# CS611 Final Project

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## Basic Design

The whole system uses MVC design pattern. We use Java Swing to implement the front end which is the View part of this pattern. And we divide the back end into Controller, Service and Model part. Controller and Service part is the Controller part of this pattern, the classes in Controller package provide different kind of method to the front end, and the classes in the Service package implement the detail of the corresponding function in the Controller. The classes in the Model package represent the Model part of this pattern, and each of the classes means an object occurring in this system.

We use MySQL as our database for data persistence.

## Division of labor

Zheng Jiang: The implement of front end, and combination the front end with the back end.

Harsh Mutha : implementation of database and backend functions excluding stock and securities functionality.

Renxuan Cao; Implementation of database and stock & securities account functionalities

## Basic Class Structure

### The Front End

1. Component Package
   1. History Table

A component class which extends the JTable. With this class, the page of the customer and manager can easily create a history table to check the transaction history.

* 1. LoanListPanel

A component class which extends the JTable. With this class, the main frame can create a plane which can create several detail loans panels according to the length of LoanList and can change dynamically, which is a replacement method for ***v-if*** in Vue.js.

* 1. StockListPanel

It has the same design idea as the previews one but it’s for StockList.

1. bankUI Package
   1. Login

The login page.

* 1. Registry

The Registry page

* 1. Core

The main page for the customer

* 1. Manager

The main page for the manager

* 1. CreateAccount

The page for customer to create the checking or saving account.

* 1. LoanDetail

The page for customer to make a loan

* 1. TransactionDetail

The page for customer to deposit, withdrawal or transfer.

* 1. StockDetail

The page for manager to publish a new stock.

### The Back End

Graphical user interface

Description automatically generated