RR Group 1 Spring 2015

ATM

Textual Descriptions of Classes

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# ATM Controller

## AbstractController - Class

Description: Sets the standards for the controller. Includes basic view, model, getters & setters.

## ATMController - Class

Description: Extends AbstractController. Initiates & controls webcam, handles login,

Controls:

* Initiates & controls webcam
* Login
* Processes user selections
* Transfer Funds
* Withdraw Funds
* Get Account Information
* Set Account Status

## CardReaderController - Class

Description: Extends AbstractController. Creates Card Reader Model and reads input from swiped cards.

## Controller - Interface

Description: Standard Public Interface for Controllers, includes getters and setters for model and view.

## DatabaseController - Class

Description: Controller for the database including functions for:

* Getting Accounts
* Getting Stored Images
* Setting the Picture
* Validating the user login information
* Depositing Funds
* Withdrawing Funds
* Transferring Funds

## IdleTimeController - Class

Description: Extends TimerTask. Handles the timer to control time out if the users don’t interact with the system. Includes functions to

Run the timer

* Set the timer
* Cancel the timer

## Results.java

### Results - Class

Description: The results controller stores the users account name, account number and balance for each account. It also provides getters for each parameter.

### AccountCompare - Class

Description: Sorts accounts by account number. Low to high.

# ATM Model

## AbstractModel – Abstract Class

Description: Implements Model. Abstract Model for other model classes. Handles listeners through a list and allows listeners to be added or removed.

## AgentStatus - Enumeration

Description: Enumeration of different statuses the ATM model uses to track activities.

## ATMCoreModel - Class

Description: Extends AbstractModel. The ATM core model houses the core ATM functionality and key parameters needed:

* Account Number
* PIN
* Name
* fromAccount
* toAccount
* Transaction type
* # of pin tries
* Login Photo
* Account validation status
* Database Controller

The ATM core model also handles error & state checking such as:

* Card Errors
* Database Errors
* Insufficient Funds
* Invalid Pin

Additional functionality includes

* Withdraw completed status setter
* Withdraw
* Do Transaction Type – Handles user transaction requests
* Set Transaction Type
* Get Transaction Type
* Start session
* Account Select
* Check Balance
* Reset model
* Waiting
* Cancel
* Transfer

Getters and setters are provided as appropriate for the model paramaters.

## CardReaderModel - Class

Description: Extends AbstractModel. The card reader model stores parameters needed to read the credit cards and getters and setters to interact with those parameters. The card reader parses the information from the credit card as its read.

Parameters:

* Card Holder
* CCN
* Date Format
* Expiration Date

## Model - Interface

Description: Standard Model Interface. Provides notify Changed functionality

## ModelEvent - Class

Description: The Model Event class is responsible for enumerating types of events and providing getters for the kind of event and agent status.

## ModelListener - Interface

Description: Standard Model Listener class. Provides functionality for model Changed.

## TransactionTypes - Enumeration

Description: Enumeration of different transaction types, Withdraw, deposit, balance, transfer.

# ATM View

## AccountSelectView - Class

Description: Extends JFrameView. Allows user to select the account they would like to interact with.

## AmountView.java

### AmountView - Class

Description: Extends JFrameView. Provides a view that allows the user to input to enter the amount that they wish to withdraw or transfer.

### Handler – Private Class

Description: Implements ActionListner

### ModelChanged – Private Class

Description: Creates new view if the model changes.

## BackgroundPanel - Class

Description: Extends JFrameView. Supports custom painting on a panel in the form of images and non solid paintings. Objects added to this layer are made transparent so that the custom painting can show through.

## BalanceView.java

### BalanceView - Class

Description: Extends JFrameView. View displayed to the user when they are viewing the balances of their accounts.

### Handler – Private Class

Description: Implements ActionListner

### ModelChanged – Private Class

Description: Holds Handler class.

## FixLabelSize - Class

Description: Adjusts font sizes to the fields they are in so the labels don’t overrun their containers.

## JFrameView - Class

Description: Extends JPanel. Abstract JFrameView for the ATM. Sets basic parameters for the views, registers & unregisters with Model & Controller.

## JNumericField.Java

### JNumericField - Class

Description: Extends JFrameView.

### JNumberFieldFilter – Private Class

Description: Extends PlainDocument

## LoginView - Class

Description: Extends JFrameView. View used for login screen.

## LogoutView - Class

Description: Extends JFrameView. View displayed when user is logging out of the sytem.

## MainView.java

### MainView - Class

Description: Extends JFrame, Implements View & Model Listner.

This is the main view file and manages how the view interacts with the controller and model including setting controllers and taking actions based on events.

### Main – Private Class

Description: Starts the program initializing the model, controller and starting the views.

## Misc - Class

Description: Extends JFrameView. Contains various miscellaneous actions a user might see that didn’t require their own class. Includes

* Logout
* Waiting
* Invalid Pin
* Insufficient funds
* Cancled
* Database Communication Errors
* Card Read Errors
* Transaction Completed

## PINScreen - Class

Description: Extends JFrameView. View to allow user to enter their pin number via a number pad.

## RequestFocusListener - Class

Description: Implements Ancestor Listener. Convenience class to request focus on a component. When the component is added to a realized Window then component will request focus immediately, since the ancestorAdded event is fired immediately. When the component is added to a non realized Window, then the focus request will be made once the window is realized, since the ancestorAdded event will not be fired until then.

Using the default constructor will cause the listener to be removed from the component once the AncestorEvent is generated. A second constructor allows you to specify a boolean value of false to prevent the AncestorListener from being removed when the event is generated. This will allow you to reuse the listener each time the event is generated.

## SelectionView - Class

Description: Types of Selections the ATM allows. Includes:

* Transfer
* Balance
* Withdraw
* Cancel
* Enter
* Start
* Logout
* Select Account

## View - Interface

Description: Public interface for View class. Creates a controller, model, and calls their initialization functions.

## WithdrawView - Class

Description: Extends JFrameView. View displayed when the customer selects the Withdraw function.