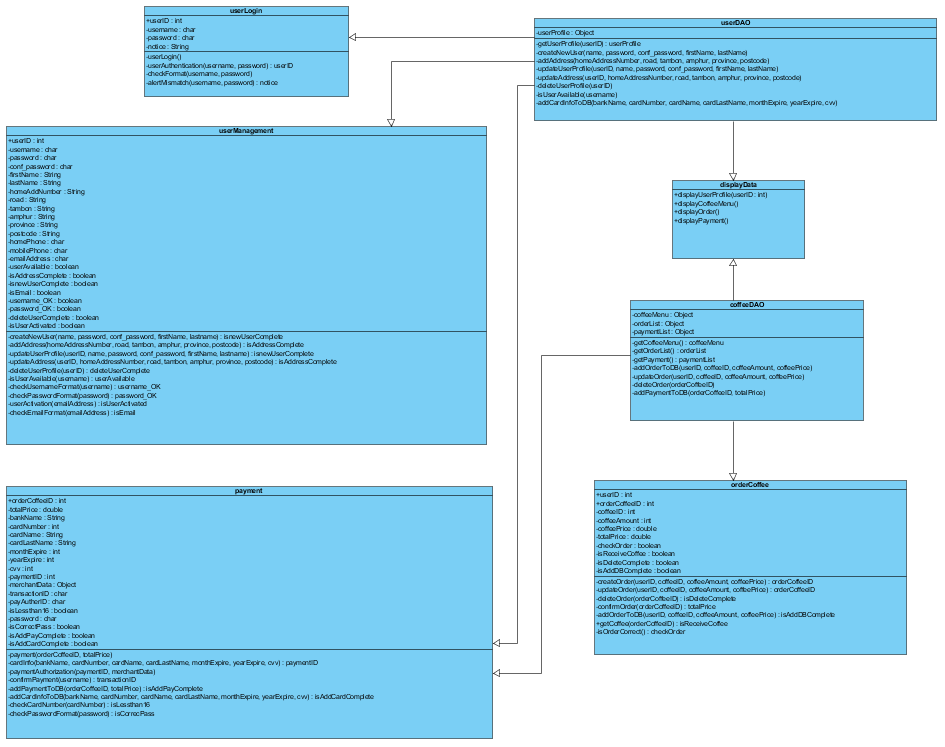
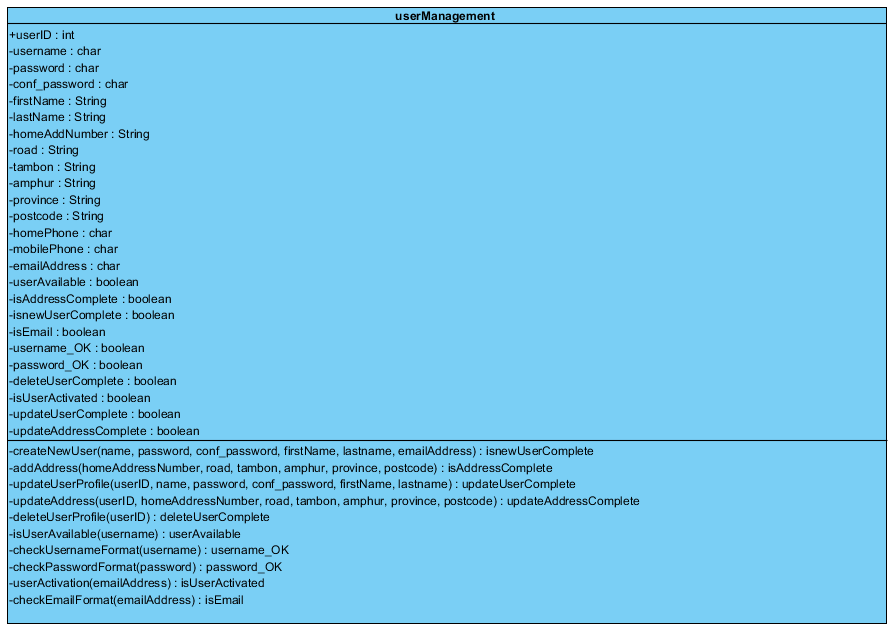
**Software Construction and Evolution: Term Project**

1. **เอกสารการออกแบบซอฟต์แวร์โดยละเอียด (Detail Design Document)**
   1. **User Requirement Specification (Software System)**
      1. Display coffee menu
      2. Create coffee order
      3. Edit coffee order
      4. Delete coffee order
      5. Confirm coffee order
      6. Payment coffee by order
      7. Receive an invoice
      8. Create user Profile
      9. View user profile
      10. Update user profile
      11. Delete user profile
      12. Display sell report
   2. **Software Requirement Specification (Functional Process)**
2. The system can display login page
3. The system allow to create new user
4. The system allow to view user profile
5. The system allow to edit user profile
6. The system allow to delete user profile
7. The system can display coffee menu
8. The system allow user to order coffee
9. The system allow user to view coffee order
10. The system allow user to confirm coffee order
11. The system allow user to edit coffee order
12. The system allow user to delete coffee order
13. The system allow user to payment coffee by order
14. The system can display order invoice
15. The system can display sell report
16. **Subsystem/Package (Architectural Design)**
17. Package 1: userManagement  
    Including: SRS\_1, SRS\_2
18. Package 2: userLogin  
    Including: SRS\_9
19. Package 3: orderCoffee  
    Including: SRS\_3, SRS\_4, SRS\_10
20. Package 4: payment  
    Including: SRS\_5
21. Package 5: displayData  
    Including: SRS\_6, SRS\_7, SRS\_8
22. **Class Design**



1. **Class userManagement**

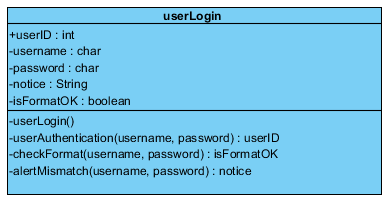


Class userManagement Functional Process

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Process** | **Output** | **Description** |
| 1 | createNewUser | char name  char password  char conf\_password  String firstName  String lastName  char emailAddress | add user profile data | boolean isNewUserComplete | add new user profile data into database |
| 2 | addAddress | String homeAddress  String road  String tambon  String amphur  String province  String postCode | add user address data | boolean isAddAddressComplete | add user address data into database |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3 | updateUserProfile | char name  char password  char conf\_password  String firstName  String lastName  char emailAddress | edit user profile data | boolean updateUserComplete | edit user profile data into database |
| 4 | updateAddress | String homeAddress  String road  String tambon  String amphur  String province  String postCode | edit user address data | boolean updateAddressComplete | edit user address data into database |
| 5 | deleteUserProfile | int userID | remove user profile | boolean deleteUserComplete | delete user profile from database |
| 6 | isUserAvailable | char username | check available username | booleanuserAvailable | check input username can use in this system |
| 7 | checkUsernameFormat | char username | check input username data | boolean username\_OK | check username is compatible format or not |
| 8 | checkPasswordFormat | char password | check input password data | boolean password\_OK | check password is compatible format or not |
| 9 | userActivation | char emailAddress | activate user account | boolean isUserActivated | unlock user account after user is registered |
| 10 | checkEmailFormat | char emailAddress | check input email address data | boolean isEmail | check email address is compatible format or not |

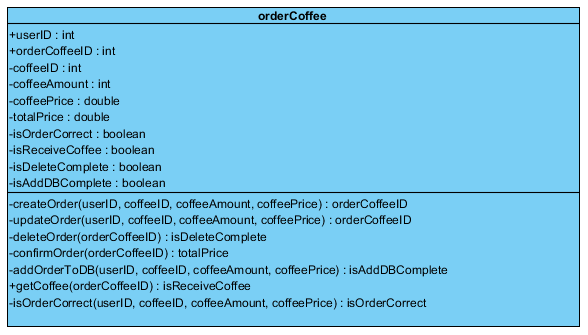
1. **Class userLogin**



Class userLogin Functional Process

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Process** | **Output** | **Description** |
| 1 | userLogin (Constructor) | - | clear existing data | - | delete existing data in login form |
| 2 | userAuthentication | char username  char password | matching username and password | int userID | matching input username, password with username, password in database |
| 3 | checkFormat | char username  char password | check username and password input data | boolean isFormatOK | check username and password is correct format or not, if input incorrect format it will trigger method alertMismatch to display message |
| 4 | alertMismatch | char username  char password | display alert message | String notice | if username or password is incorrect this method will display alert message |

1. **Class oderCoffee**

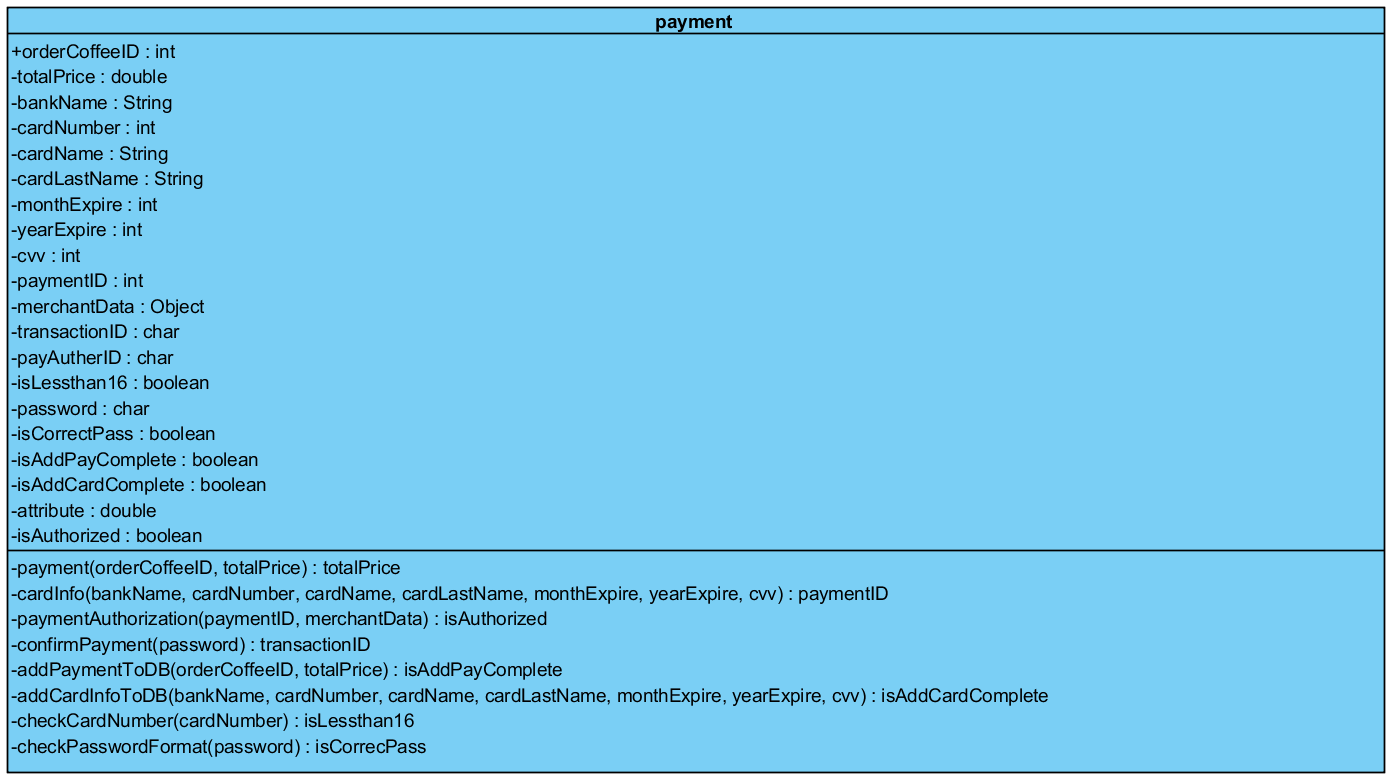


Class orderCoffee Functional Process

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Process** | **Output** | **Description** |
| 1 | createOrder | int userID  int coffeeID  int coffeeAmount  double coffeePrice | create new coffee order | int orderCoffeeID | create new coffee order |
| 2 | updateOrder | int userID  int coffeeID  int coffeeAmount  double coffeePrice | edit coffee order | int orderCoffeeID | edit coffee order in database |
| 3 | deleteOrder | int userID | delete coffee order | boolean isDeleteComplete | remove coffee order from database |
| 4 | confirmOrder | int orderCoffeeID | verify to make coffee | double totalPrice | ensure to make coffee by this order list |
| 5 | addOrderToDB | int userID  int coffeeID  int coffeeAmount  double coffeePrice | add order to database | boolean isAddDBComplete | confirm message when coffee order data was added |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 6 | getCoffee | int orderCoffeeID | get coffee to user | boolean isReceiveCoffee | release cup of coffee that verify by orderCoffeeID |
| 7 | isOrderCorrect | int userID  int coffeeID  int coffeeAmount  double coffeePrice | check details of order | boolean isOrderCorrect | check input order are completely details data before confirm order |

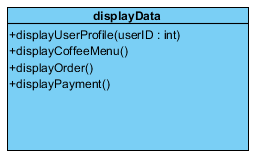
1. **Class payment**



Class payment Functional Process

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Process** | **Output** | **Description** |
| 1 | payment (Constructor) | int orderCoffeeID  double totalPrice | compute coffee price depend on coffee order | double totalPrice |  |
| 2 | cardInfo | String bankName  int cardNumber  String cardName  String cardLastName  int monthExpire  int yearExpire  int cvv | input credit/debit card data | int paymentID | input credit/debit card data to purchase coffee |
| 3 | paymentAuthorization | int paymentID  Object merchantData | request payment authorization | boolean isAuthorized | request authorization from user’s merchant banks |
| 4 | confirmPayment | char password | confirm payment process | int transactionID | user confirm payment |
| 5 | addPaymantToDB | int orderCoffee  double totalPrice | add payment data into database | boolean isAddPayComplete | add payment transaction data to database |
| 6 | addCardInfoToDB | String bankName  int cardNumber  String cardName  String cardLastName  int monthExpire  int yearExpire  int cvv | add card data into database | boolean isAddCardComplete | add user’s credit/debit card data into database for next time |
| 7 | checkCardNumber | int cardNumber | check input card number data | boolean isLessthan16 | check card number is 16 digit |
| 8 | checkPasswordFormat | char password | check input password data | boolean isCorrectPass | check password is compatible format or not |

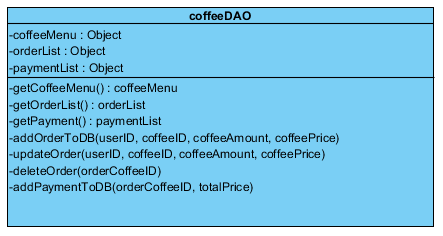
1. **Class displayData**



Class displayData Functional Process

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Process** | **Output** | **Description** |
| 1 | displayUserProfile | int userID | display user profile data | Object userProfile | show user account data |
| 2 | displayCoffeeMenu | - | display coffee menu | Object coffeeMenu | show coffee menu data |
| 3 | displayOrder | - | display coffee order list | Object orderList | show coffee order transaction data |
| 4 | displayPayment | - | display payment transaction | Object paymentList | show payment transaction data |

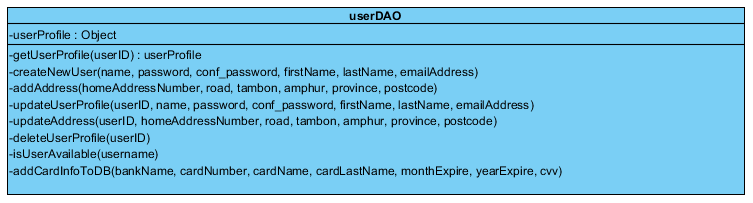
1. **Class coffeeDAO**



Class coffeeDAOFunctional Process

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Process** | **Output** | **Description** |
| 1 | getCoffeeMenu | - | query data from database | Object coffeeMenu | query coffee menu from database |
| 2 | getOrderList | - | query data from database | Object orderList | query order list from database |
| 3 | getPayment | - | query data from database | Object paymentList | query payment transaction from database |
| 4 | addOrderToDB | int userID  int coffeeID  int coffeeAmount  double coffeePrice | add data into database | - | add coffee order to database |
| 5 | updateOrder | int userID  int coffeeID  int coffeeAmount  double coffeePrice | edit data into database | - | edit coffee order to database |
| 6 | deleteOrder | int orderCoffeeID | remove data from database | - | remove coffee order from database |
| 7 | addPaymentToDB | int orderCoffeeID  double totalPrice | add data into database | - | add payment transaction to database |

1. **Class userDAO**



Class userDAOFunctional Process

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Process** | **Output** | **Description** |
| 1 | getUserProfile | int userID | query data from database | Object userProfile | query user data from database |
| 2 | createNewUser | char name  char password  char conf\_password  String firstName  String lastName  char emailAddress | add data into database | - | add user profile into database |
| 3 | addAddress | String homeAddress  String road  String tambon  String amphur  String province  String postCode | add data into database | - | add user address data into database |
| 4 | updateUserProfile | char name  char password  char conf\_password  String firstName  String lastName  char emailAddress | edit data into database | - | edit user profile into database |
| 5 | updateAddress | String homeAddress  String road  String tambon  String amphur  String province  String postCode | edit data into database | - | edit user address data into database |
| 6 | deleteUserProfile | int userID | remove data from database | - | remove user profile from database |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 7 | isUserAvailable | char username | compare between input data and database | - |  |
| 8 | addCardInfoToDB | String bankName  int cardNumber  String cardName  String cardLastName  int monthExpire  int yearExpire  int cvv | add data into database | - | add user’s credit/debit card data into database |

1. **Data Test**

Class coffeeDAOFunctional Process

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Test Data** |
| 1 | getCoffeeMenu | - | - |
| 2 | getOrderList | - | - |
| 3 | getPayment | - | - |
| 4 | addOrderToDB | int userID  int coffeeID  int coffeeAmount  double coffeePrice | userID = 10  coffeeID = 01  coffeeAmount = 1  coffeePrice = 55 |
| 5 | updateOrder | int userID  int coffeeID  int coffeeAmount  double coffeePrice | userID = 10  coffeeID = 01  coffeeAmount = 1  coffeePrice = 55 |
| 6 | deleteOrder | int orderCoffeeID | orderCoffeeID = 4 |
| 7 | addPaymentToDB | int orderCoffeeID  double totalPrice | orderCoffeeID = 4  totalPrice = 95 |

Class userDAOFunctional Process

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Method** | **Input** | **Test Data** |
| 1 | getUserProfile | int userID | userID = 10 |
| 2 | createNewUser | char name  char password  char conf\_password  String firstName  String lastName  char emailAddress | name = usernameTest  password = 1234Password  conf\_password = 1234Password  firstName = nameTest  lastName = lastnameTest  emailAddress = emailTest@mailservice.com |
| 3 | addAddress | String homeAddress  String road  String tambon  String amphur  String province  String postCode | homeAddress = 12/34  road = roadTest  tambon = tambonTest  amphur = amphurTest  province = provinceTest  postCode = 12345 |
| 4 | updateUserProfile | char name  char password  char conf\_password  String firstName  String lastName  char emailAddress | name = usernameTest  password = 1234Password  conf\_password = 1234Password  firstName = nameTest  lastName = lastnameTest  emailAddress = emailTest@mailservice.com |
| 5 | updateAddress | String homeAddress  String road  String tambon  String amphur  String province  String postCode | homeAddress = 12/34  road = roadTest  tambon = tambonTest  amphur = amphurTest  province = provinceTest  postCode = 12345 |
| 6 | deleteUserProfile | int userID | userID = 10 |
| 7 | isUserAvailable | char username | username = user |
| 8 | addCardInfoToDB | String bankName  int cardNumber  String cardName  String cardLastName  int monthExpire  int yearExpire  int cvv | bankName = bankTest  cardNumber = 7855498568458735  cardName = nameTest  cardLastName = lastnameTest  monthExpire = 12  yearExpire = 2018  cvv = 848 |

1. **คู่มือสำหรับพัฒนาโปรแกรมสำหรับกลุ่มพัฒนา (Construction Manual)**
   1. **Purpose**
2. The system is developed for using in coffee shop.
3. This system are provided for both sides of customer and staff in order to make an order of drinks.
4. User is more convenience to order a cup of coffee and pick up it by drive-through.

The system is developed for using in coffee shop. According to the features of system, it is provided for both sides of customer and staff in order to make an order of drinks.

\*\*\* อันนี้เอามาจาก slide 2 ของ Delivery Coffee SRS ลองอ่านดูนะ เผื่อเอิงจะเอาไปปรับอ่า

* 1. **Goals**

1. Increased sales of coffee from the previous sale
2. To improve the quality of the coffee shop
3. Promotion of coffee shop
4. More convenience
5. Reduces the time
6. Coffee shop to expand into areas within the province
7. To Increase market share
8. In order to Cost Reduction
   1. **Work Schedule & Responsibility**

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Task** | **Date** | **Responsible** |
| 1 | Purpose and Goals | 20/10/2014 | Angkana |
| 2 | User Requirement | 21/10/2014 |  |
| 3 | System Requirement | 21/10/2014 |  |
| 4 | Design Class Diagram | 22-23/10/2014 |  |
| 5 | Functional Process | 22-23/10/2014 |  |
| 6 | Code Implementations | 22-23/10/2014 |  |
| 7 | Database Design | /10/2014 |  |
| 8 | Sketch Screen | /10/2014 |  |
| 9 | Wireframe and Storyboard | /10/2014 |  |
| 10 | Prototype | /10/2014 |  |
| 11 | Prototype Testing | /10/2014 |  |
| 12 | Create Mobile Application | /10/2014 |  |
|  | Unit Test | pending |  |
|  | Integration Test | pending |  |
|  | Acceptance Test | pending |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Appendix**

1. **Data Dictionary**

|  |  |  |
| --- | --- | --- |
| **#** | **Key Term** | **Description** |
| 1 | card | a user’s credit card |
| 2 | confirm | to ensure user before payment |
| 3 | display | to show information on the screen |
| 4 | create | to add new data to the database |
| 5 | edit | to modify and update data in the database |
| 6 | delete | to remove data from the database |
| 7 | drive-through | a service that provided by a business. It allows customers to purchase products without leaving their cars. |
| 8 | customer | a user of the drive-through coffee application |
| 9 | invoice | a receipt of coffee order |
| 10 | management | user can add, edit, or delete their information in the database |
| 11 | menu | a list of proposed coffee product |
| 12 | order | a buying list |
| 13 | payment | a transaction of purchasing coffee |
| 14 | profile | a user account |
| 15 | sell report | to show sell record by daily, monthly, yearly |

**References**

1. <http://en.wikipedia.org/wiki/Drive-through>