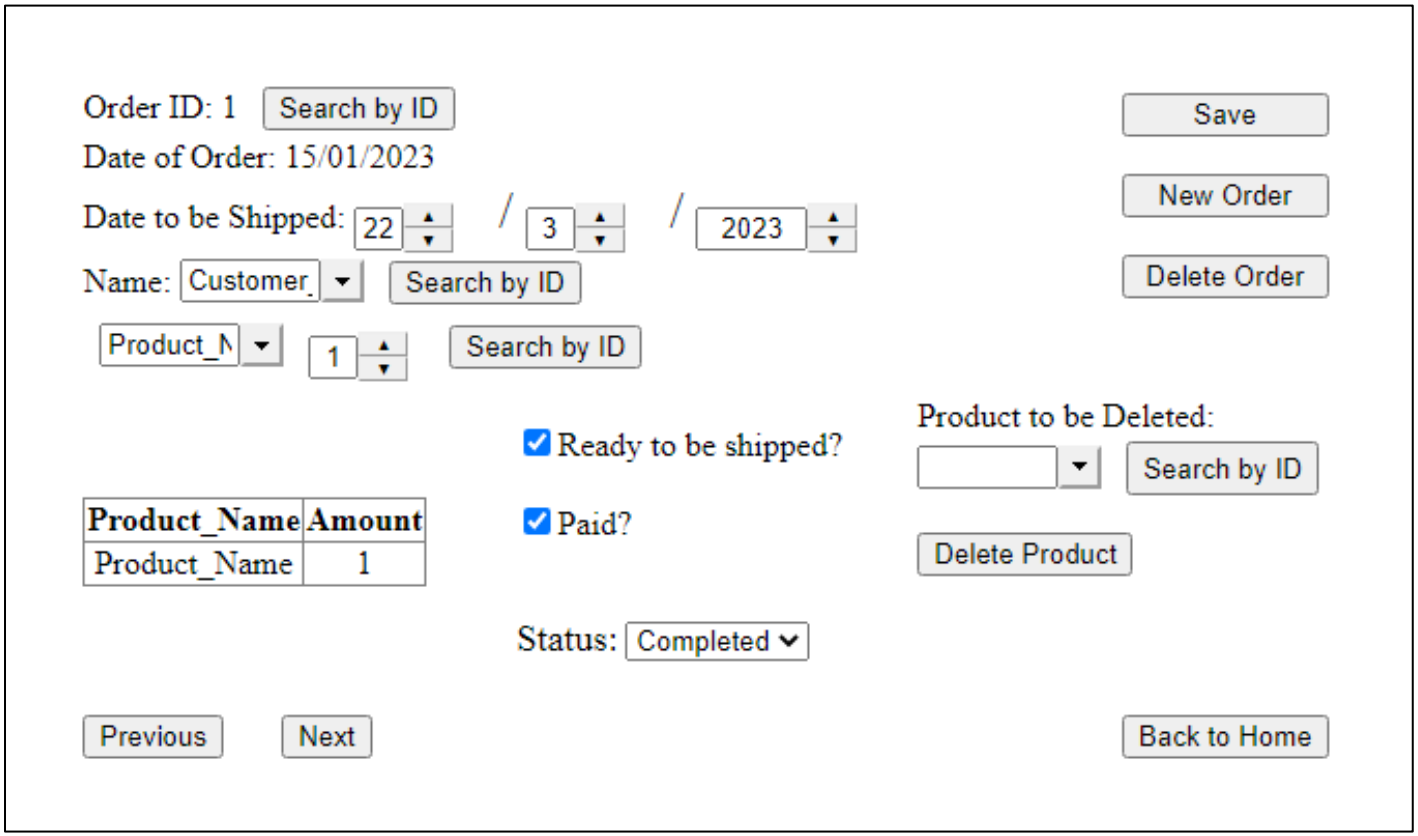
Input and output designs

1. Login Page

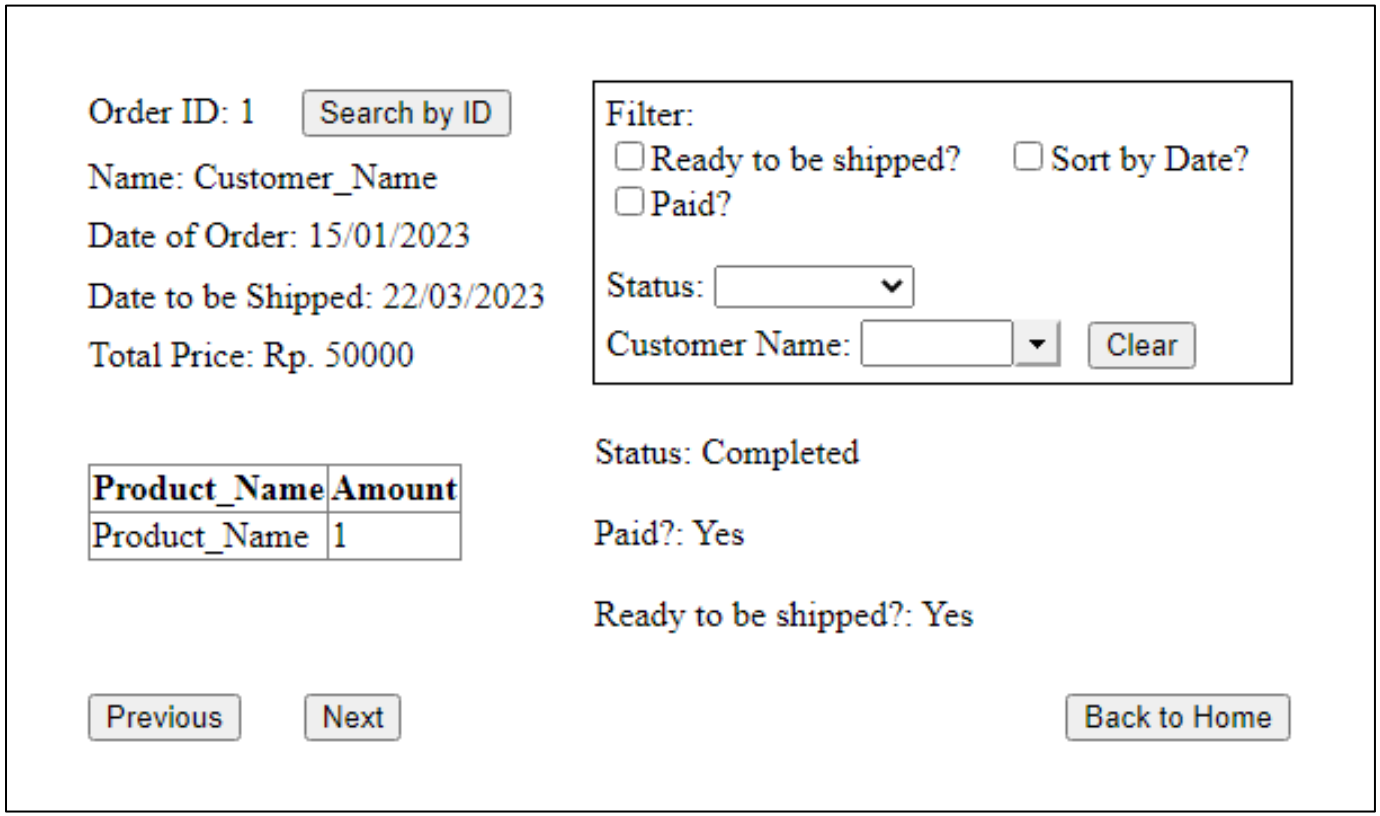
2. Home Page



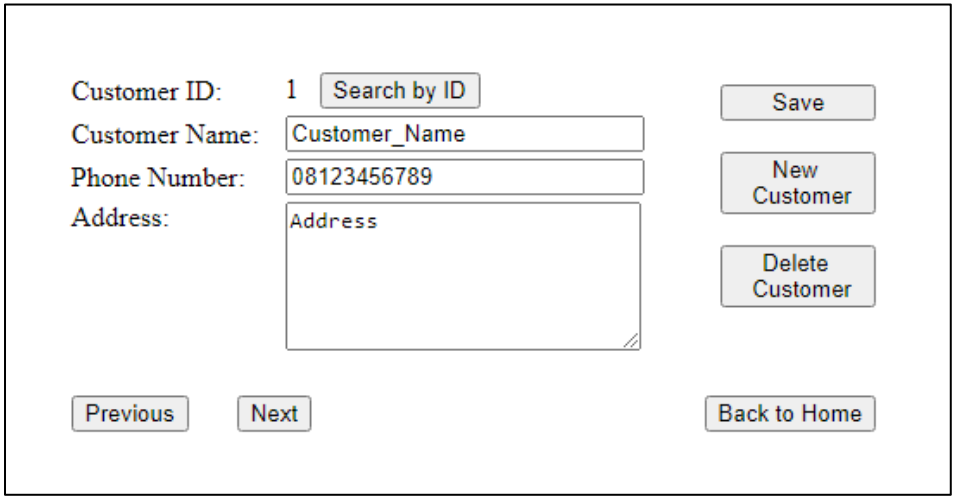
3. Edit Orders Page



4. View Orders Page

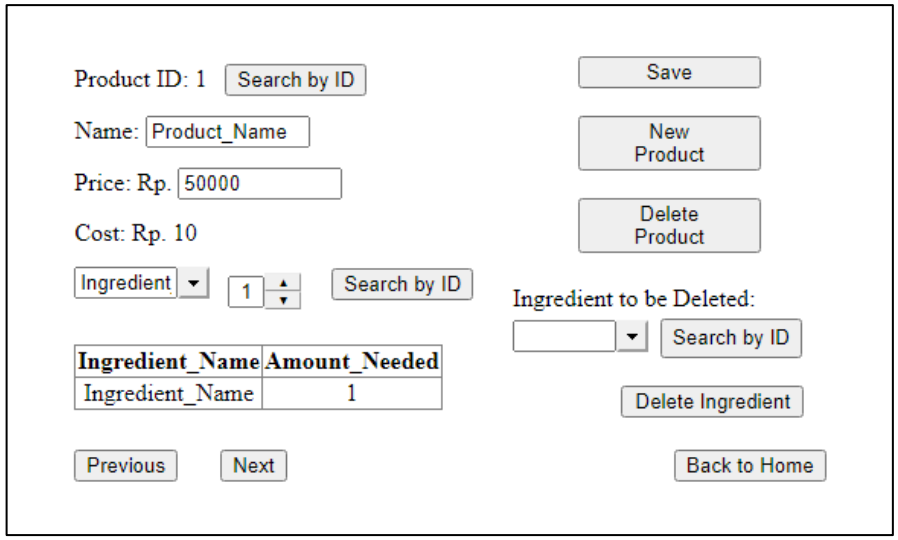


5. Edit Customer Information Page

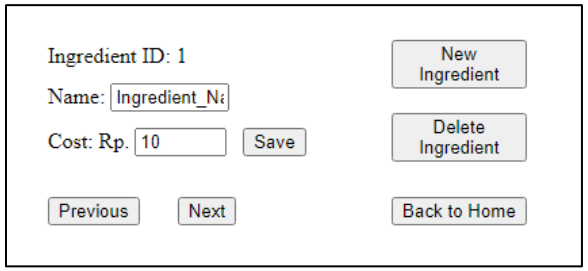


6. View Customer Information Page

7. Edit Products Page

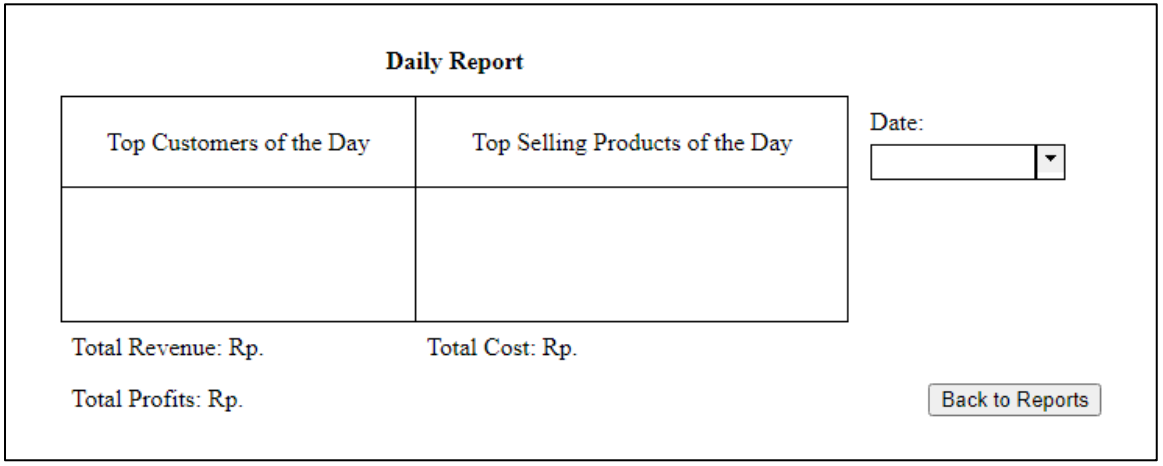


8. Edit Ingredients Page

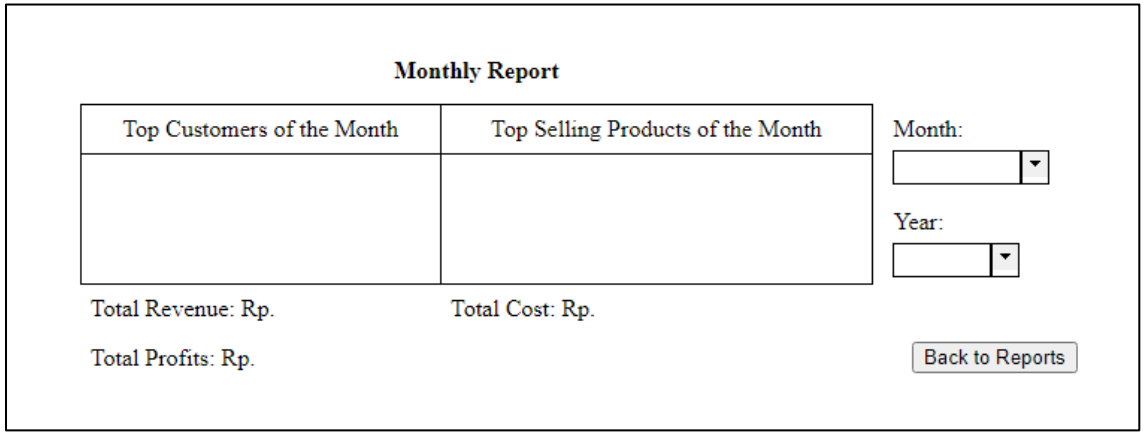


9. Reports Page

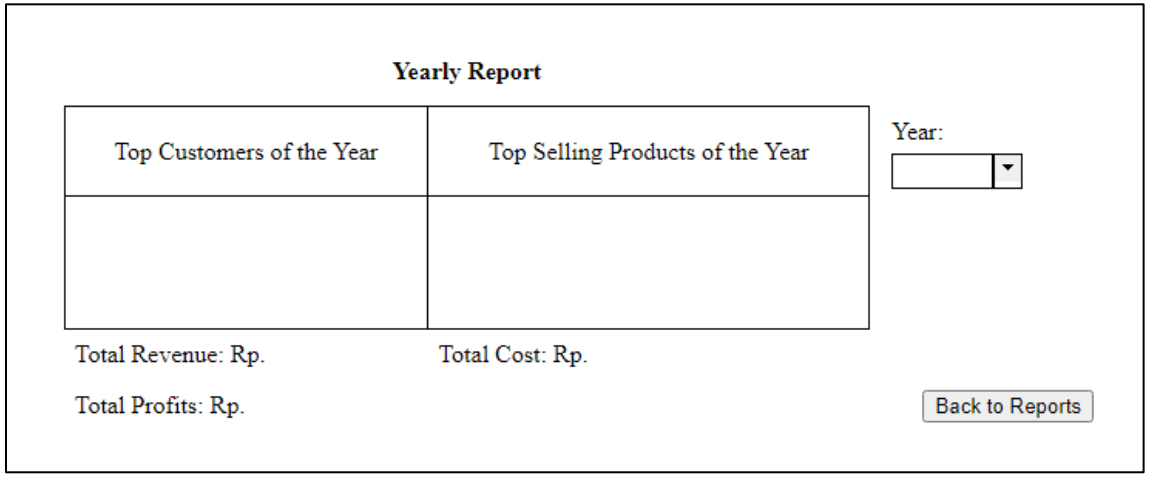
10. Daily Report Page



11. Monthly Report Page



12. Yearly Report Page



13. All Time Report Page

All Time Report

Top Customers of All Time	Top Selling Products of All Time
1. Customer_Name 2. 3. 4. 5.	1. Product_Name 2. 3. 4. 5.

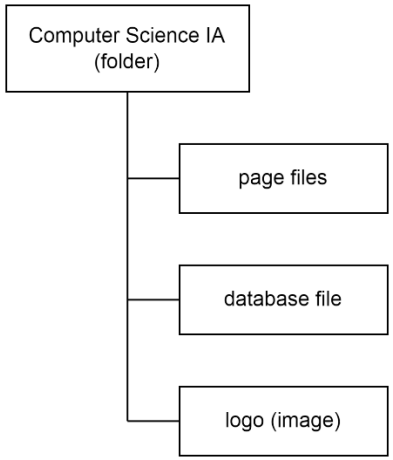
Total Revenue: Rp. 50000

Total Cost: Rp. 10

Total Profits: Rp. 49990

Back to Reports

Folder Structure



Database Structure

Login

Fields	Data Type	Description
Username	Short Text	-
Password	Short Text	-

Customer Information

Fields	Data Type	Description
Customer ID	Number	Incremented automatically
Customer Name	Short Text	Entered manually
Address	Short Text	Entered manually
Phone Number	Number	Entered manually

Product List

Fields	Data Type	Description
Product ID	Number	Incremented automatically
Product Name	Short Text	Entered manually
Price	Currency	Entered manually

Ingredient List

Fields	Data Type	Description
Ingredient ID	Number	Incremented automatically
Ingredient Name	Short Text	Entered manually
Cost	Currency	Entered manually

Orders

Fields	Data Type	Description
Order ID	AutoNumber	Automatically numbered
Customer ID	Number	-
Completed?	Yes/No	Entered manually through checkbox
Paid?	Yes/No	Entered manually through checkbox
Ready to be shipped?	Yes/No	Entered manually through checkbox
Date_of_Order	Date/Time	Set to *Today* at the time of order creation
Date_to_be_Shipped	Date/Time	Entered manually

Ingredients Needed (Linked Table)

Fields	Data Type	Description
Ingredient ID	Number	-
Product ID	Number	-
Amount Needed	Number	Entered manually

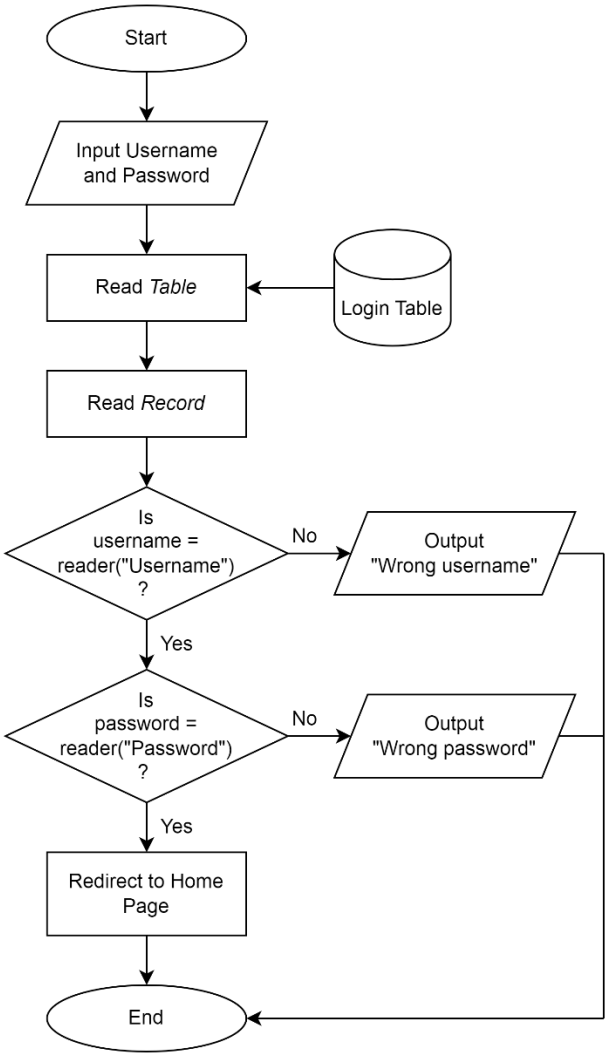
Products of Orders (Linked Table)

Fields	Data Type	Description
Order ID	Number	-
Product ID	Number	-
Amount	Number	Entered manually

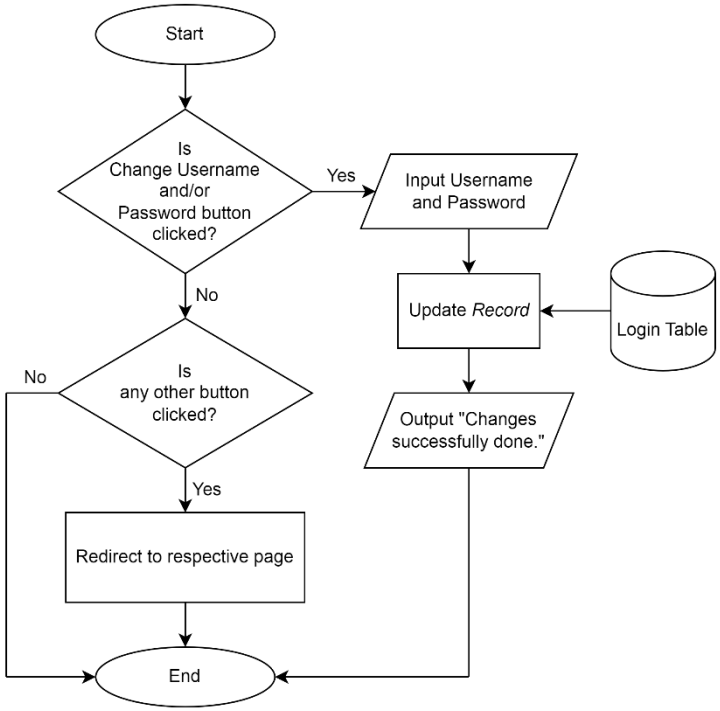
Legend	
	Primary key
	Foreign key

Flowchart

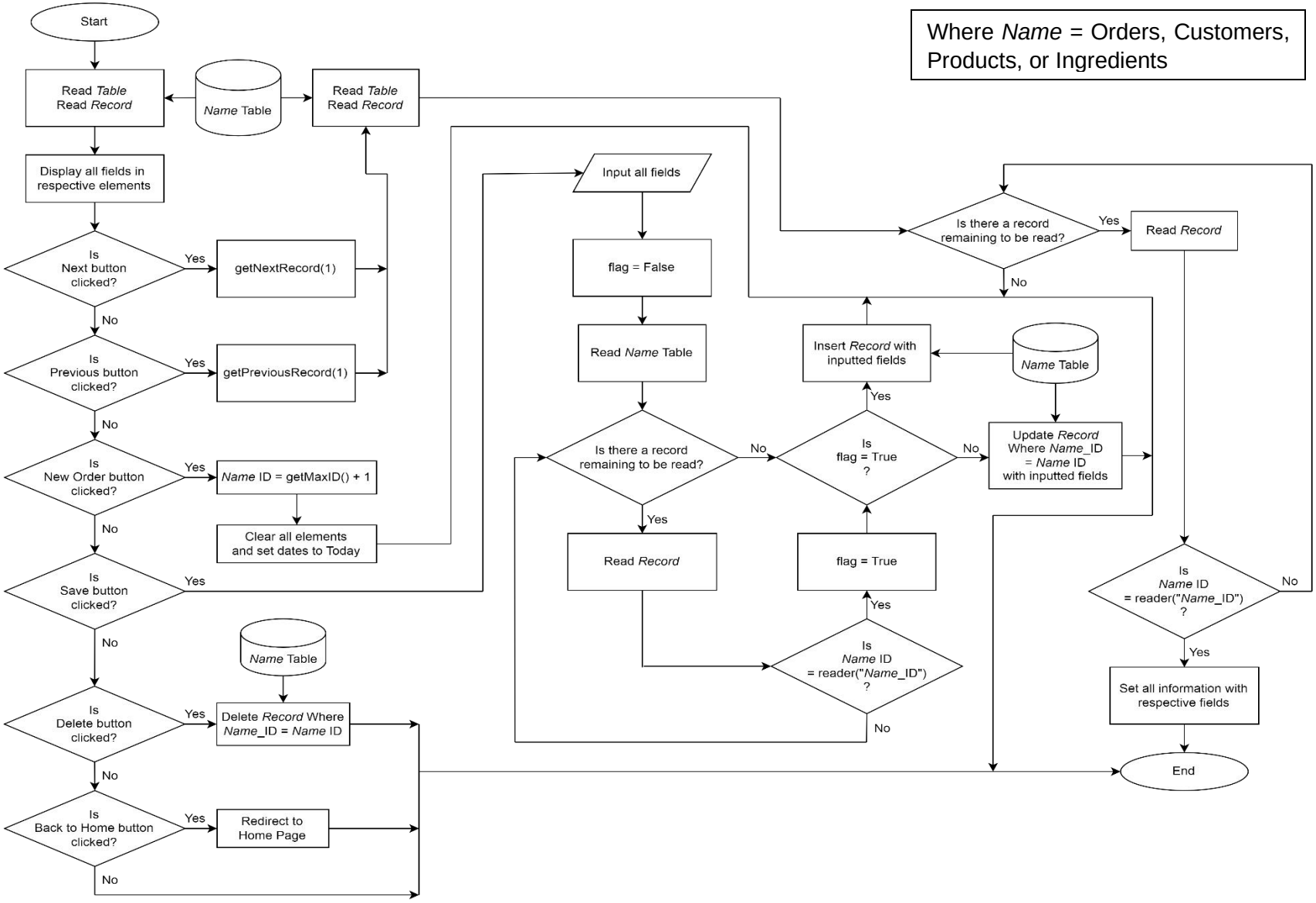
1. Login Page



2. Home Page

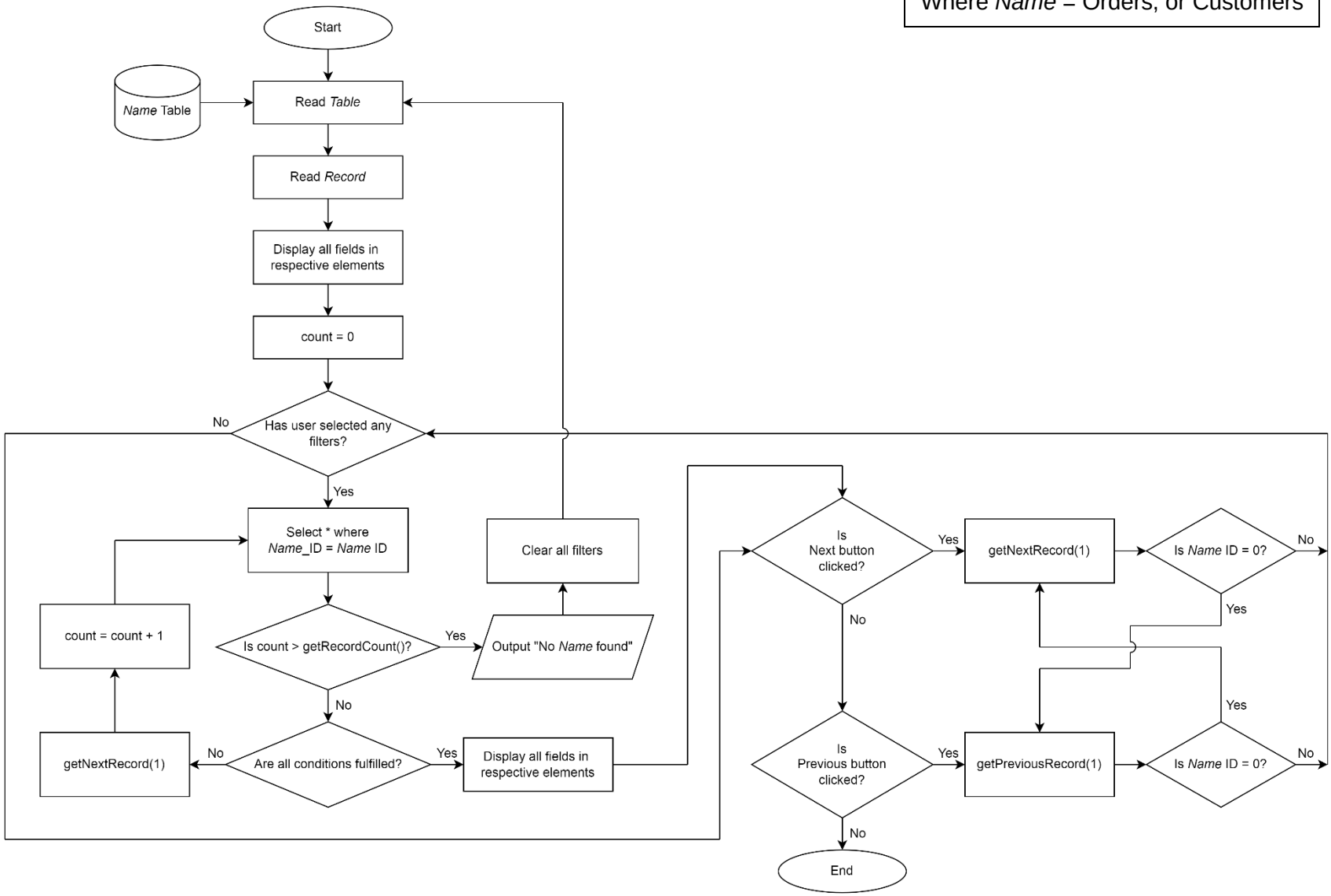


3. Edit Orders Page, 5. Edit Customer Information Page, 7. Edit Products Page, 8. Edit Ingredients Page

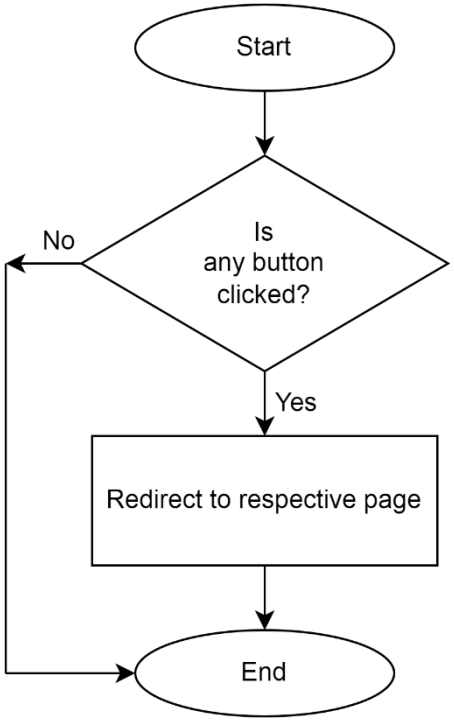


4. View Orders Page, 6. View Customer Information Page

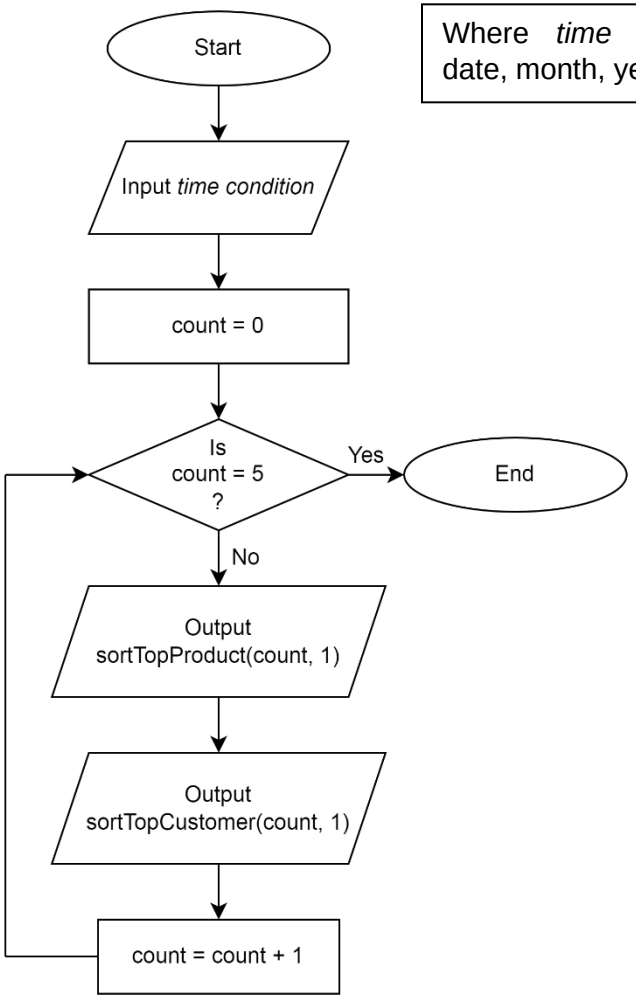
Where *Name* = Orders, or Customers



9. Reports Page

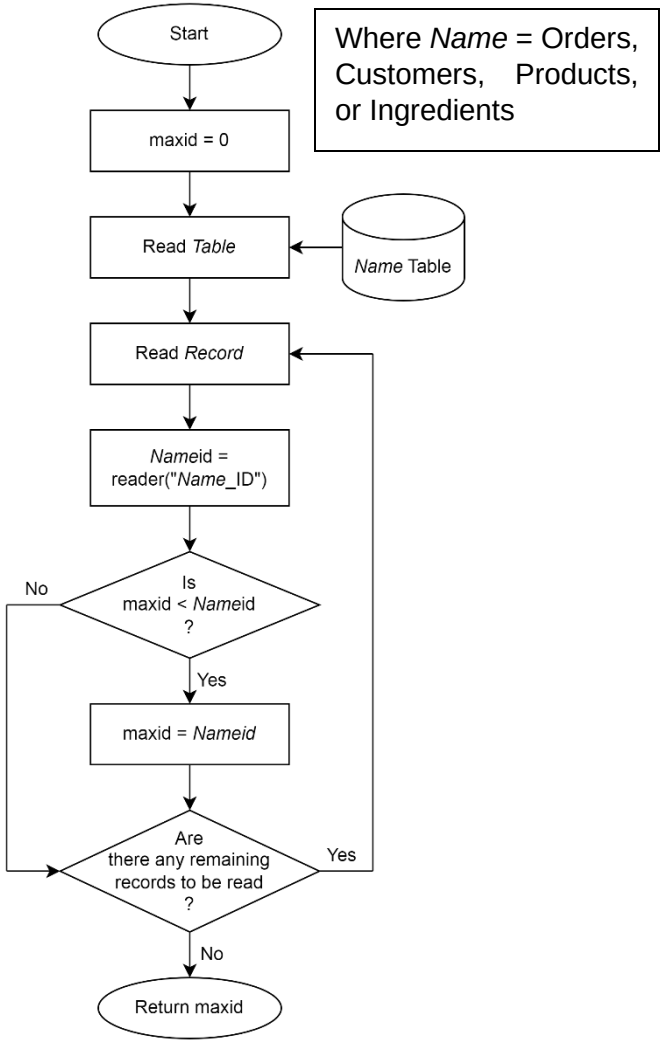


10. Daily Report Page, 11. Monthly Report Page, 12. Yearly Report Page, 13. All Time Report Page

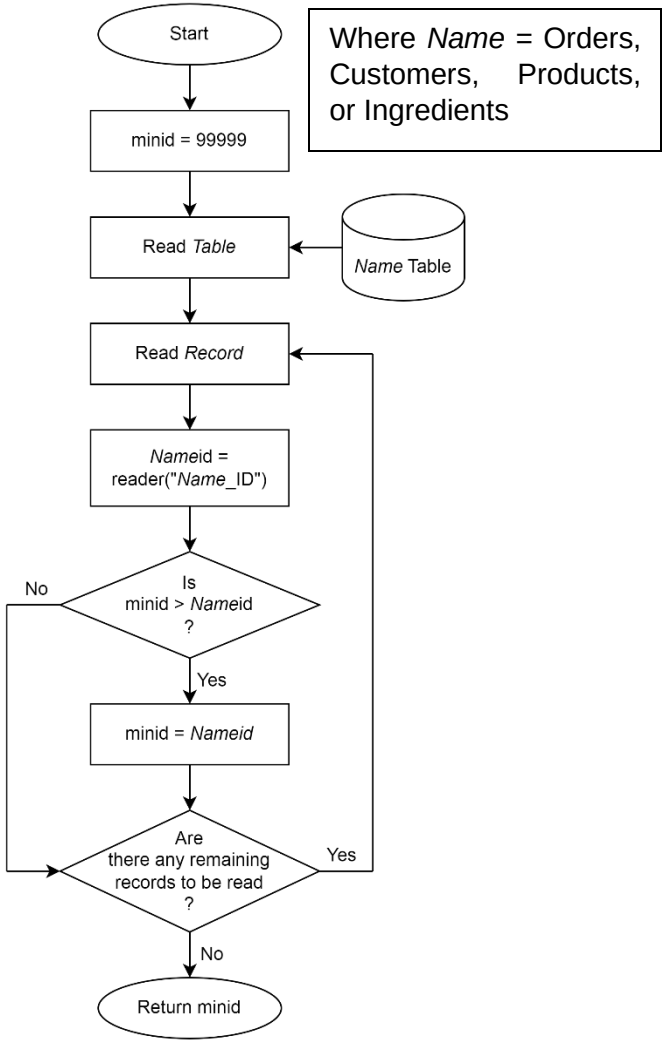


Functions

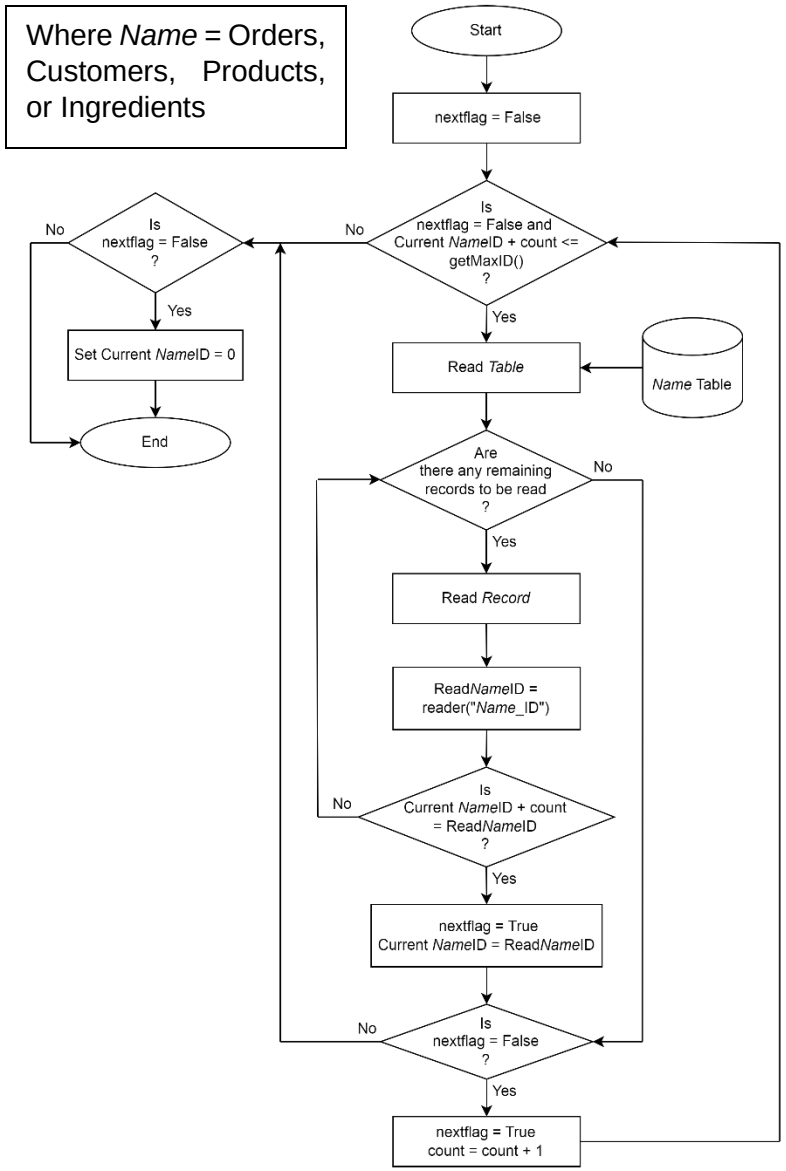
getMaxID()



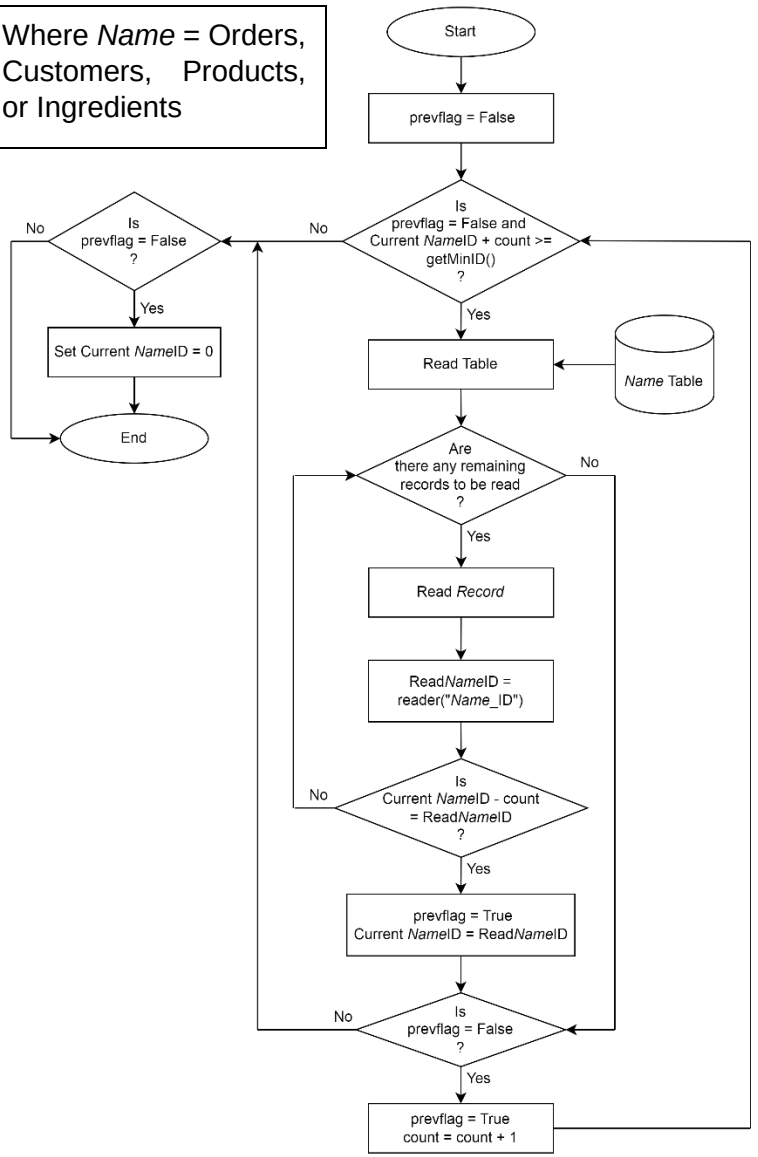
getMinID()



getNextRecord(count)

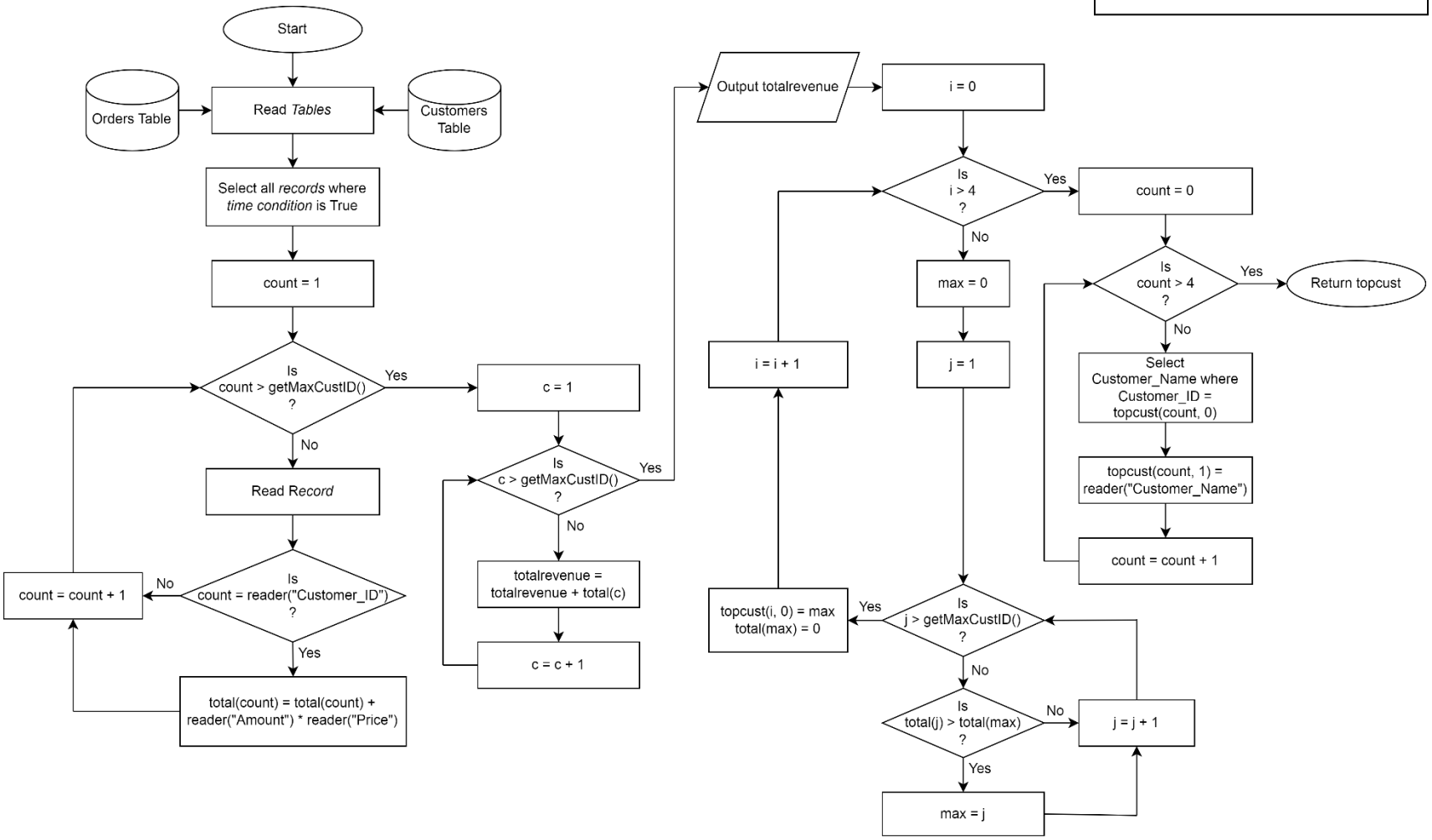


getPreviousRecord(count)



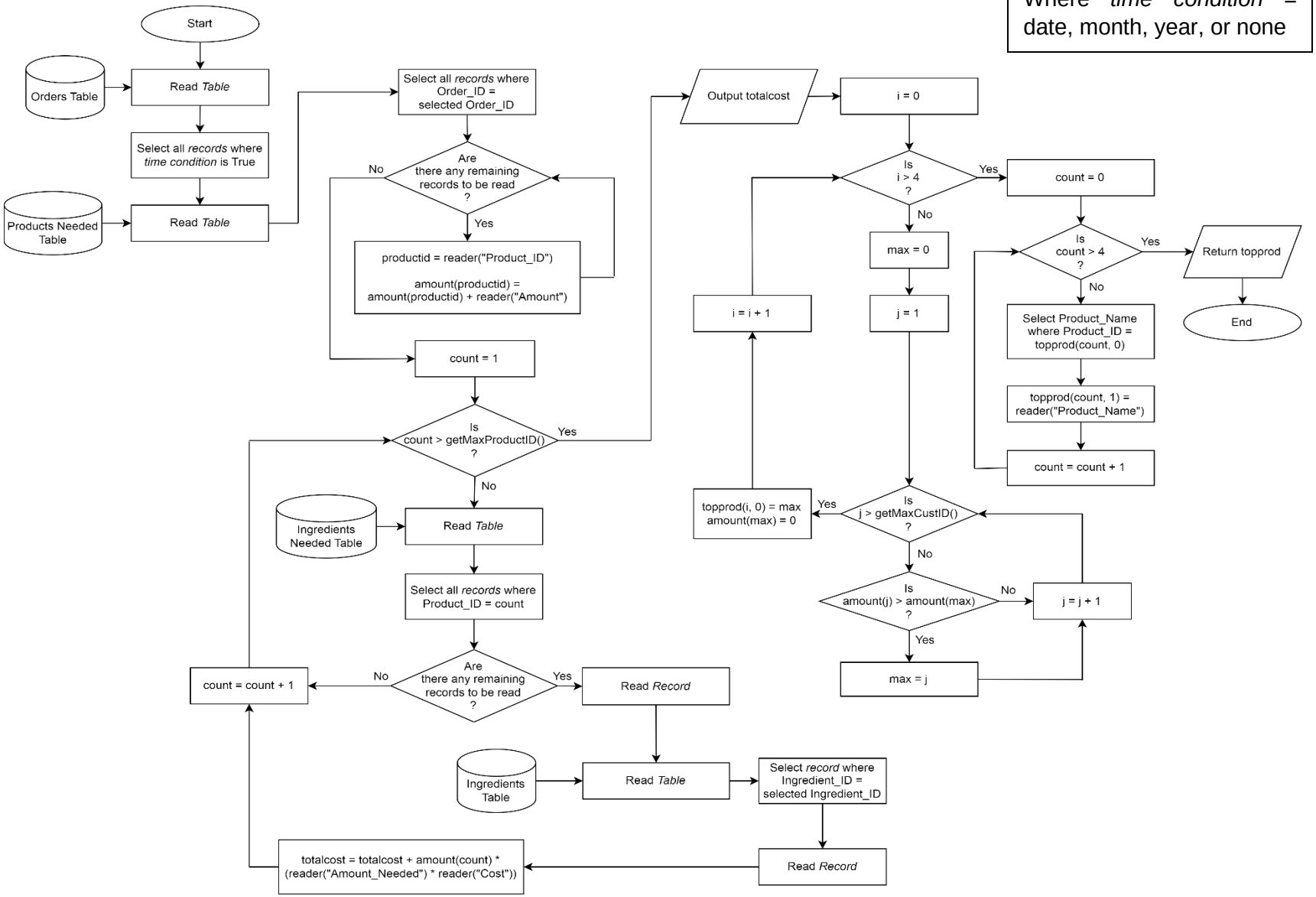
sortTopCustomer()

Where *time condition* = date, month, year, or none

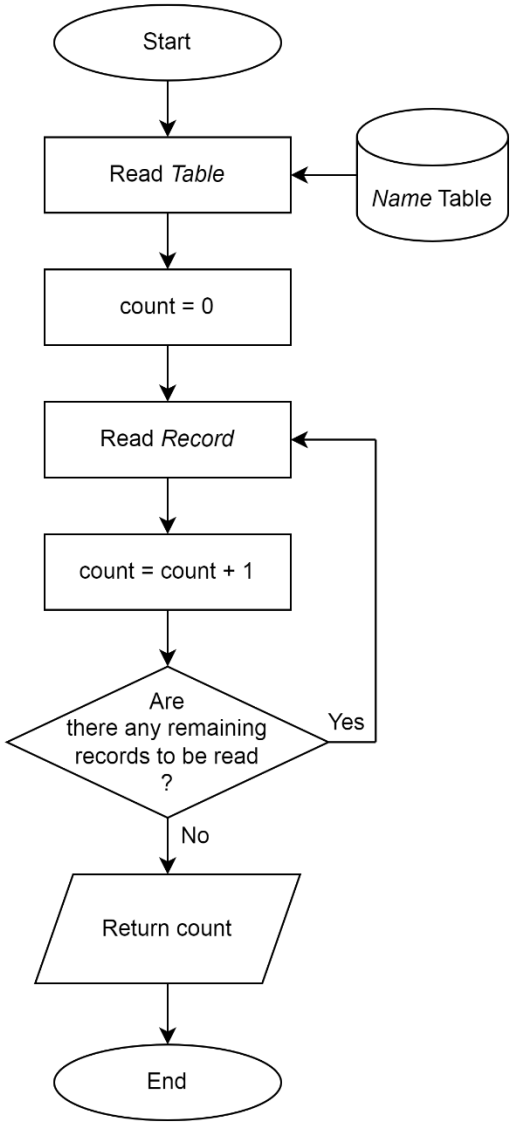


sortTopProduct()

Where *time condition* = date, month, year, or none



getRecordCount()



Where *Name* = Orders, or Customers

Extensibility

1. **Meaningful Identifiers**

Variables and functions are given meaningful names in order for easy understanding of what each variable and function is meant to store and do.

2. **Modularity**

The application functions are divided into separate pages so that the different operations of the program are clear and focused. This allows for easy recognition of the various purposes of the application.

3. **Flowcharts**

Flowcharts provide visual representations of code to aid in the understanding of future developers of the logical aspects of the program.

4. **Abstraction**

The creation and use of multiple functions facilitate abstraction which allows future developers to simply make use of the functions and methods without understanding the logic behind them, placing focus on the problem at hand, as well as reduces the complexity of the program.

5. **Database Structure and Data Dictionary**

Providing the database structure allows for better understanding of the relationships between the data involved. The data dictionary allows future developers to identify the properties of such data, including its data type and how it is to be provided.

Test Plan

No.	Description	Purpose	Expected Result	Actual Outcome as expectations?
1	Login Page	Normal data	User is given access	Yes
2	Login Page	Abnormal data	An error message is shown	Yes
3	Edit Orders	Update data	Displays success message and the database Is updated	Yes
4	Add New Order	Add new data	Displays success message and a new record is added to the database	Yes
5	Delete Existing Order	Delete data	Displays success message and record has been deleted from the database	Yes
6	Filter Order	Filter data by attribute values	Data is filtered correctly	Yes
7	No Filtered Orders Found	Indicates absence of data with criteria of filter	An error message is shown	Yes
8	Sort Order	Sorts data by date	Orders are shown in ascending order of date to be shipped	Yes
9	Edit Existing Customer Information	Update data	Displays success message and the database Is updated	Yes

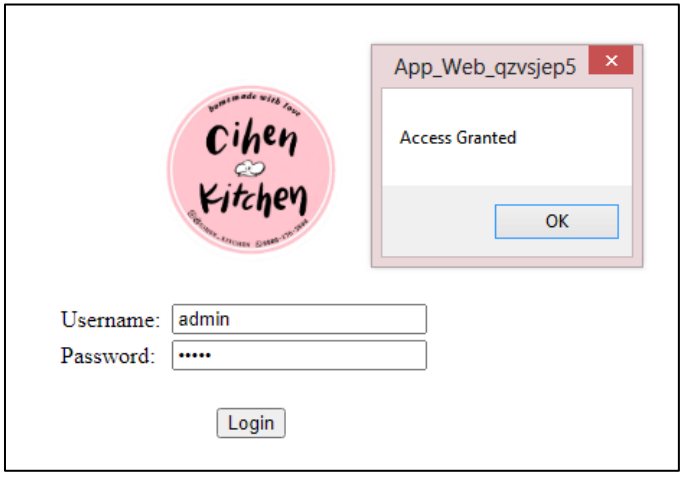
10	Add New Customer Information	Add new data	Displays success message and a new record is added to the database	Yes
11	Delete Existing Customer Information	Delete data	Displays success message and record has been deleted from the database	Yes
12	Filter Customer Information	Filter data by name	Data is filtered correctly	Yes
13	No Filtered Customer Information Found	Indicates absence of data with criteria of filter	An error message is shown	Yes
14	Edit Existing Product	Update data	Displays success message and the database Is updated	Yes
15	Add New Product	Add new data	Displays success message and a new record is added to the database	Yes
16	Delete Existing Product	Delete data	Displays success message and record has been deleted from the database	Yes
17	Cost of Product	Calculates cost of each product as per its ingredients	Displays correct value for cost of product	Yes
18	Edit Existing Ingredient	Update data	Displays success message and the database Is updated	Yes
19	Add New Ingredient	Add new data	Displays success message and a new record is added to the database	Yes

20	Delete Existing Ingredient	Delete data	Displays success message and record has been deleted from the database	Yes
21	Top 5 Customers Products (daily, monthly, yearly, all time)	Sorts products according to its sales	Product list is displayed to be correctly sorted	Yes
22	Top 5 Customers (daily, monthly, yearly, all time)	Sorts customers according to purchases	Customers are displayed to be correctly sorted	Yes
23	Sales Information (daily, monthly, yearly, all time)	Calculates for total revenue, profit and cost	Correct values are displayed	Yes

Test Evidence

1.

2.



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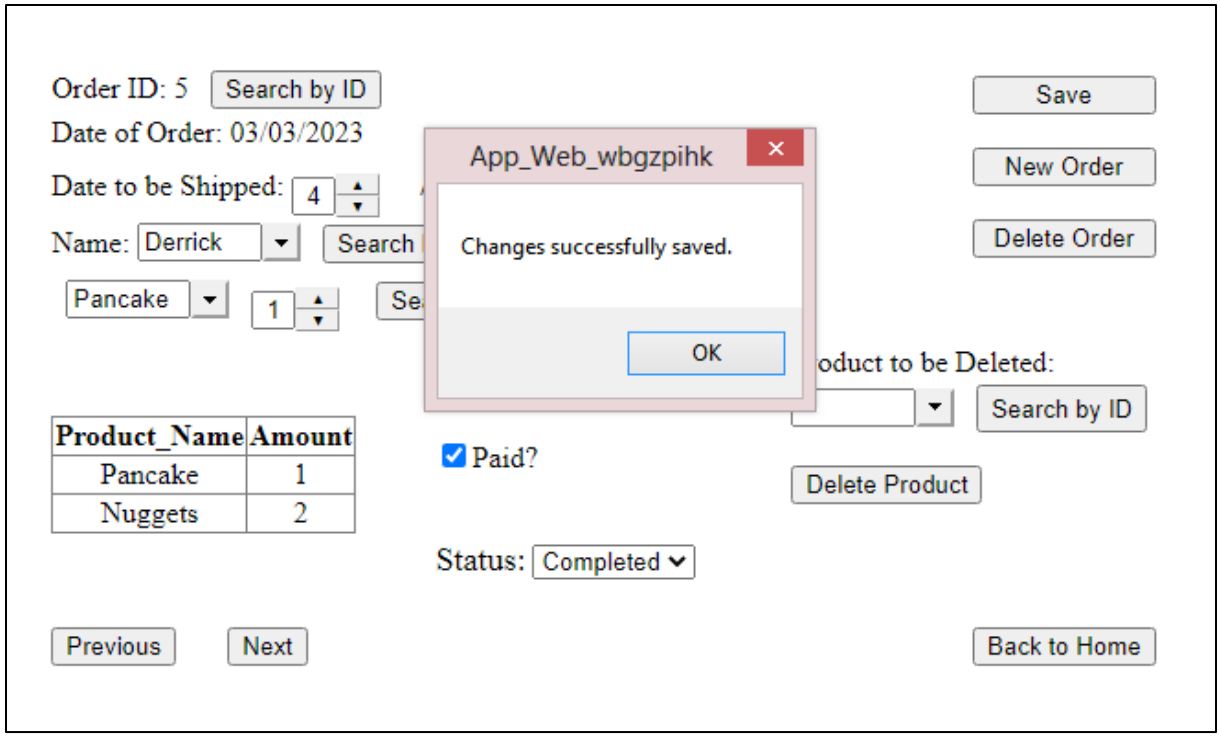
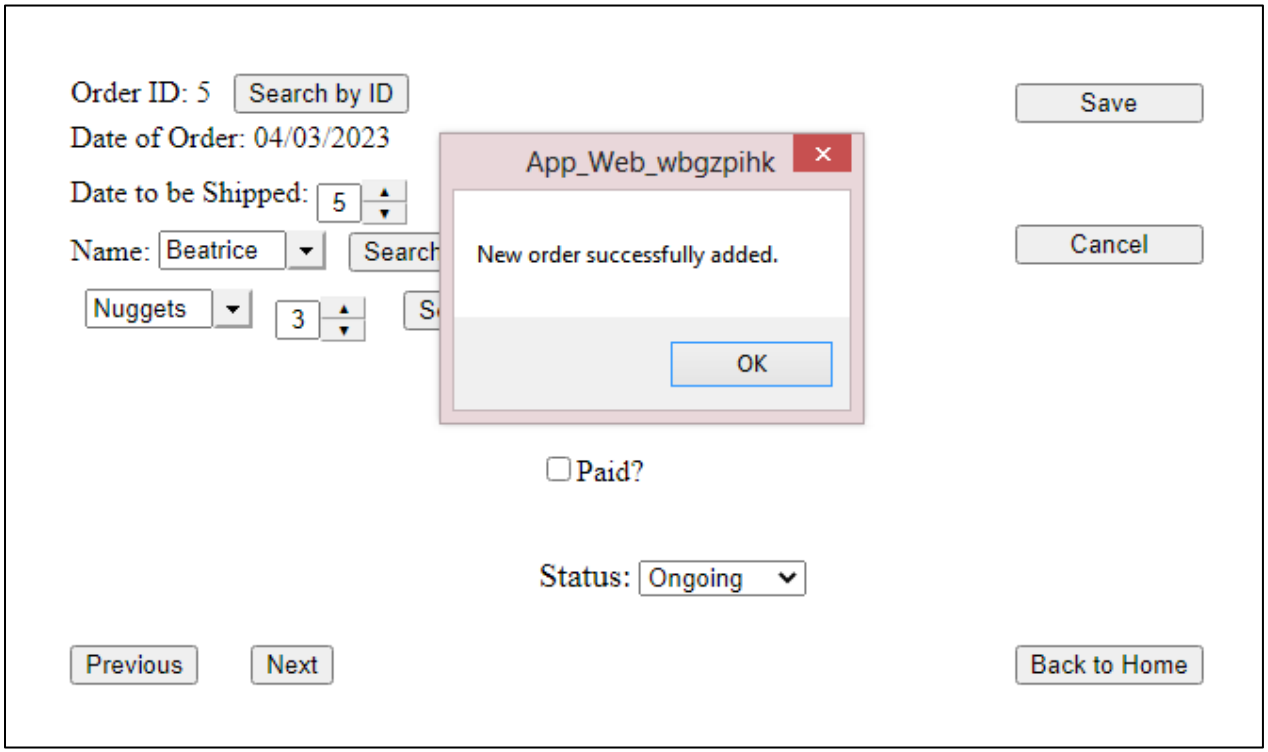


Orders

Order_ID	Customer_ID	Completed?	Paid?	Ready_to_be_shipped?	Date_of_Order	Date_to_be_Shipped
1	2	☑	☑	☑	03/03/2023	05/03/2023
2	1	☐	☐	☑	03/03/2023	05/03/2023
3	4	☐	☐	☐	03/03/2023	04/03/2023
4	3	☐	☑	☐	03/03/2023	04/03/2023
5	5	☑	☑	☑	03/03/2023	04/03/2023

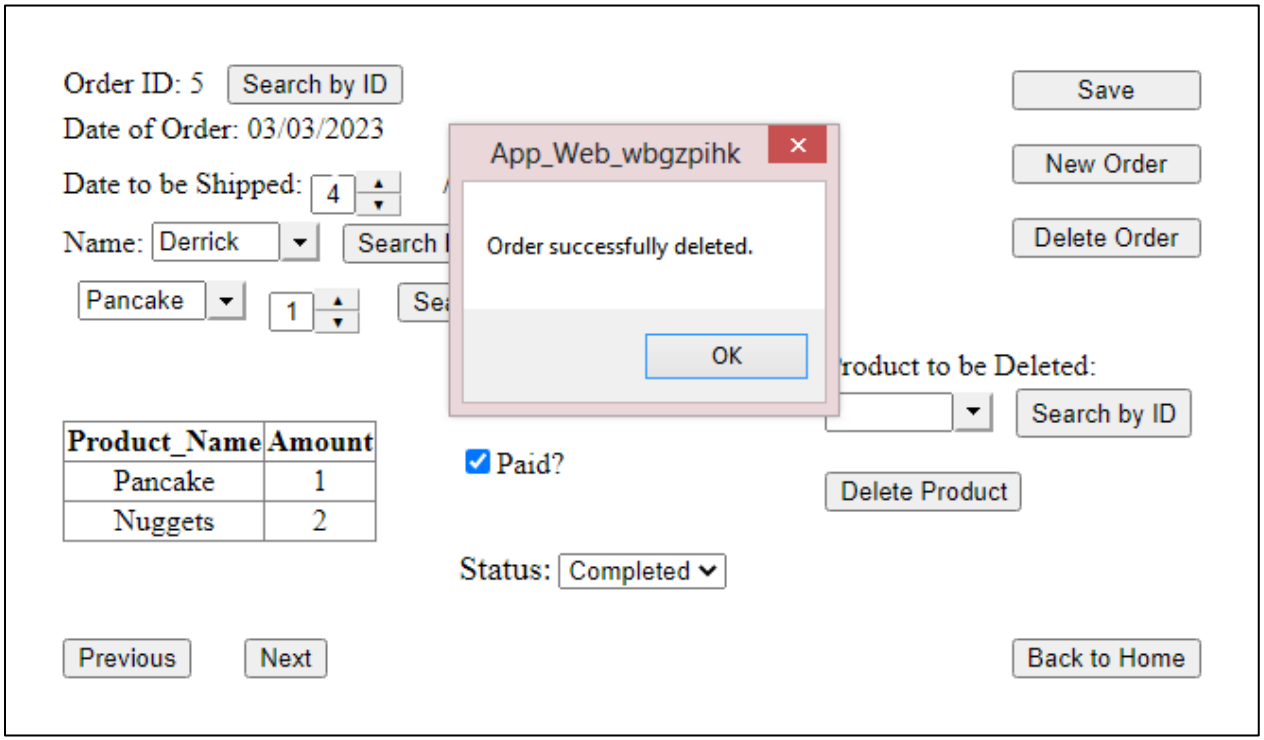
4.



Orders

Order_ID	Customer_ID	Completed?	Paid?	Ready_to_be_shipped?	Date_of_Order	Date_to_be_Shipped
1	2	☑	☑	☑	03/03/2023	05/03/2023
2	1	☐	☐	☑	03/03/2023	05/03/2023
3	4	☐	☐	☐	03/03/2023	04/03/2023
4	3	☐	☑	☐	03/03/2023	04/03/2023
5	2	☐	☐	☑	04/03/2023	05/03/2023

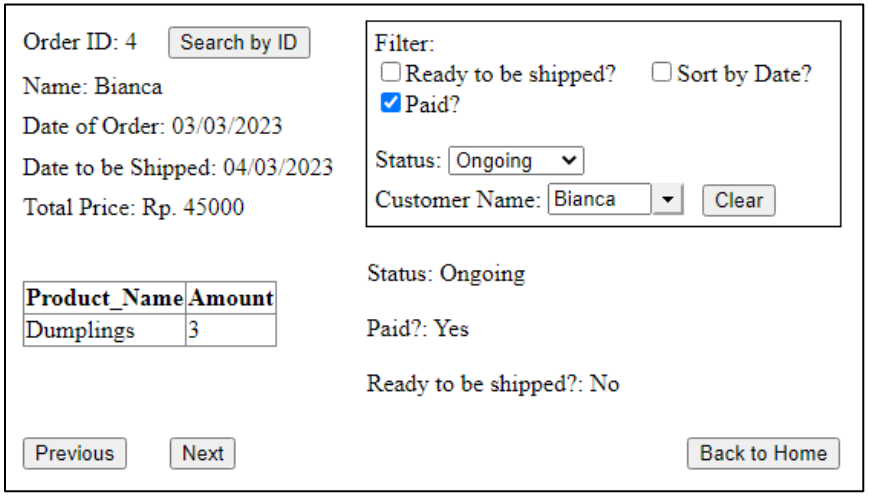
5.



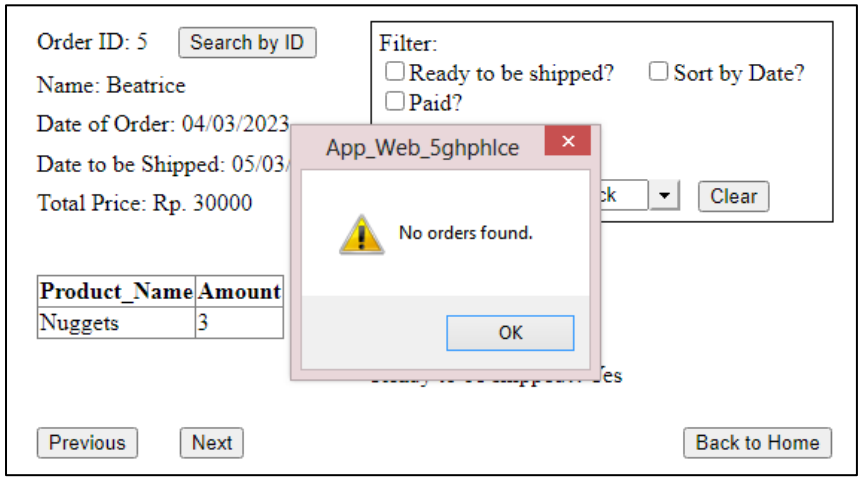
Orders

Order_ID	Customer_ID	Completed?	Paid?	Ready_to_be_shipped?	Date_of_Order	Date_to_be_Shipped	Click to Add
1	2	☑	☑	☑	03/03/2023	05/03/2023	
2	1	☐	☐	☑	03/03/2023	05/03/2023	
3	4	☐	☐	☐	03/03/2023	04/03/2023	
4	3	☐	☑	☐	03/03/2023	04/03/2023	
#Deleted	#Deleted	■	■	■	#Deleted	#Deleted	

6.

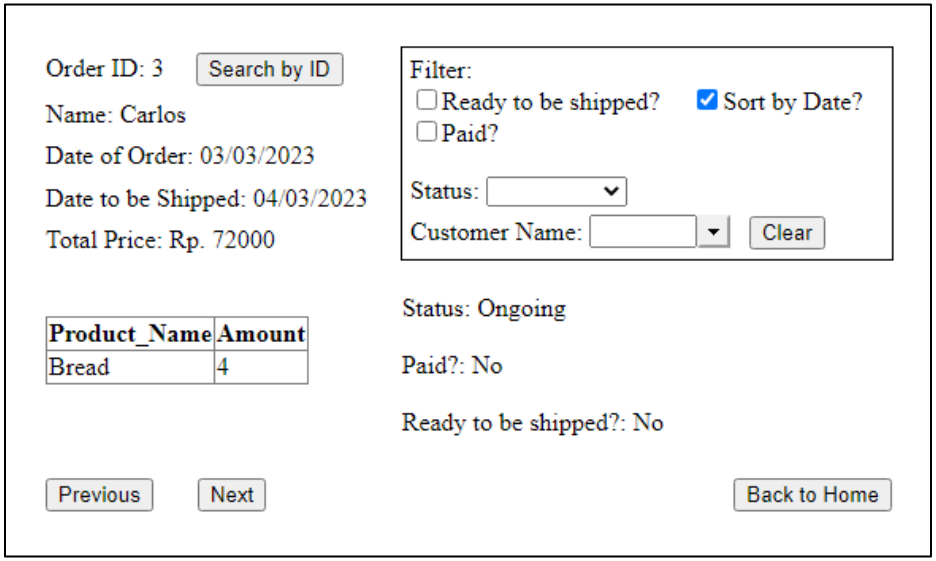

Order ID: 4
Search by ID
Name: Bianca
Date of Order: 03/03/2023
Date to be Shipped: 04/03/2023
Total Price: Rp. 45000
Product_Name
Amount
Dumplings
3
Filter:
Ready to be shipped?
Sort by Date?
Paid?
Status: Ongoing
Customer Name: Bianca
Clear
Status: Ongoing
Paid?: Yes
Ready to be shipped?: No
Previous
Next
Back to Home

7.

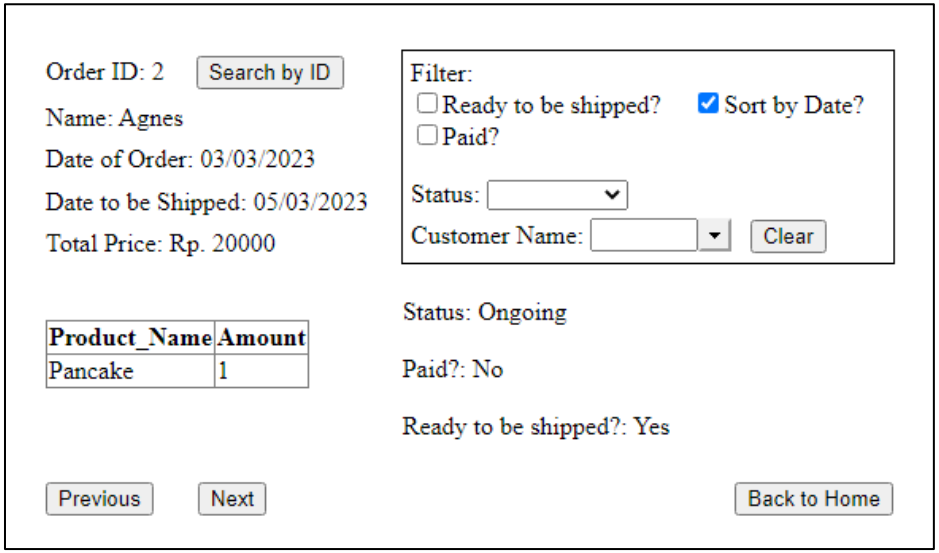

Order ID: 5
Search by ID
Name: Beatrice
Date of Order: 04/03/2023
Date to be Shipped: 05/03/
Total Price: Rp. 30000
Product_Name
Amount
Nuggets
3
Filter:
Ready to be shipped?
Sort by Date?
Paid?
Clear
App_Web_5ghphlce
No orders found.
OK
Previous
Next
Back to Home

8.

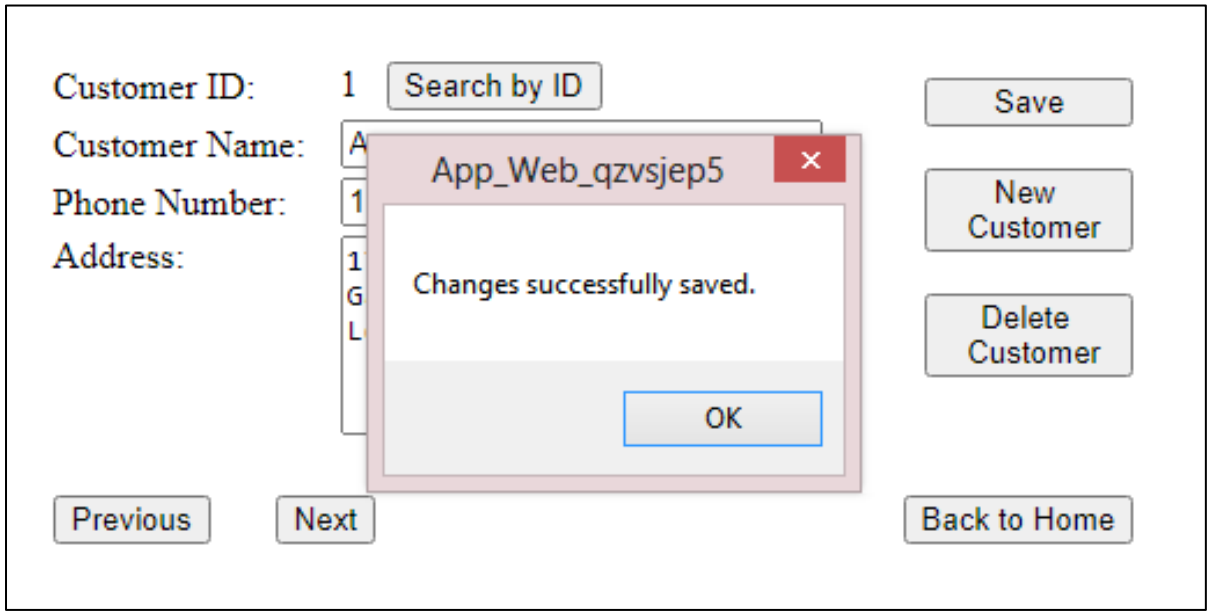
1st Customer displayed



2nd Customer displayed



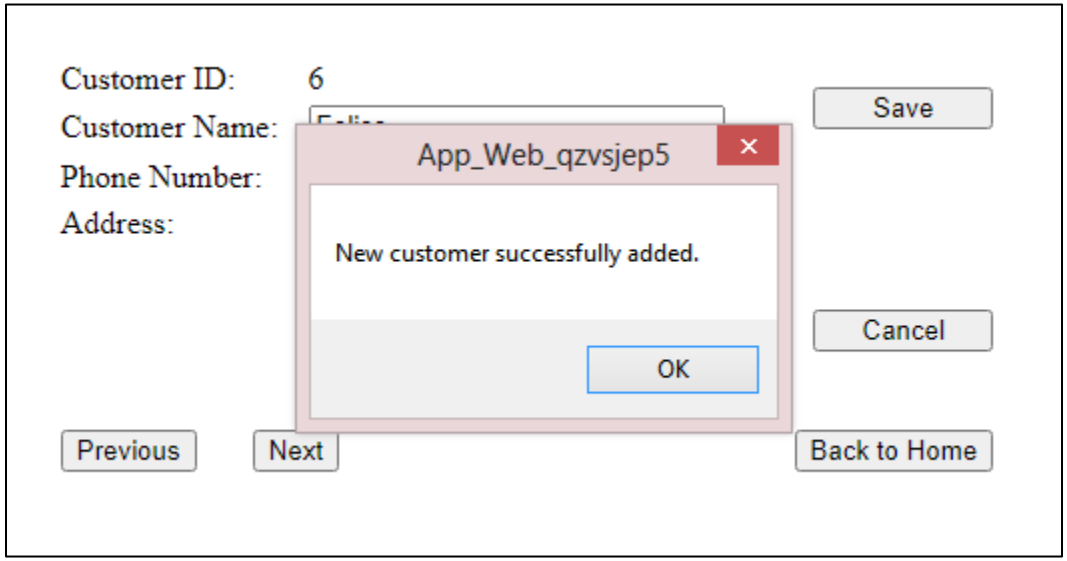
9.



Customer_Information

Customer_ID	Customer_Name	Address	Phone_Number
1	Agnes	17th Rose Str	12038923784
2	Beatrice	Muara Karan	32813719837
3	Bianca	Cemparalok	92744289479
4	Carlos	11th Mejis St	12197347327
5	Derrick	4th Pepperm	63272611098
6	Felice	15th Orchard	2128201013

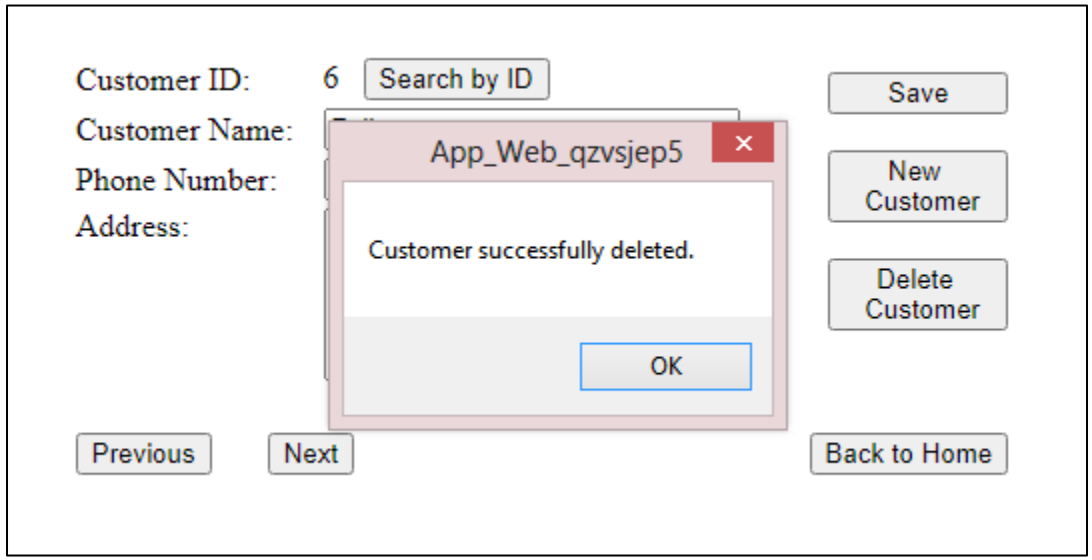
10.



Customer_Information

Customer_ID	Customer_Name	Address	Phone_Number
1	Agnes	17th Rose Str	12038923784
2	Beatrice	Muara Karan	32813719837
3	Bianca	Cemparalok	92744289479
4	Carlos	11th Mejis St	12197347327
5	Derrick	4th Pepperm	63272611098
6	Felice	15th Orchard	2128201012

11.



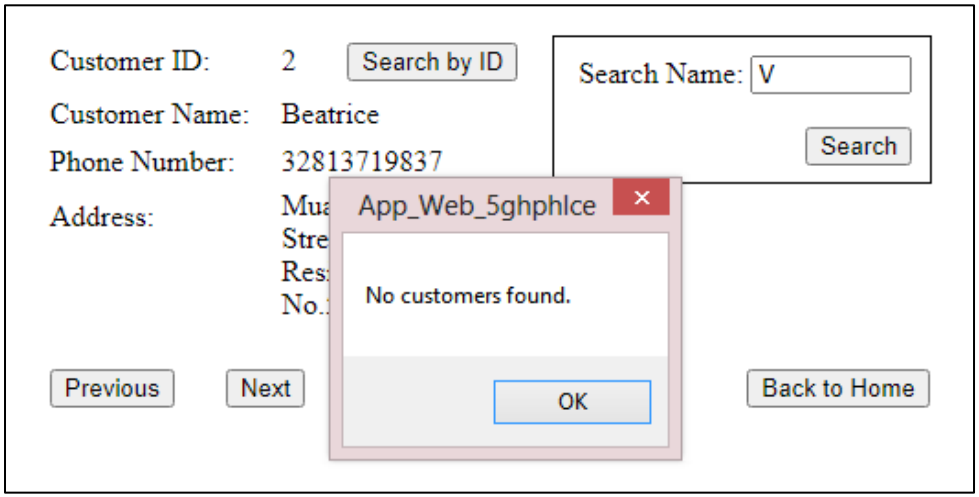
Customer_Information

Customer_ID	Customer_Name	Address	Phone_Number
1	Agnes	17th Rose Str	12038923784
2	Beatrice	Muara Karan	32813719837
3	Bianca	Cemparalok	92744289479
4	Carlos	11th Mejis St	12197347327
5	Derrick	4th Pepperm	63272611098
#Deleted	#Deleted	#Deleted	#Deleted

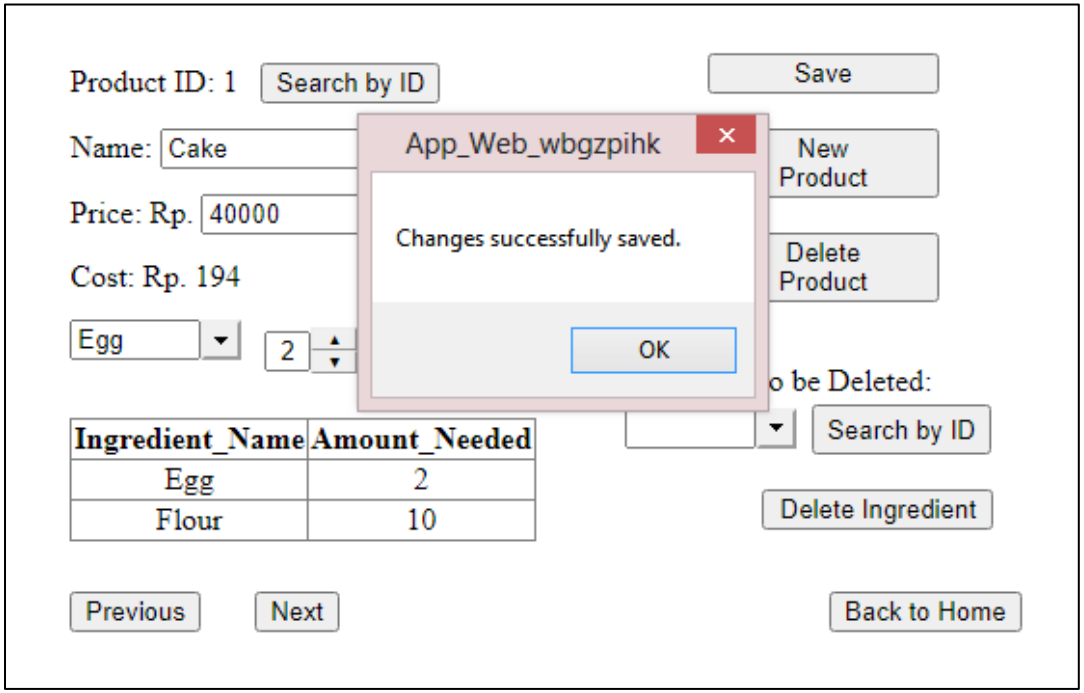
12.

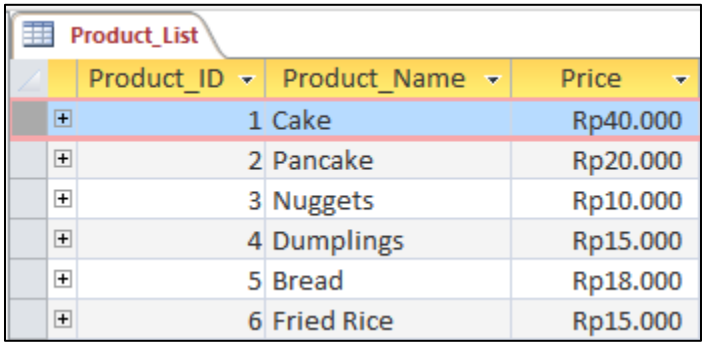
Customer ID: 2
Search by ID
Customer Name: Beatrice
Phone Number: 32813719837
Address: Muara Karang Street Mutiara Residence, No.5 Jakarta
Search Name: Bea
Search
Previous
Next
Back to Home

13.


Customer ID: 2
Search by ID
Customer Name: Beatrice
Phone Number: 32813719837
Address:
Search Name: V
Search
App_Web_5ghphlce
No customers found.
OK
Previous
Next
Back to Home

14.

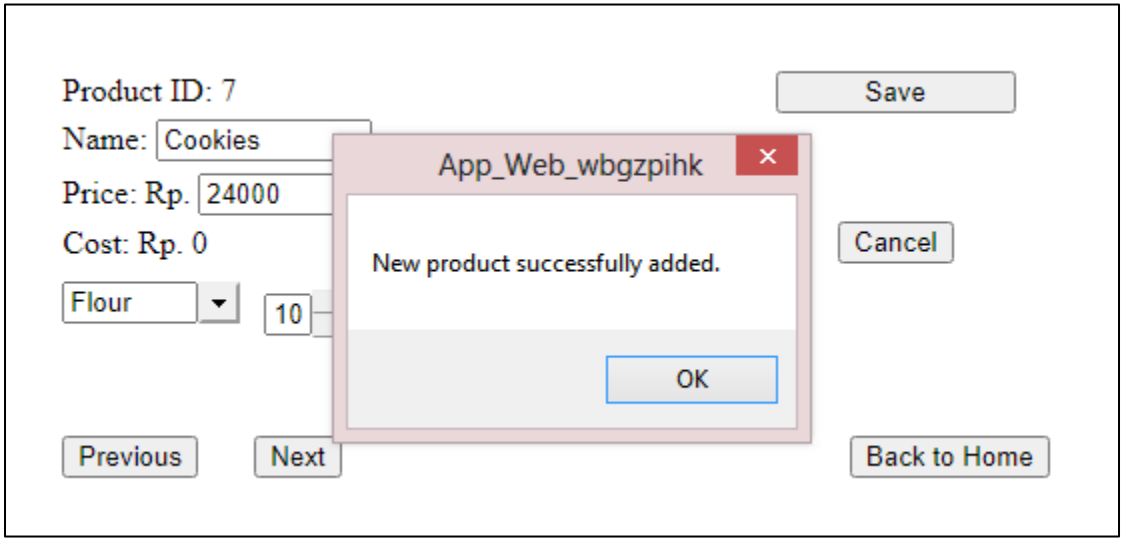




Product_List

Product_ID	Product_Name	Price
1	Cake	Rp40.000
2	Pancake	Rp20.000
3	Nuggets	Rp10.000
4	Dumplings	Rp15.000
5	Bread	Rp18.000
6	Fried Rice	Rp15.000

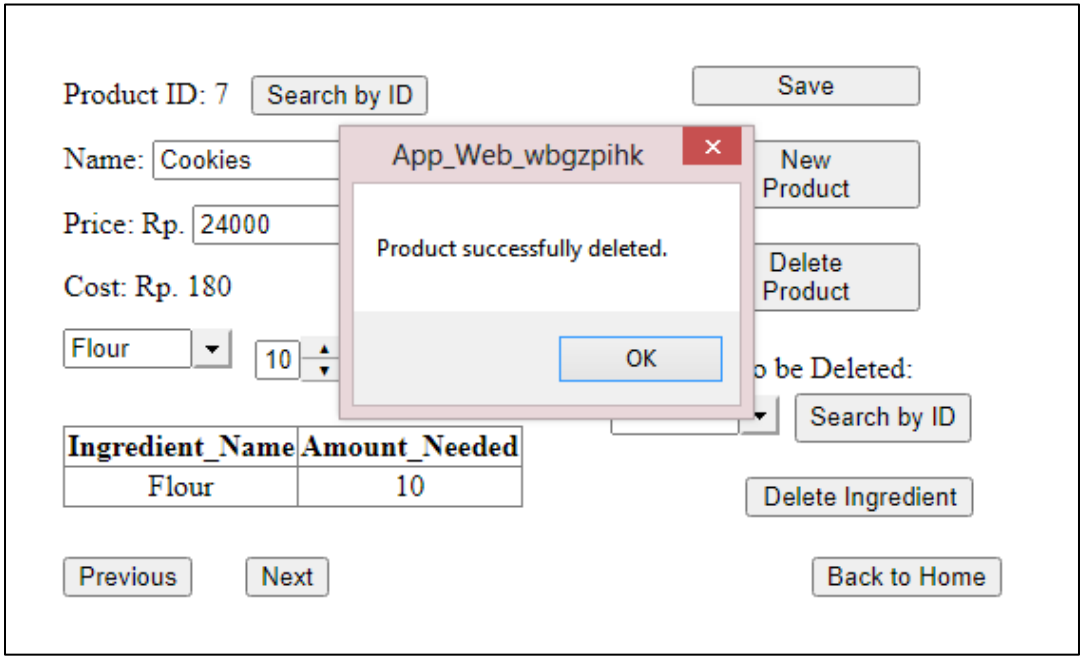
15.

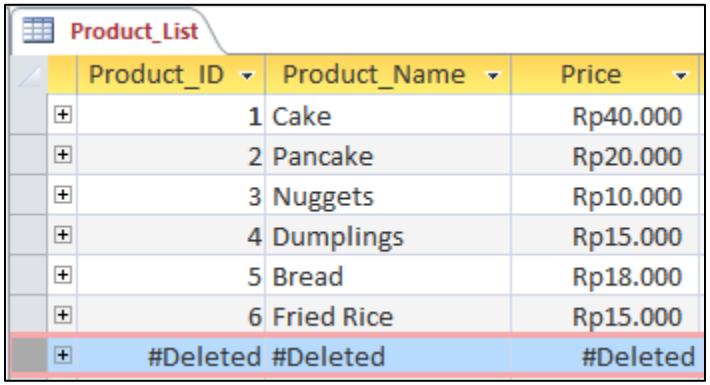


Product_List

Product_ID	Product_Name	Price
1	Cake	Rp40.000
2	Pancake	Rp20.000
3	Nuggets	Rp10.000
4	Dumplings	Rp15.000
5	Bread	Rp18.000
6	Fried Rice	Rp15.000
7	Cookies	Rp24.000

16.

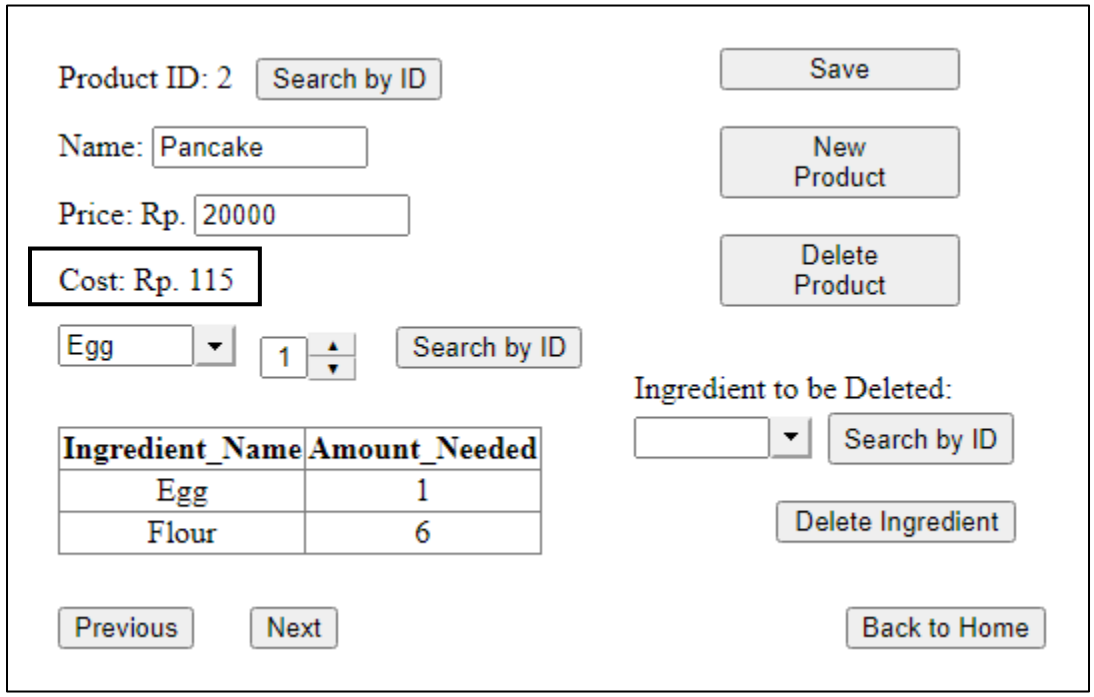




Product_List

Product_ID	Product_Name	Price
1	Cake	Rp40.000
2	Pancake	Rp20.000
3	Nuggets	Rp10.000
4	Dumplings	Rp15.000
5	Bread	Rp18.000
6	Fried Rice	Rp15.000
#Deleted	#Deleted	#Deleted

17.

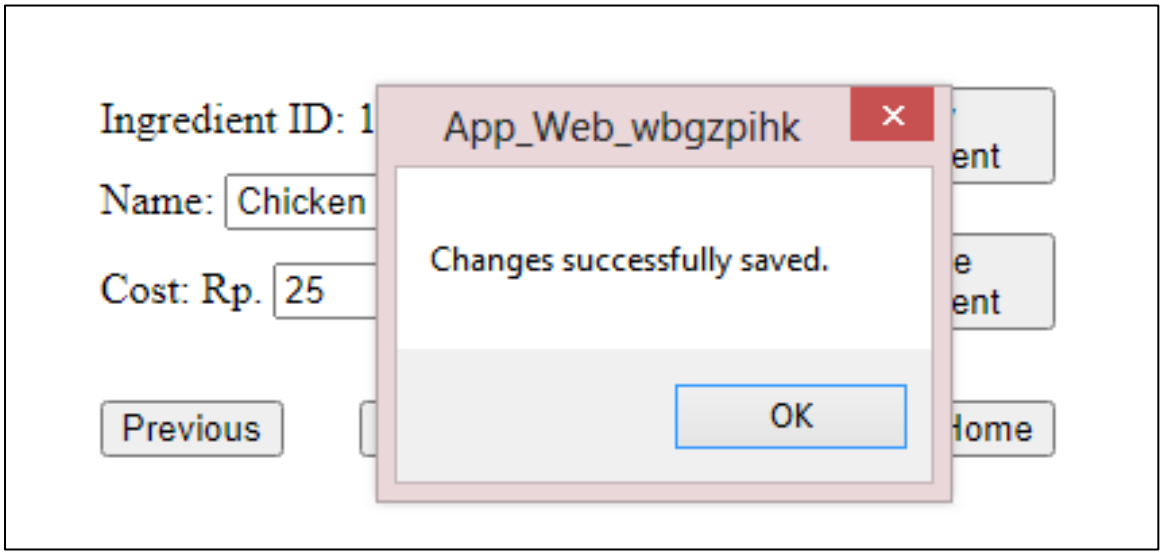


Ingredient_Name	Amount_Needed
Egg	1
Flour	6

Ingredient_List

Ingredient_ID	Ingredient_	Cost
1	Chicken Breast	Rp25
2	Salt	Rp8
3	Egg	Rp7
4	Flour	Rp18
5	Rice	Rp10

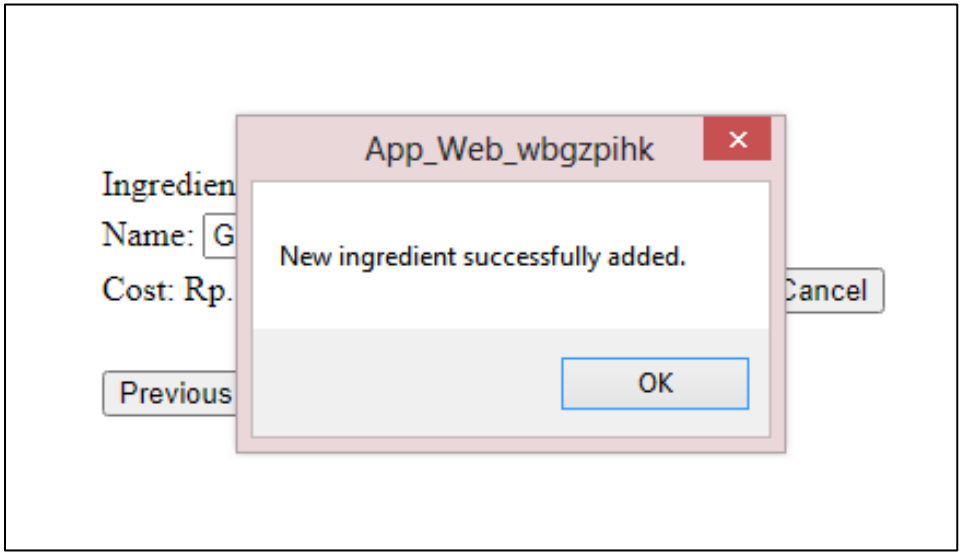
18.



Ingredient_List

Ingredient_ID	Ingredient_	Cost
1	Chicken Breast	Rp25
2	Salt	Rp8
3	Egg	Rp7
4	Flour	Rp18
5	Rice	Rp10

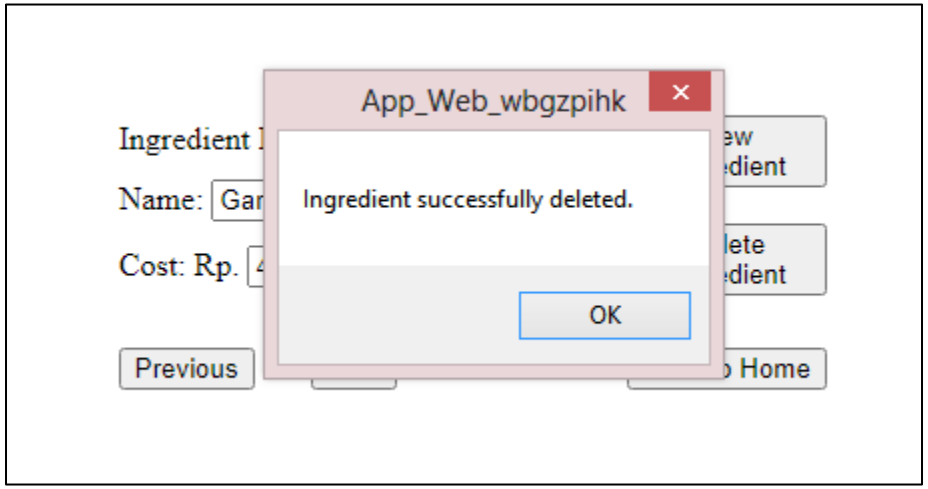
19.



Ingredient_List

Ingredient_ID	Ingredient_	Cost
1	Chicken Breast	Rp25
2	Salt	Rp8
3	Egg	Rp7
4	Flour	Rp18
5	Rice	Rp10
6	Garlic	Rp4

20.



Ingredient_List

Ingredient_ID	Ingredient_	Cost
1	Chicken Breast	Rp25
2	Salt	Rp8
3	Egg	Rp7
4	Flour	Rp18
5	Rice	Rp10
#Deleted	#Deleted	#Deleted

21. 22. 23.

Daily Report

Top Customers of the Day	Top Selling Products of the Day
1. Beatrice 2. Carlos 3. Bianca 4. Agnes 5.	1. Bread 2. Dumplings 3. Cake 4. Pancake 5. Nuggets

Date: 03/03/2023

Total Revenue: Rp. 227000 Total Cost: Rp. 5215

Total Profits: Rp. 221785

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Monthly Report

Top Customers of the Month	Top Selling Products of the Month
1. Beatrice 2. Carlos 3. Bianca 4. Agnes 5.	1. Nuggets 2. Bread 3. Dumplings 4. Cake 5. Pancake

Month: March

Year: 2023

Total Revenue: Rp. 257000 Total Cost: Rp. 6436

Total Profits: Rp. 250564

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Yearly Report

Top Customers of the Year	Top Selling Products of the Year
1. Beatrice 2. Carlos 3. Bianca 4. Agnes 5.	1. Nuggets 2. Bread 3. Dumplings 4. Cake 5. Pancake

Year: 2023

Total Revenue: Rp. 257000 Total Cost: Rp. 6436

Total Profits: Rp. 250564

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All Time Report

Top Customers of All Time	Top Selling Products of All Time
1. Beatrice 2. Carlos 3. Bianca 4. Agnes 5.	1. Nuggets 2. Bread 3. Dumplings 4. Cake 5. Pancake

Total Revenue: Rp. 257000 Total Cost: Rp. 6436

Total Profits: Rp. 250564

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