OO Design Phase – Wilf’s App

Group 4

Mason Cooper (140328200), Neil Ong (140733080)

November 21, 2016

**OO Design**

**System Diagram**

Item

User

OrderInterface

Notification

LoginInterface

MenuInterface

*LoginInterface* subsystem implements the user interface of the login screen.

*MenuInterface* subsystem implements the user interface of the menu.

*OrderInterface* subsystem implements the user interface of the user’s order.

*User* subsystem implements the storage of the user’s login information (i.e. username, password, etc.)

*Notification* subsystem implements the communication between the user and Wilf’s

*Item* subsystem implements the storage of menu items.

**Rationale**

The System design is a layered format. This is because the application stems off the main menu system. From there the actor, can access the login, select items, view their order and checkout. This format was chosen because the actor will be allowed to view items on the menu without being logged in. However, when the user attempts to select items for order, they will be prompt to login. After the user logs in the will have access to their order and will be able to complete orders.

**Object Design**

**Object Description**

User:

The user object lets the user log in to their unique account. It also allows them to create a new account if they do not have one. For a user object to be created it needs to be passed both an email and a password. The user object then holds onto both email and password.

Once the user object is created from within the menu class. A method is called to ask if the user is a new or an existing user. If the user is an existing one a method is called for the user to sign in. The password and email is checked until the user enters valid information, then the user object is set to logged in. If the user is new, then a method is called to ask for an email and password and that is set up for the new account and is now considered logged in.

Menu:

The menu object is used to hold all the categories and items. Categories can be made by passing a string with the category name. Each category is an array of item objects stored within the Menu class. This class also displays itself to the user.

The menu class first calls upon the user class to get key information for the order class and notification class. Once the user object status is updated to logged in the menu is displayed to the user. A method is called to display the main menu page. From the main menu page the user can click on different categories, which will take them to various category pages. Once on a category page items are displayed. The item can be then clicked to open the item object.

Items:

Each item object is an item on the menu. An item was a description, a price, and allergies. This is all stored within the item class. It is put into a menu category. It also has the ability to add itself to the order.

Once the user clicks on an item and opens its page, a method is called to display its description and price. At the very bottom a button is placed with a method that can add the item to the order object.

Order:

The order class holds all the items that the user wants to order. It has an add and remove function for items. It can display the items and price it contains to the user. It must also confirm before an order is sent. Once confirmation is accepted it uses the notification object.

Once the user opens the order page, a method is called to display all the items and prices added to the order. The user can also user order remove method to remove item objects that they decided they do not want anymore. Once the user is ready confirm the order, they press a button which calls a method within the already initialized notification object that sends a confirmation email the user.

Notification:

The notification object is created and passed the user email from the user object and the order from the order object. Once both has been passed it sends an order email to the user. Also, once the order is ready a WILF’s employee is able to send a notification to the user email that the food is ready.

The notification object is created once the user object is set to “logged in”. The user object passes it key information like name and email. Once the order object calls the notification method to send the order confirmation email it creates one using the information from user and sends it to the email. It can also be used to send a notification to the user once the food is ready.

**Class Responsibility Collaboration**

|  |
| --- |
| User() |
| * The user class contains the unique information for each account. * This unique information is name, email, and password. * The user class can also create a brand-new user object. * It is called by the menu class and is used to confirm the user. |
| * Notification * Menu |

|  |
| --- |
| Order() |
| * Contains items objects * Can output what’s in the order * Delete or add items in order object * Verifies if order is correct with user * Creates notification object once the order is confirmed |
| * Notification * Items * Menu |

|  |
| --- |
| Notification() |
| * Sends email to user with order number and total order. * Sends notification to user when food is ready. |
| * Order * User |

|  |
| --- |
| Menu() |
| * Uses arrays of objects to store item objects. Each an array is a category. * The menu can display itself to the user and what’s in its categories. * Can add or remove item objects from categories. * Confirms if the user is logged in or not. |
| * Order * User * Items |

|  |
| --- |
| Items() |
| * Item objects are used to hold all the information of an object. * It contains key information for the specific object like description, price, and ingredients. * Its responsibility is to be used by the menu object and placed into its categories * It also can be added or removed from the order object. |
| * Order * Menu |

|  |
| --- |
| Notification() |
| * Sends email to user with order number and total order. * Sends notification to user when food is ready. |
| * Order * User |

|  |
| --- |
| Items() |
| * Item objects are used to hold all the information of an object. * It contains key information for the specific object like description, price, and ingredients. * Its responsibility is to be used by the menu object and placed into its categories * It also can be added or removed from the order object. |
| * Order * Menu |

|  |
| --- |
| User() |
| * The user class contains the unique information for each account. * This unique information is name, email, and password. * The user class can also create a brand new user object. * It is called by the menu class and is used to confirm the user. |
| * Notification * Menu |

WILF’s App Class Diagram

send()

login()

|  |
| --- |
| Menu() |
| * Uses arrays of objects to store item objects. Each an array is a category. * The menu can display itself to the user and what’s in its categories. * Can add or remove item objects from categories. * Confirms if the user is logged in or not. |
| * Order * User * Items |

|  |
| --- |
| Order() |
| * Contains items objects * Can output what’s in the order * Delete or add items in order object * Verifies if order is correct with user * Creates notification object once the order is confirmed |
| * Notification * Items * Menu |

add() / remove()

display() / go\_back()