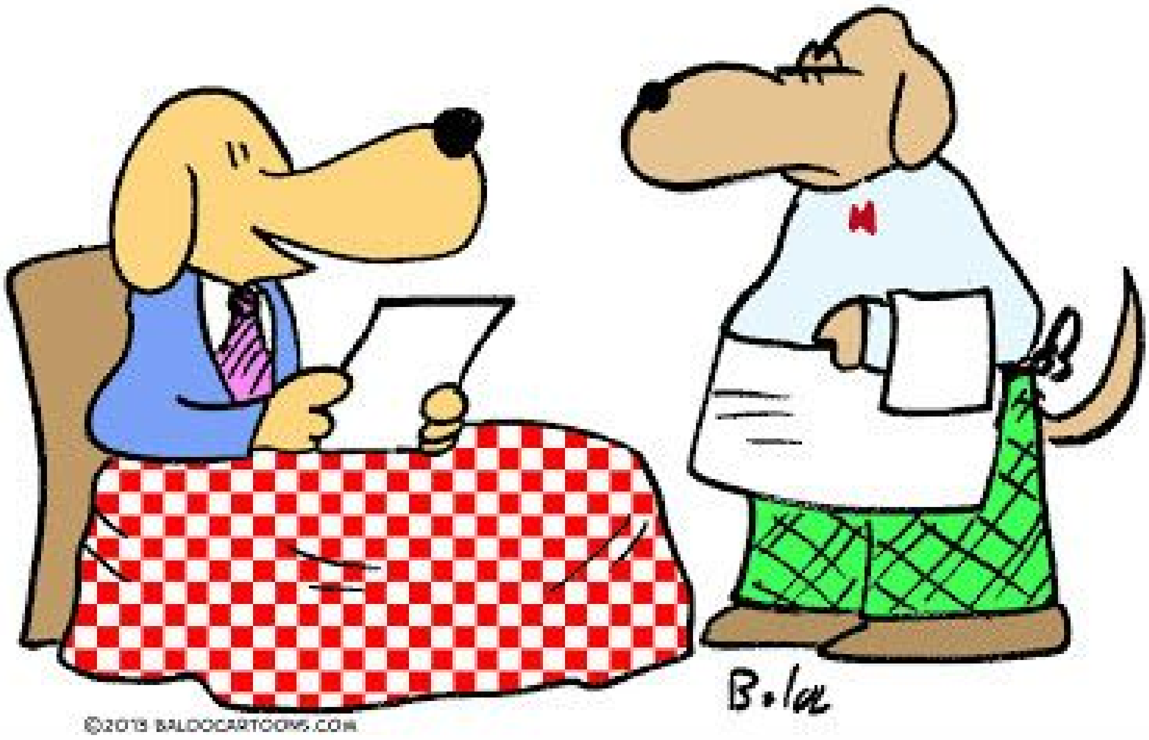
SWE: Serve with Ease

GROUP #1

Project: Restauranting Made Easy

Technical Documentation



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"How's the homework today?"

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1.) Overview of the System

The SWE system implements a client server structure where each employee with a tablet is a client and the three databases and message controller act as the server. SWE is also implements a distributed database system because it uses three different databases.
The databases are as follows:

- Database A holds all employee information. This will handle login and logout requests from all employees.
- Database B holds the list of tables in the restaurant and the information associated with that table. This will handle requests from the Host to get table data.
- Database C holds the menu, the inventory, and the revenues. This will handle requests for the menu from the waiter as well as updates on the inventory from the chef. It will also

The Message Controller will be used to forward messages from one employee to another. This way the user's tablet does not have to know all of the other active tablet's IP addresses, only the Message Controller's IP address.

Database A, B, and C, as well as the Message Controller, will run on their own processes. They can be started by running DatabaseAcontroller.java, DatabaseBcontroller.java, DatabaseCcontroller.java, and MessageController.java.

Each employee should have their own tablet and this tablet will run TabletApp.java.
This program will set up a connection with Database A and send a request with an employee id to login. The response will include the position of the employee id on success. Then it will close this connection and start up the interface that corresponds to that position.
Each interface has a

- Message listener: constantly listens for messages sent from the Message Controller.
- Message sender: sends any messages from this user to the Message Controller
- Interface Controller: controls the data associated with this interface and what screen is open
- JPanels (one for each screen): draws the screen for the user using the data in the interface controller

There is a host, chef, manager, waiter, and owner interface.

The configuration file is used to hold the IP Addresses of the Databases and the Message Controller and must be updated accordingly in configuration/domainNames.txt and configuration/portNumbers.txt.

2.) Packages:

Chef

- Holds all files associated with the chef interface. Notice that this is not finished (labeled WIP = work in process)

Configuration

- Holds files used for configuring the sockets. Holds the text files that hold the IP Addresses and Port Numbers of the DB A,B,C and Message Controller servers.

databaseA

- Holds controller(used to start up DB A) and the data structure class Employee.

dataBaseC

- Holds controller(used to start up DB B) and the following data structure classes: Table, TableList

dataBaseC

- Holds controller(used to start up DB C) and the following data structure classes: Dish, DishData, Ingredient, Menu.

Host

- Holds all files associated with the host interface. (listed in overview of system)

loggingIn

- Holds TabletApp.java and the log in screen panel.

Manager

- Holds all files associated with the manager interface. (listed in overview of system)

messageController

- Holds all files associated with the message controller and the data structure class Message.

Waiter

- Holds all files associated with the waiter interface. (listed in overview of system)

3.) Javadoc

These Docs show describe the function of each method and class within the application.
All Javadocs are in the folder javadoc. Inside this folder there will be folders for each package. The pdf version of the Javadoc for each class in that package will be found inside the package folder. These package folders follow the same organization as above.