**Final Programming Assignment**

*Stage 4*

**Design Change Document**

**BoxMate**



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Friday, June 15, 2012

ICS 4U1

## Design Change Table

|  |  |
| --- | --- |
| Name of Class, Field, or Method | Description of Change |
| Address.java | * Added a city field. |
| normalize() | * This method offers a different String representation of the address, one which is more standard. This is useful for output as well as the geo-location features. |
| Date.java | * Added this class because the Date class in the Java API was too troublesome. |
| Show.java | * Added a price field. This price is the same for all seats for that show. * Added ID field. |
| sortShowings() | * Added this method to keep the showings in chronological order. |
| avgDistancePerCustomer() | * Replaced the idea of finding the most common source for customer. Now, we just find the average distance a customer travels. |
| Time.java | * Added this class because the Time class in the Java API was too troublesome. |
| User.java | * Changed the password field to a byte array in order to encrypt it. * Added ID field |
| PasswordEncryption.java | * Using the hashPassword() method, the user’s password is salted (combined) with their password, then hashed using MD5 to make the password secure and unreadable to human eyes. |
| Session.java | * Controls the user’s session:   + Identifies the user that is currently logged in.   + Controls log in/log out   + Closes any open windows when the user logs out. |
| Show.jva | * Added ID field |
| Showing.java | * Added ID field |
| Theatre.java | * Added ID field |

Additionally, we separated files into packages: app.boxmate, app.run, app.testing, app.util. The app.boxmate package contains the base classes originally designed in the data dictionary. The app.run package contains classes for GUI and the Main class for the software. The app.testing class contains main methods to testing various functionalities. Lastly, the app.util contains several utility files which are not unique to the BoxMate program.

## Date

**Class Description:** Stores a date. Implements Comparable.

**Attributes Dictionary:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| Month | enum | Stores the potential values for month.  (JANUARY, …, DECEMBER) |
| year | int | Stores the year. |
| month | Month | Stores the month. |
| day | int | Stores the day. |

**Methods Dictionary:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| Date() | constructor | Constructs a Date object, using the current date. |
| Date(int year, Month month, int day) | constructor | Constructs a Date object with the provided date. |
| compareTo(Object object) | int | Compares this date object to another. |
| toString() | String | Returns the Date object expressed as a String. |

## Time

**Class Description:** Stores a time. Implements Comparable.

**Attributes Dictionary:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| hour | int | Stores the hour. |
| minute | int | Stores the minute. |

**Methods Dictionary:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| Time() | constructor | Constructs a Time object, using the current time. |
| Time(int hour, int minute) | constructor | Constructs a Time object with the provided time. |
| compareTo(Object object) | int | Compares this time object to another. |
| toString() | String | Returns the Time object expressed as a String. |

## Currently Implemented GUIs

Few screens have been created at this time. These will be completed over the next two days.

The reason for this delay is that we were focusing our time on ensuring that all core functionality (searching, sorting, creating, editing and deleting) were fully implemented and functioning prior to focusing on the creation of our GUI screens.

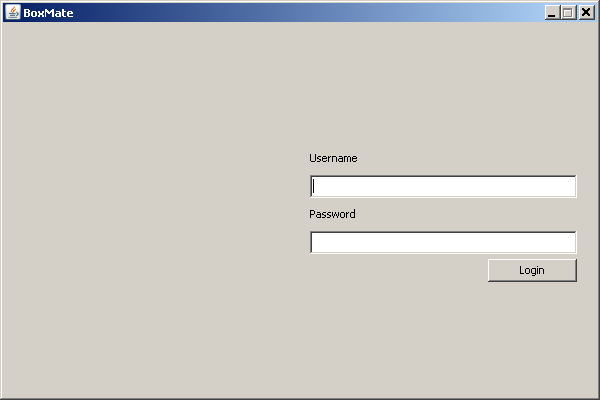


Figure : Login.java

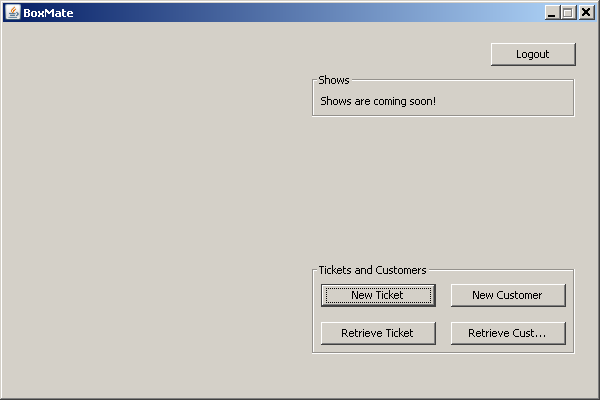


Figure : Dashboard.java

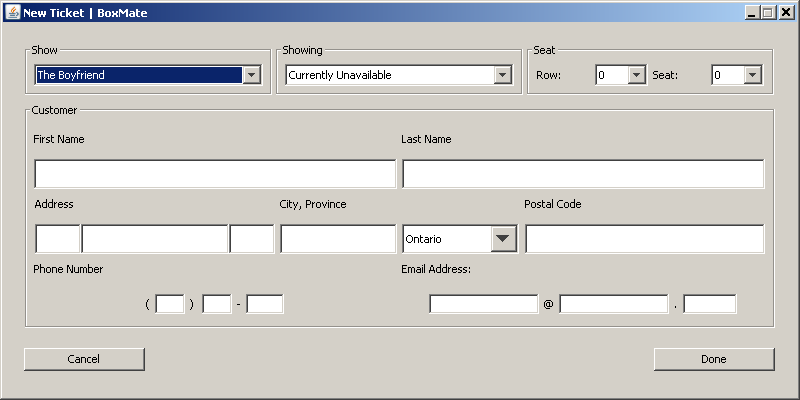


Figure 3: NewTicket.java

## Screen Layout Changes

As of yet, no changes to screen layout have been made.