OOP PROJECT REPORT

TFB1033: OBJECT ORIENTED PROGRAMMING
MAY 2024 SEMESTER

LECTURER: DR. NOORDIN ZAKARIA

SPORT STORE By Power Rangers

NO.	NAME	STUDENT ID	COURSE
1.	NUR ADRIANA AIESYA BINTI AHMAD SUKRI	22002943	INFORMATION TECHNOLOGY
2.	FATIN QISTEENA BINTI MOHD FAISAL	22004246	INFORMATION TECHNOLOGY
3.	MOHAMAD FAUZAN NAUFAL BIN MARHAIDI	22000852	INFORMATION TECHNOLOGY
4.	AARON IMAN KENNEDY	22000798	INFORMATION TECHNOLOGY
5.	FARID ADLEEN IRFAN BIN FARID ADLI	22004676	INFORMATION TECHNOLOGY

YouTube Link : https://youtu.be/DXuN50rld9g

PROJECT DESCRIPTION

In the age of digitalization, companies are constantly seeking innovative and creative methods to enhance their operations and establish stronger connections with their customers. This trend is evident across various industries, including the sportswear sector. The sportswear industry, known for its dynamic nature and high competition, demands efficient management systems to ensure smooth operations and exceptional customer experiences.

Our project aims to address these needs by developing a comprehensive Sport Store Management System. This software program is designed to optimize the overall operations of a sports store, making them more efficient and effective. By integrating advanced technology and user-friendly features, the Sport Store Management System will streamline various aspects of store management, from inventory control and sales tracking to customer relationship management and reporting.

The implementation of such a system will not only enhance the operational efficiency of the store but also improve customer satisfaction by providing a seamless and personalized shopping experience. With real-time data and analytics, store managers will be able to make informed decisions, anticipate market trends, and respond quickly to customer needs.

In essence, our Sport Store Management System represents a significant step forward in the digital transformation of the sportswear sector, providing a robust platform that supports both the day-to-day operations and long-term strategic goals of sports stores.

OBJECTIVES

1) **Optimize Operational Efficiency**:

- Develop a comprehensive system that automates and streamlines inventory control, sales tracking, and reporting.
- Reduce manual processes and minimize errors in store management tasks.

2) **Enhance Customer Satisfaction**:

- Implement features that provide a seamless and personalized shopping experience for customers.
- Ensure quick and accurate response to customer needs through efficient management of customer relationship data.

3) **Enable Real-Time Data and Analytics**:

- Provide store managers with access to real-time data and analytics to make informed decisions.
- Utilize data insights to anticipate market trends and adapt quickly to changing customer preferences.

4) **Support Strategic Decision-Making**:

- Facilitate long-term strategic planning by providing detailed and comprehensive reporting tools.
- Enable store managers to identify and capitalize on opportunities for growth and improvement.

5) **Integrate Advanced Technology**:

- Utilize cutting-edge technology to enhance the functionality and usability of the management system.
- Ensure the system is user-friendly and accessible to all levels of store management staff.

6) **Improve Inventory Management**:

- Implement advanced inventory tracking mechanisms to ensure optimal stock levels.
- Reduce stockouts and overstock situations by providing accurate inventory forecasts.

FEATURES

1) User Management and Security

- **Role-Based Access Control:** Assign different access levels based on user roles to ensure data security.
- **Audit Trails:** Track and log changes made within the system for accountability and security.
- **Data Backup and Recovery:** Implement regular data backups and recovery options to protect against data loss.

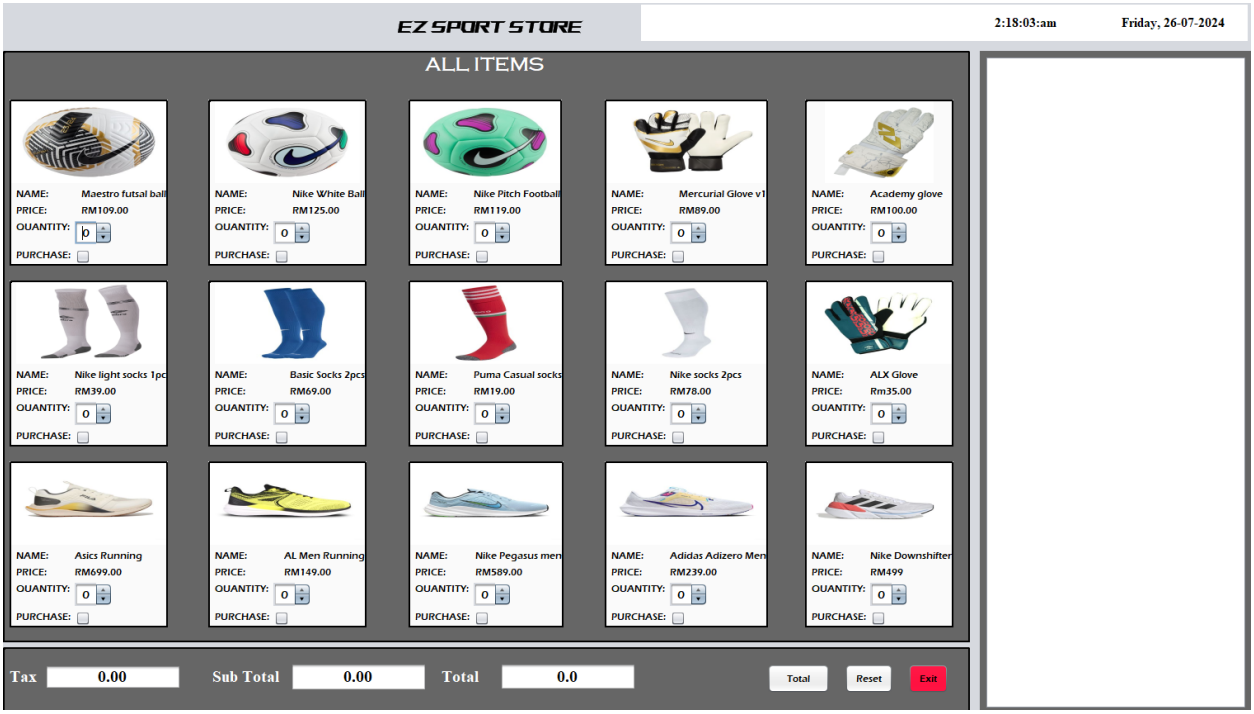
2) **Real-Time Data and Analytics**

- **Dashboard:** Provide an overview of key metrics such as sales, inventory levels, and customer activity.
- **Reports and Analytics:** Generate detailed reports on sales, inventory turnover, and customer behavior.
- **Trend Analysis:** Analyze market trends and customer preferences to make data-driven decisions.

3) **Customer Relationship Management (CRM)**

- **Customer Profiles:** Maintain detailed profiles including purchase history, preferences, and contact information.
- **Personalized Recommendations:** Suggest products based on past purchases and browsing behavior.
- **Customer Feedback and Support:** Collect and manage customer feedback and support

INTERFACE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PRICE: RM109.00
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PURCHASE:
NAME: Nike White Ball
PRICE: RM125.00
QUANTITY: 0
PURCHASE:
NAME: Nike Pitch Football
PRICE: RM119.00
QUANTITY: 0
PURCHASE:
NAME: Mercurial Glove v1
PRICE: RM89.00
QUANTITY: 0
PURCHASE:
NAME: Academy glove
PRICE: RM100.00
QUANTITY: 0
PURCHASE:
NAME: Nike light socks 1pc
PRICE: RM39.00
QUANTITY: 0
PURCHASE:
NAME: Basic Socks 2pcs
PRICE: RM69.00
QUANTITY: 0
PURCHASE:
NAME: Puma Casual socks
PRICE: RM19.00
QUANTITY: 0
PURCHASE:
NAME: Nike socks 2pcs
PRICE: RM78.00
QUANTITY: 0
PURCHASE:
NAME: ALX Glove
PRICE: Rm35.00
QUANTITY: 0
PURCHASE:
NAME: Asics Running
PRICE: RM699.00
QUANTITY: 0
PURCHASE:
NAME: AL Men Running
PRICE: RM149.00
QUANTITY: 0
PURCHASE:
NAME: Nike Pegasus men
PRICE: RM589.00
QUANTITY: 0
PURCHASE:
NAME: Adidas Adizero Men
PRICE: RM239.00
QUANTITY: 0
PURCHASE:
NAME: Nike Downshifter
PRICE: RM499
QUANTITY: 0
PURCHASE:
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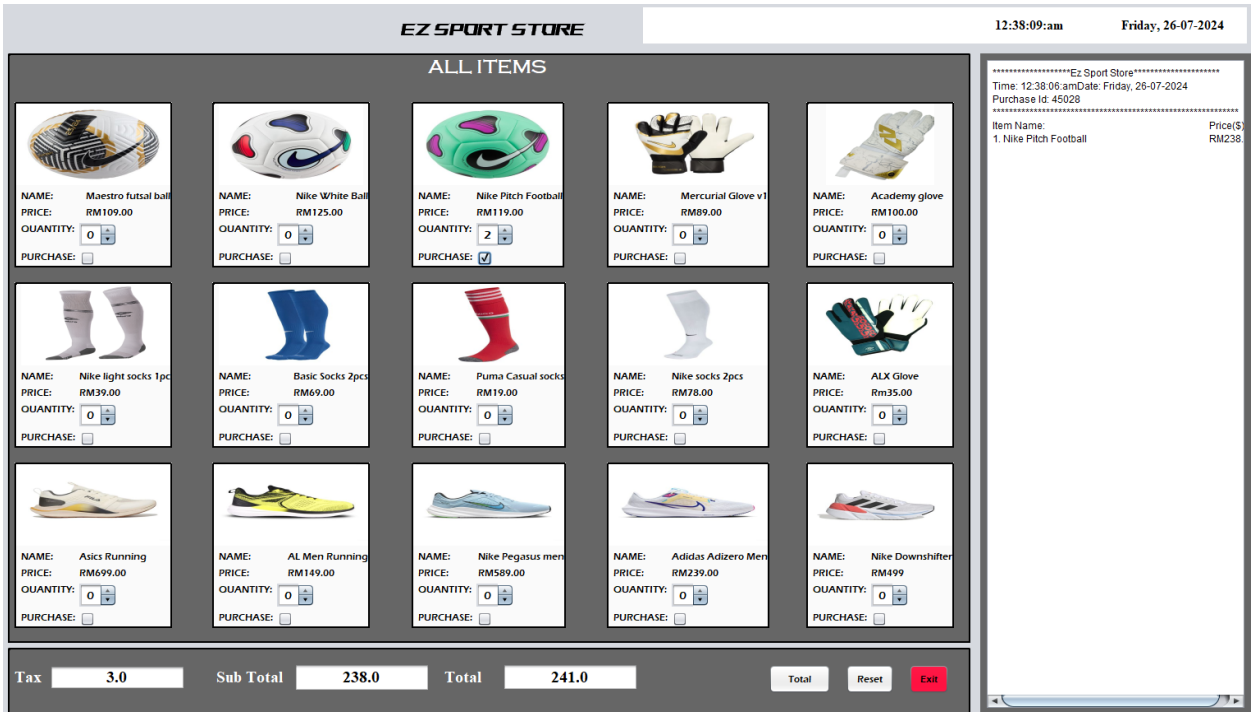
Sub Total 0.00
Total 0.0
Total
Reset
Exit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PRICE: RM125.00
QUANTITY: 0
PURCHASE:
NAME: Nike Pitch Football
PRICE: RM119.00
QUANTITY: 2
PURCHASE:
NAME: Mercurial Glove v1
PRICE: RM89.00
QUANTITY: 0
PURCHASE:
NAME: Academy glove
PRICE: RM100.00
QUANTITY: 0
PURCHASE:
NAME: Nike light socks 1pc
PRICE: RM39.00
QUANTITY: 0
PURCHASE:
NAME: Basic Socks 2pcs
PRICE: RM69.00
QUANTITY: 0
PURCHASE:
NAME: Puma Casual socks
PRICE: RM19.00
QUANTITY: 0
PURCHASE:
NAME: Nike socks 2pcs
PRICE: RM78.00
QUANTITY: 0
PURCHASE:
NAME: ALX Glove
PRICE: Rm35.00
QUANTITY: 0
PURCHASE:
NAME: Asics Running
PRICE: RM699.00
QUANTITY: 0
PURCHASE:
NAME: AL Men Running
PRICE: RM149.00
QUANTITY: 0
PURCHASE:
NAME: Nike Pegasus men
PRICE: RM589.00
QUANTITY: 0
PURCHASE:
NAME: Adidas Adizero Men
PRICE: RM239.00
QUANTITY: 0
PURCHASE:
NAME: Nike Downshifter
PRICE: RM499
QUANTITY: 0
PURCHASE:
Tax 3.0
Sub Total 238.0
Total 241.0
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Reset
Exit
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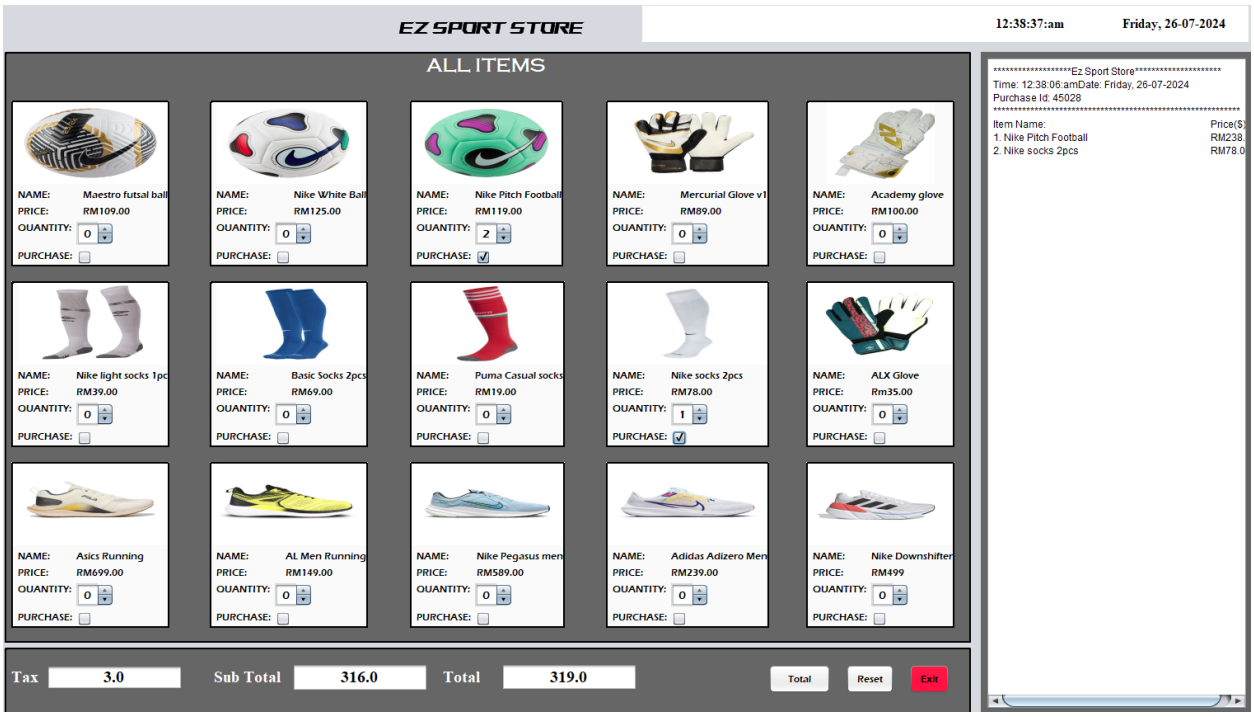
Purchase Id: 45028
Item Name: Price($)
1. Nike Pitch Football RM238.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PURCHASE:
NAME: Nike White Ball
PRICE: RM125.00
QUANTITY: 0
PURCHASE:
NAME: Nike Pitch Football
PRICE: RM119.00
QUANTITY: 2
PURCHASE:
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PRICE: RM89.00
QUANTITY: 0
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PRICE: RM100.00
QUANTITY: 0
PURCHASE:
NAME: Nike light socks 1pc
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QUANTITY: 0
PURCHASE:
NAME: Basic Socks 2pcs
PRICE: RM69.00
QUANTITY: 0
PURCHASE:
NAME: Puma Casual socks
PRICE: RM19.00
QUANTITY: 0
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NAME: Nike socks 2pcs
PRICE: RM78.00
QUANTITY: 1
PURCHASE:
NAME: ALX Glove
PRICE: Rm35.00
QUANTITY: 0
PURCHASE:
NAME: Asics Running
PRICE: RM699.00
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PURCHASE:
NAME: AL Men Running
PRICE: RM149.00
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PURCHASE:
NAME: Nike Pegasus men
PRICE: RM589.00
QUANTITY: 0
PURCHASE:
NAME: Adidas Adizero Men
PRICE: RM239.00
QUANTITY: 0
PURCHASE:
NAME: Nike Downshifter
PRICE: RM499
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PURCHASE:
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Total
Reset
Exit
**********Ez Sport Store**********
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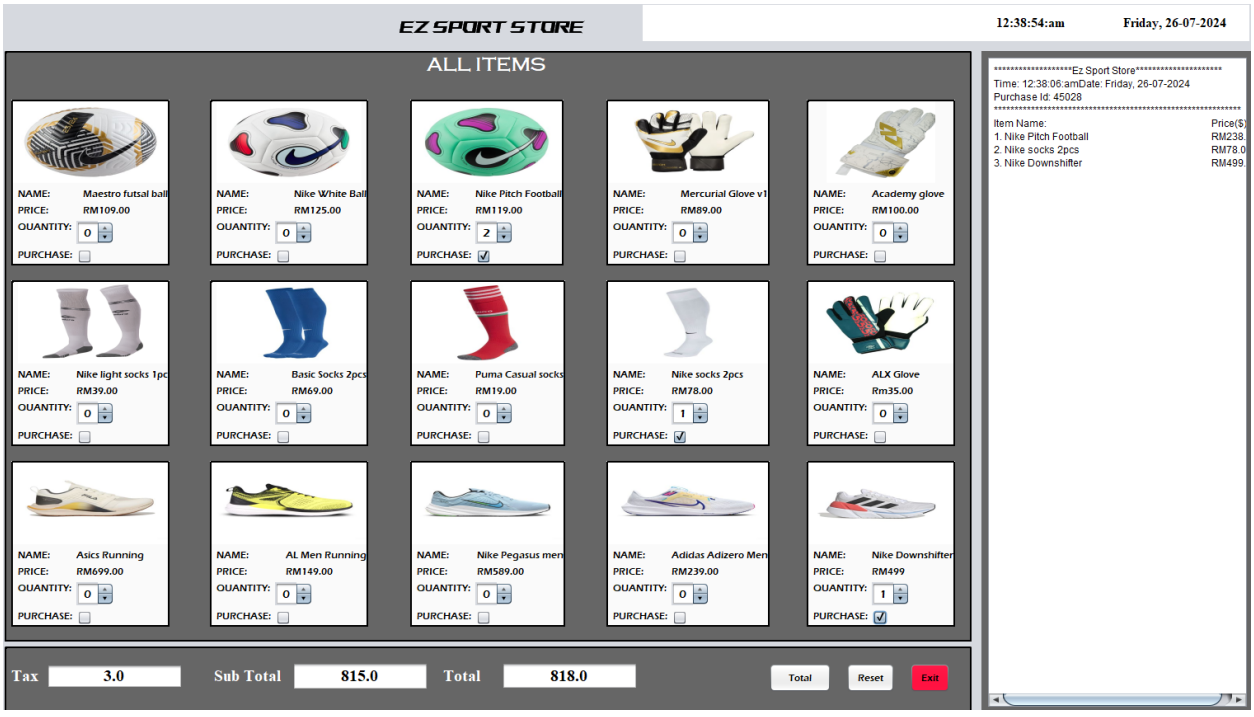
Purchase Id: 45028
Item Name: Price(
1. Nike Pitch Football RM238.
2. Nike socks 2pcs RM78.0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PRICE: RM109.00
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PURCHASE:
NAME: Nike White Ball
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QUANTITY: 0
PURCHASE:
NAME: Nike Pitch Football
PRICE: RM119.00
QUANTITY: 2
PURCHASE:
NAME: Mercurial Glove v1
PRICE: RM89.00
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NAME: Academy glove
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PRICE: RM39.00
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PURCHASE:
NAME: Basic Socks 2pcs
PRICE: RM69.00
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PURCHASE:
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PURCHASE:
NAME: Nike Pegasus men
PRICE: RM589.00
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PURCHASE:
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PRICE: RM499
QUANTITY: 1
PURCHASE:
Tax 3.0
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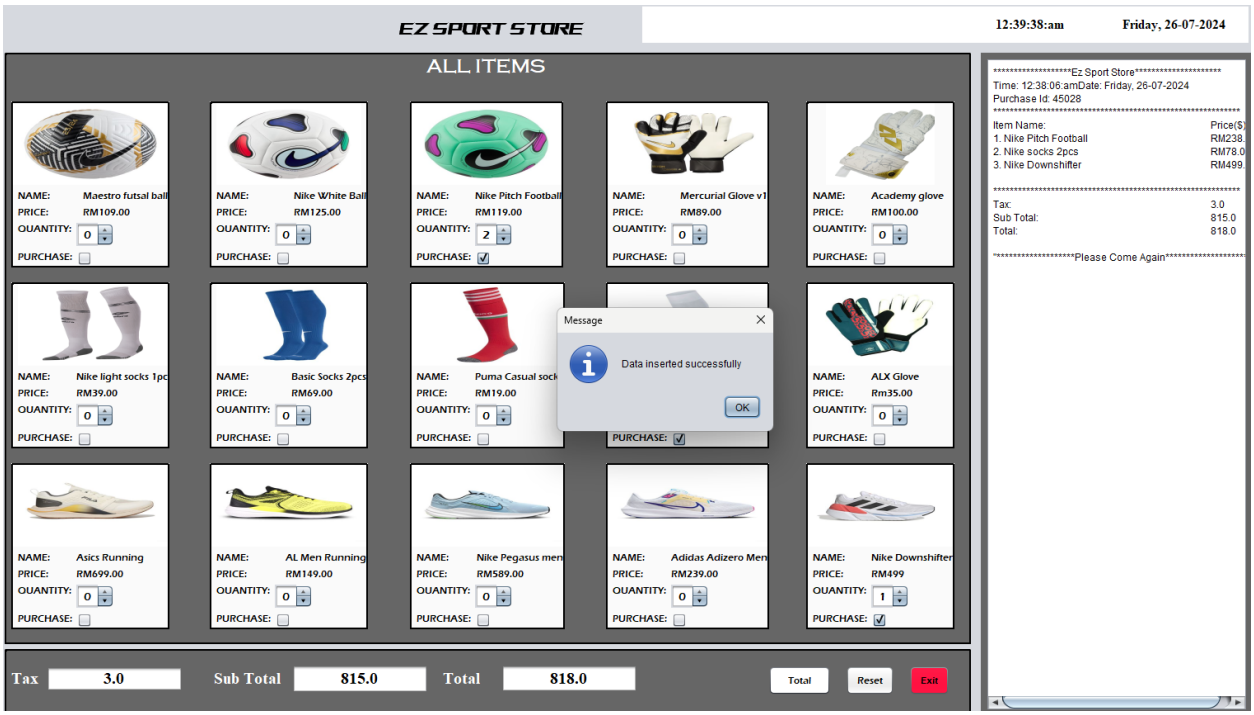
Total 818.0
Total
Reset
Exit
**********Ez Sport Store**********
Time: 12:38:06:amDate: Friday, 26-07-2024
Purchase Id: 45028
Item Name: Price(
1. Nike Pitch Football RM238.
2. Nike socks 2pcs RM78.0
3. Nike Downshifter RM499.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ALL ITEMS
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PRICE: RM109.00
QUANTITY: 0
PURCHASE:
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QUANTITY: 0
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NAME: Nike Pitch Football
PRICE: RM119.00
QUANTITY: 2
PURCHASE:
NAME: Mercurial Glove v1
PRICE: RM89.00
QUANTITY: 0
PURCHASE:
NAME: Academy glove
PRICE: RM100.00
QUANTITY: 0
PURCHASE:
NAME: Nike light socks 1pc
PRICE: RM39.00
QUANTITY: 0
PURCHASE:
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QUANTITY: 0
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NAME: AL Men Running
PRICE: RM149.00
QUANTITY: 0
PURCHASE:
NAME: Nike Pegasus men
PRICE: RM589.00
QUANTITY: 0
PURCHASE:
NAME: Adidas Adizero Men
PRICE: RM239.00
QUANTITY: 0
PURCHASE:
NAME: Nike Downshifter
PRICE: RM499
QUANTITY: 1
PURCHASE:
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Data inserted successfully
OK
Tax 3.0
Sub Total 815.0
Total 818.0
Total
Reset
Exit
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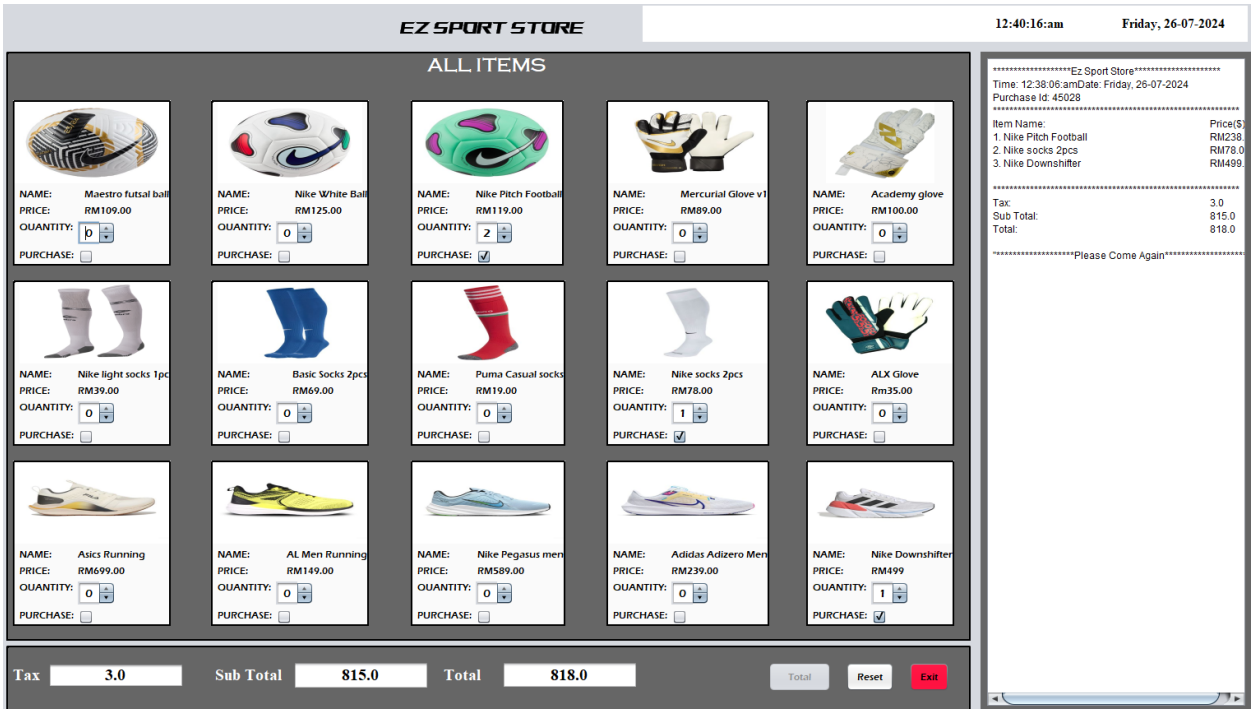
Time: 12:38:06:amDate: Friday, 26-07-2024
Purchase Id: 45028
Item Name: Price($)
1. Nike Pitch Football RM238.
2. Nike socks 2pcs RM78.0
3. Nike Downshifter RM499.
Tax: 3.0
Sub Total: 815.0
Total: 818.0
**********Please Come Again**********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NAME: Nike Pitch Football
PRICE: RM119.00
QUANTITY: 2
PURCHASE:
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QUANTITY: 0
PURCHASE:
NAME: Academy glove
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NAME: Puma Casual socks
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QUANTITY: 0
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NAME: Nike socks 2pcs
PRICE: RM78.00
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PRICE: Rm35.00
QUANTITY: 0
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NAME: Asics Running
PRICE: RM699.00
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PURCHASE:
NAME: AL Men Running
PRICE: RM149.00
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PURCHASE:
NAME: Nike Pegasus men
PRICE: RM589.00
QUANTITY: 0
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NAME: Adidas Adizero Men
PRICE: RM239.00
QUANTITY: 0
PURCHASE:
NAME: Nike Downshifter
PRICE: RM499
QUANTITY: 1
PURCHASE:
Tax 3.0
Sub Total 815.0
Total 818.0
Total
Reset
Exit
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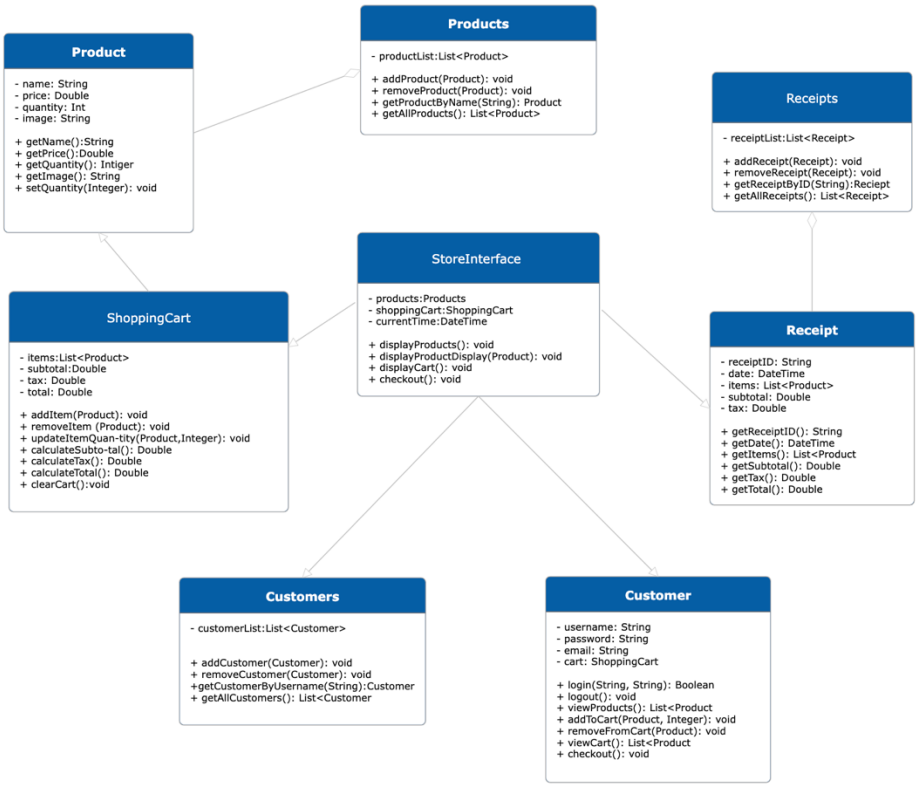
2. Nike socks 2pcs RM78.0
3. Nike Downshifter RM499.
Tax: 3.0
Sub Total: 815.0
Total: 818.0
**********Please Come Again**********

UML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- price: Double
- quantity: Int
- image: String
+ getName():String
+ getPrice():Double
+ getQuantity(): Intiger
+ getImage(): String
+ setQuantity(Integer): void
Products
- productList:List<Product>
+ addProduct(Product): void
+ removeProduct(Product): void
+ getProductByName(String): Product
+ getAllProducts(): List<Product>
Receipts
- receiptList:List<Receipt>
+ addReceipt(Receipt): void
+ removeReceipt(Receipt): void
+ getReceiptByID(String):Reciept
+ getAllReceipts(): List<Receipt>
StoreInterface
- products:Products
- shoppingCart:ShoppingCart
- currentTime:DateTime
+ displayProducts(): void
+ displayProductDisplay(Product): void
+ displayCart(): void
+ checkout(): void
ShoppingCart
- items:List<Product>
- subtotal:Double
- tax: Double
- total: Double
+ addItem(Product): void
+ removeItem (Product): void
+ updateItemQuan-tity(Product,Integer): void
+ calculateSubto-tal(): Double
+ calculateTax(): Double
+ calculateTotal(): Double
+ clearCart():void
Receipt
- receiptID: String
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+ getDate(): DateTime
+ getItems(): List<Product
+ getSubtotal(): Double
+ getTax(): Double
+ getTotal(): Double
Customers
- customerList:List<Customer>
+ addCustomer(Customer): void
+ removeCustomer(Customer): void
+getCustomerByUsername(String):Customer
+ getAllCustomers(): List<Customer
Customer
- username: String
- password: String
- email: String
- cart: ShoppingCart
+ login(String, String): Boolean
+ logout(): void
+ viewProducts(): List<Product
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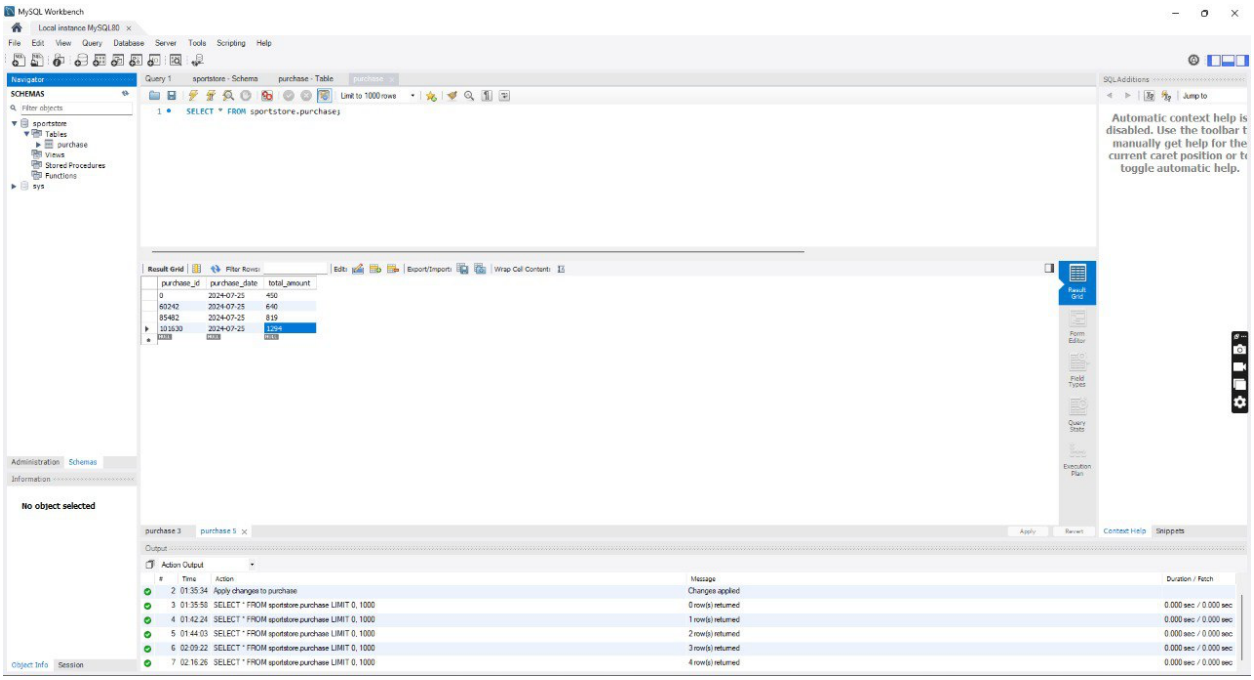
+ removeFromCart(Product): void
+ viewCart(): List<Product
+ checkout(): void

SQL


MySQL Workbench
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