

**STORE ORDER MANAGEMENT SYSTEM**

**Course**: **Programming 1 - COSC2081**

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*Group 4*

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1. **Introduction**

**Background:**

In this project, we designed a store management system, building basic features for both users and admins. This system will make it easy for users to purchase and manage orders, besides, the system will also help admins easily manage all information of products, users, as well as other information of the orders.

Our team consists of 4 people, and each person takes on different roles:

1. Nguyen Thi Ha Giang - *S3914108*: Back-end for user and UI developer.
2. Tran Duy Phong - *S3879069* : Back-end for admin and UI developer.
3. Trinh Viet Quy - *S3915202* : Back-end for admin.
4. Nguyen Tuan Thang - *S3877039* : Back-end for user.

**Scope and objective:**

* Goal: We made this project based on the knowledge provided in the course on java programming. Besides, we will also research external documents to get the most complete application possible. Through this project, we hope to achieve a complete product that meets the basic features of a store management system. Besides, acquiring new knowledge and applying them during project implementation is also one of the important purposes when we started this project.
* Scope:
  + Back-end and database:
    - User:

Our system includes the most basic features needed in a store management system to meet the purchasing needs of users. Users can easily view all products in our system, and customers can register as members to receive benefits from the system. After registering for an account, customers will be able to purchase products, manage order history as well as receive incentives from the store system.

* + - Admin:

As an admin, the system will allow the admin to manage all lists of products, customers as well as orders. Admin has the ability to add products, edit product prices as well as delete products. In addition, the admin can change the status of the order and from there, the system will update the order status for the customer.

* + GUI:

As for the interface, our system will provide users with the simplest possible interface, which will be easy for users to use and interact with the system. Besides, we have explicitly and tightly linked back-end data and UI, so the information customers make on the interface will always be updated simultaneously in the database.

1. **Project Description**

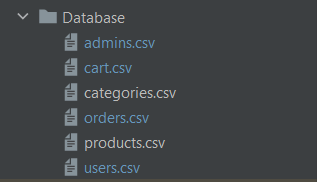
* First, to design all classes of the system, we decide to sketch a class diagram to manage all class and functions of our application. In class diagram,
* We have used JDK 16 Oracle to run our application. Besides, we have used 4 main library in java to implements our code, including: java.util, java.io, java.text and especially java.swing to design GUI.
  + Java.util:
  + Java.io:
  + Java.text:
  + Java.swing:

1. **Implementations Details**
2. **Class diagram**

* First of all, to build a complete application, we sketched a class diagram to understand all the components needed to design a store management system. Below is a diagram image of our system:

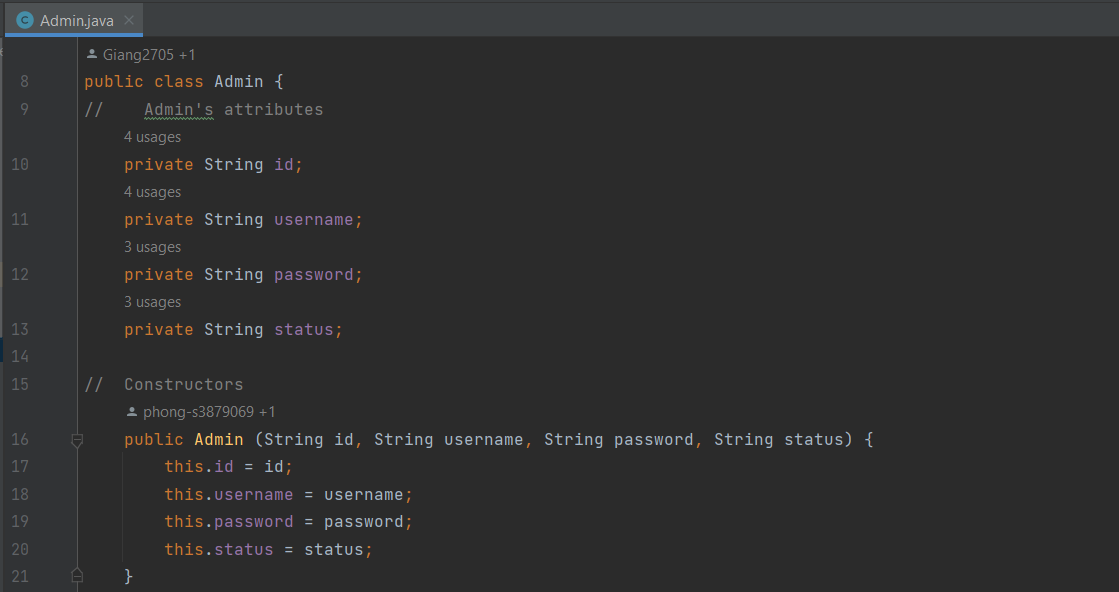
1. **Code details**
2. **Back-end and database**
   * + Database:

* Regarding data storage and management, we use CSV files for this. The data when stored in the CSV file will be clearly divided between attributes by commas ( , ) , so we can easily manage and retrieve data from the database.
* In our entire system, there are a total of 6 CSV files to store data of each different object, including admins, users, categories, products, carts, and orders.

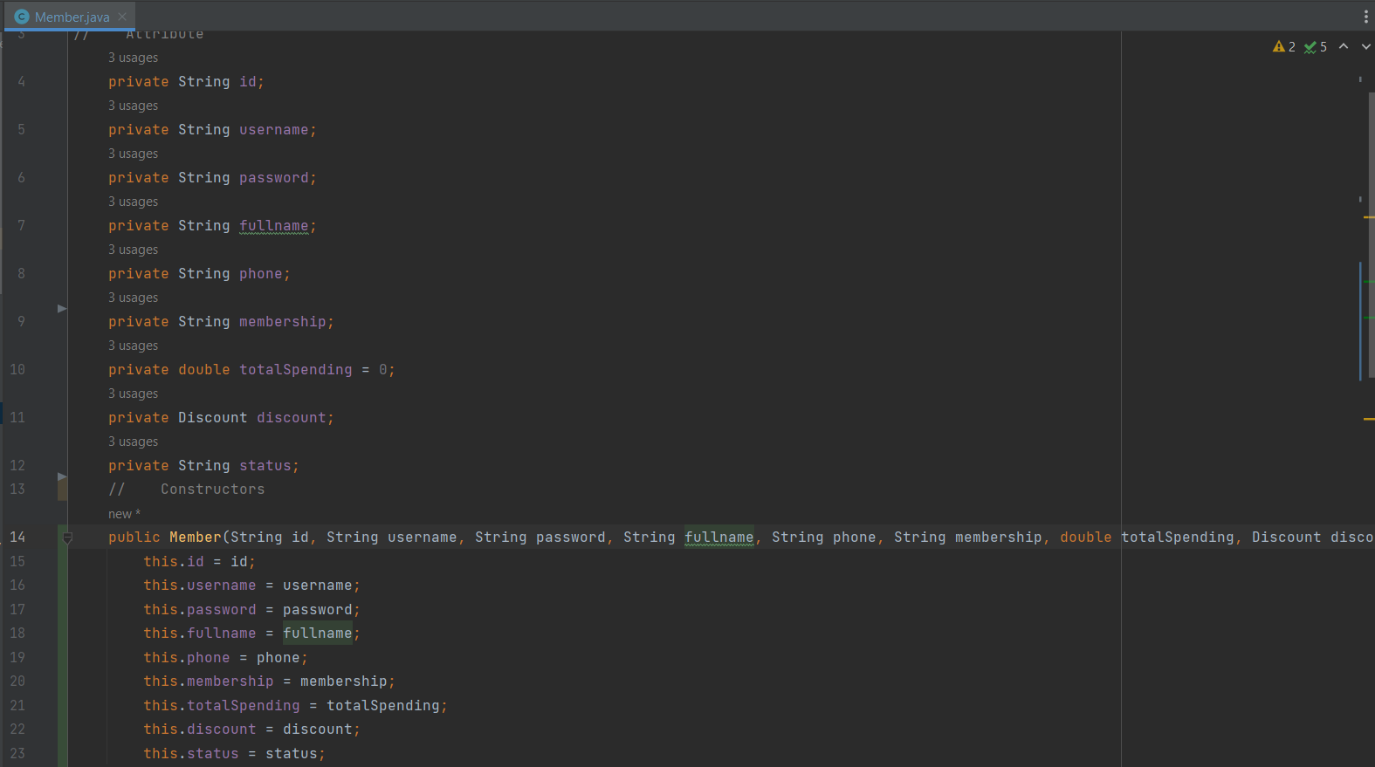


**Figure 1. All CSV files to store database**

* + - Classes: We have built the whole system including 6 main object classes: Admin, Member, Category, Product, Cart, and Order. In addition, there is an abstract class that is Discount with 3 inherited subclasses, SilverDiscount, GoldDiscount and PlatinumDiscount.
* Class Admin:



* Class Member:



* Class Category:
* Class Product:
* Class Cart:
* Class Order:
* Class Discount:
* Class SilverDiscount:
* Class Golđícount:
* Class PlatinumDiscount:
  + - Functions:
* GenerateID:
* GetDate:
* storeDatabase:
* readDatabase:
* updateDatabase:
* deleteDatabase:
* Login:
* GetTotalSpending:
* UpdateTotalSpending:
* SearchOrder:
* SortByCategory:
* SortByPrice:
* RemoveProductFromCart:
* ChangeLoginStatus:
* ChangeMemberShip:
* ChangeStatusProductInCart:
* ChangeOrderStatus:

1. **GUI**
   * + Component:

* ListOrdersAdmin:
* ListProductsAdmin:
* ListUsersAdmin:
* ProductItemAdmin:
* ProductItem:
* ListProducts:
* OrderItem:
* OrdersTable:
* ProductInCart:
  + - User:
* MemberHomePage:
* UserRegisterForm:
* UserLoginPage:
* modalAddToCart:
* CartScreen:
* ConfirmedOrderModal:
* AccountPage:
* OrderHistoryScreen:
  + - Admin:
* AdminLoginPage:
* AdminHomePage:
* AddNewProductForm:
* AddNewCategoryForm:
* UpdateProductForm:

1. **Project Planning Report**

* We have planned and managed our works on Trello Board as well as we created a Meeting Record to manage timeline. We will share our Trello link and GitHub repo in which the Meeting Record is pushed.
  + **GitHub repo:** <https://github.com/Giang2705/Programming1.git>
  + **Trello Board:** <https://trello.com/invite/b/SWmTXgRt/cc096ec7a981e674711da8d168e95c1b/programming-1>
* We will summarize our works through each week (from 25/07/20022 to 04/09/2022)
* **Week 1 (25/07/2022 – 01/08/2022)**

|  |  |  |
| --- | --- | --- |
| All Team Members | Role and Task Given | Individual Contribution (%) |
| 1. Nguyen Thi Ha Giang | Design UX-UI for the app + Implement code for Welcome Screen | 80% |
| 1. Nguyen Tuan Thang | Create class Admin and class Order | 80% |
| 1. Trinh Viet Quy | Create class Product and Category | 80% |
| 1. Tran Duy Phong | Create class Customer and Member | 80% |

* **Week 2 (01/08/2022 – 08/08/2022)**

|  |  |  |
| --- | --- | --- |
| All Team Members | Role and Task Given | Individual Contribution (%) |
| 1. Nguyen Thi Ha Giang | Add products to cart (User) | 100% |
| 1. Nguyen Tuan Thang | Register + Login + Logout (User) | 100% |
| 1. Trinh Viet Quy | Edit + Delete (User) | 100% |
| 1. Tran Duy Phong | CRUD Products (Admin) | 100% |

* **Week 3 (08/08/2022 – 15/08/2022)**

|  |  |  |
| --- | --- | --- |
| All Team Members | Role and Task Given | Individual Contribution (%) |
| 1. Nguyen Thi Ha Giang |  | 100% |
| 1. Nguyen Tuan Thang |  | 100% |
| 1. Trinh Viet Quy |  | 100% |
| 1. Tran Duy Phong |  | 100% |

* **Week 4 (15/08/2022 – 22/08/2022)**

|  |  |  |
| --- | --- | --- |
| All Team Members | Role and Task Given | Individual Contribution (%) |
| 1. Nguyen Thi Ha Giang |  | 100% |
| 1. Nguyen Tuan Thang |  | 100% |
| 1. Trinh Viet Quy |  | 100% |
| 1. Tran Duy Phong |  | 100% |

* **Week 5 (22/08/2022 – 29/08/2022)**

|  |  |  |
| --- | --- | --- |
| All Team Members | Role and Task Given | Individual Contribution (%) |
| 1. Nguyen Thi Ha Giang |  | 100% |
| 1. Nguyen Tuan Thang |  | 100% |
| 1. Trinh Viet Quy |  | 100% |
| 1. Tran Duy Phong |  | 100% |

* **Week 6 (29/08/2022 – 04/09/2022)**

|  |  |  |
| --- | --- | --- |
| All Team Members | Role and Task Given | Individual Contribution (%) |
| 1. Nguyen Thi Ha Giang | Record video demonstration:   * User view orders history * Admin search orders by member’s id * Admin change order’s status | 100% |
| 1. Nguyen Tuan Thang | Record video demonstration:   * User sort products by category * User sort products by price * User add products to cart * User delete products in cart * User create new order | 100% |
| 1. Trinh Viet Quy | Record video demonstration:   * Customer view list of products * User registration * User login * User view list of products | 100% |
| 1. Tran Duy Phong | Record video demonstration:   * Admin view all information of products, users, and orders * Admin add new product * Admin edit product’s price * Admin delete products | 100% |

* **Week 7 (04/09/2022 – 11/09/2022)**

|  |  |  |
| --- | --- | --- |
| All Team Members | Role and Task Given | Individual Contribution (%) |
| 1. Nguyen Thi Ha Giang | Record video demonstration:   * User view orders history * Admin search orders by member’s id * Admin change order’s status | 100% |
| 1. Nguyen Tuan Thang | Record video demonstration:   * User sort products by category * User sort products by price * User add products to cart * User delete products in cart * User create new order | 100% |
| 1. Trinh Viet Quy | Record video demonstration:   * Customer view list of products * User registration * User login * User view list of products | 100% |
| 1. Tran Duy Phong | Record video demonstration:   * Admin view all information of products, users, and orders * Admin add new product * Admin edit product’s price * Admin delete products | 100% |

* **Week 6 (11/09/2022 – 18/09/2022)**

|  |  |  |
| --- | --- | --- |
| All Team Members | Role and Task Given | Individual Contribution (%) |
| 1. Nguyen Thi Ha Giang | Record video demonstration:   * User view orders history * Admin search orders by member’s id * Admin change order’s status | 100% |
| 1. Nguyen Tuan Thang | Record video demonstration:   * User sort products by category * User sort products by price * User add products to cart * User delete products in cart * User create new order | 100% |
| 1. Trinh Viet Quy | Record video demonstration:   * Customer view list of products * User registration * User login * User view list of products | 100% |
| 1. Tran Duy Phong | Record video demonstration:   * Admin view all information of products, users, and orders * Admin add new product * Admin edit product’s price * Admin delete products | 100% |

1. **Conclusion**
2. **References**