Classic ToolShop Desktop App with API

This is a joint, cross-course project with ENSF 607/608. It is a classic Tool Shop desktop application written in Java.

Contributors

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Quick Start

client and remote server

1. fulfill dependencies in `pom.xml` if builds are missing packages
2. making sure remote backend server is up and running. (See note below)
3. to connect to the remote client, compile and run `src/client/main.java`

client and local server

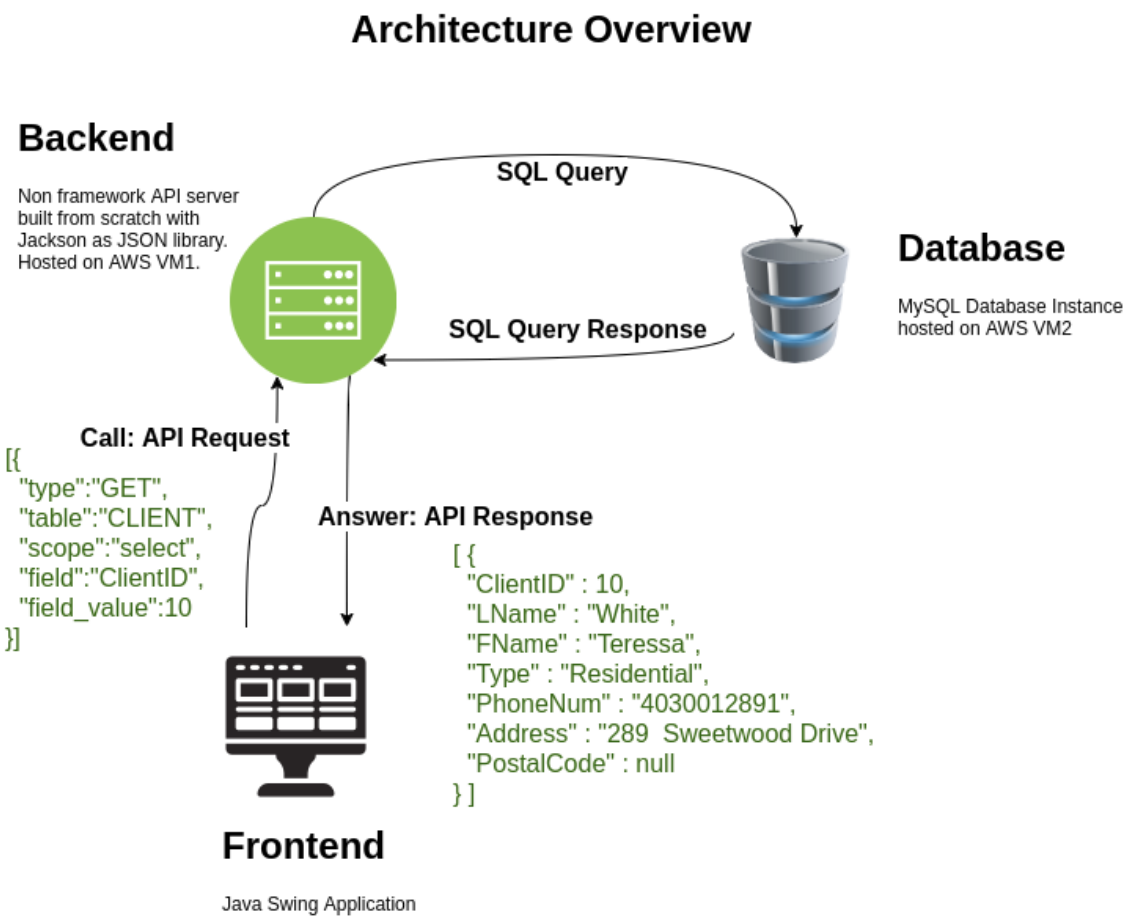
1. fulfill dependencies in `pom.xml` if builds are missing packages
2. to start the server, compile and run `src/server/startServerLocal.java` (See note below)
3. to start the local client, compile and run `src/client/mainLocal.java`

Summary

Inventory management system that has two functionalities:

- Allows owner to add new customers/update their information and allows customers to search for tools from the data base and purchase.
- If the quantity of an item goes below 40 items then the program automatically generates an order line for that item

Architecture



Front-End

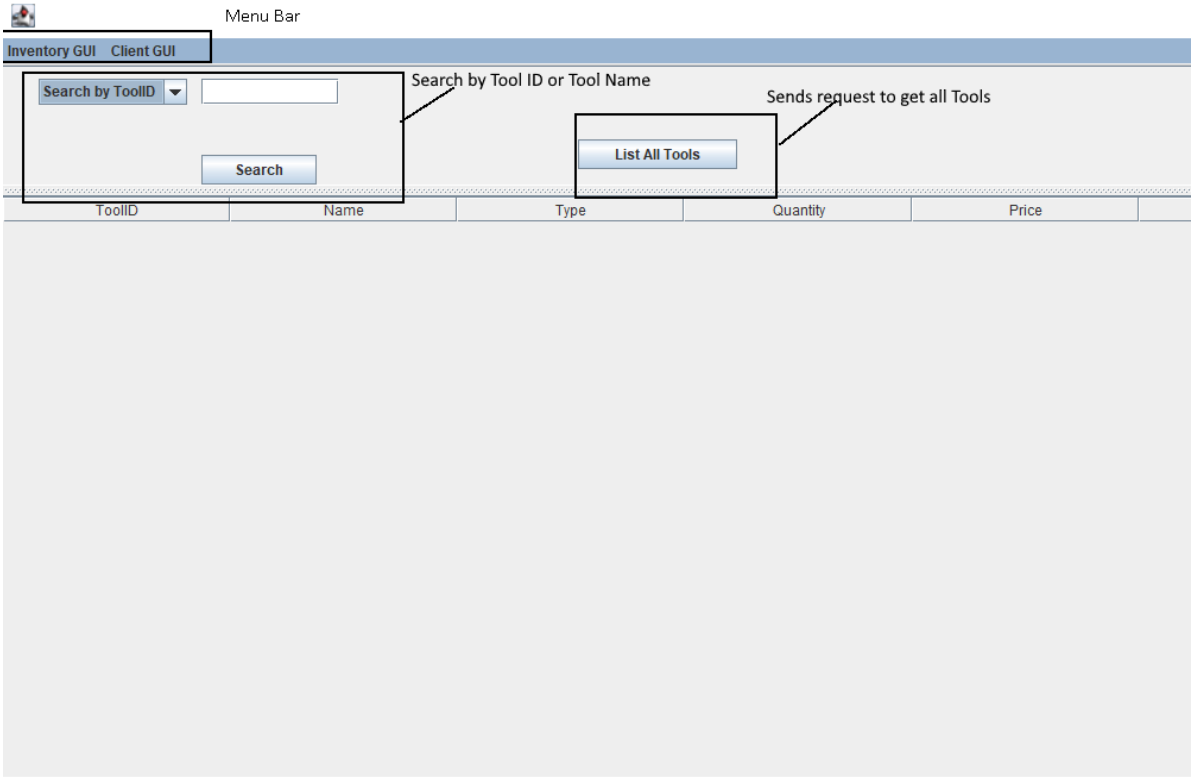
The front end is a GUI application that will send messages in a JSON format to the server via sockets, then it will receive a response. Example if search by ToolId is selected a we are searching for a ToolID of 8000 then it will send a JSON message as follow: `"{ \"type\" : \"GET\", \"table\" : \"TOOL\" , \"scope\":\"select\",\"field\":\"ToolID\",\"field_value\":\"8000\"}";`

The response is a JSON Node as follows `[ { "ToolID" : 8000, "Name" : "Knock Bitzzz", "Type" : "Electric", "Quantity" : 70, "Price" : 15.0, "SupplierID" : 8004, "PowerType" : null} ]`

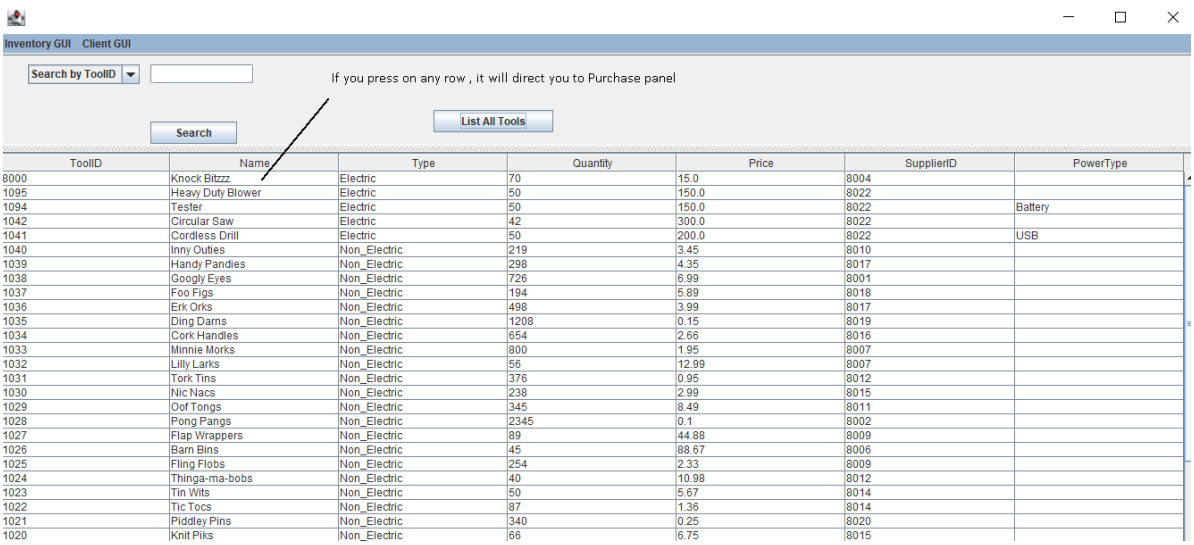
And it will be printed in the GUI

GUI Panels

1. Inventory Panel



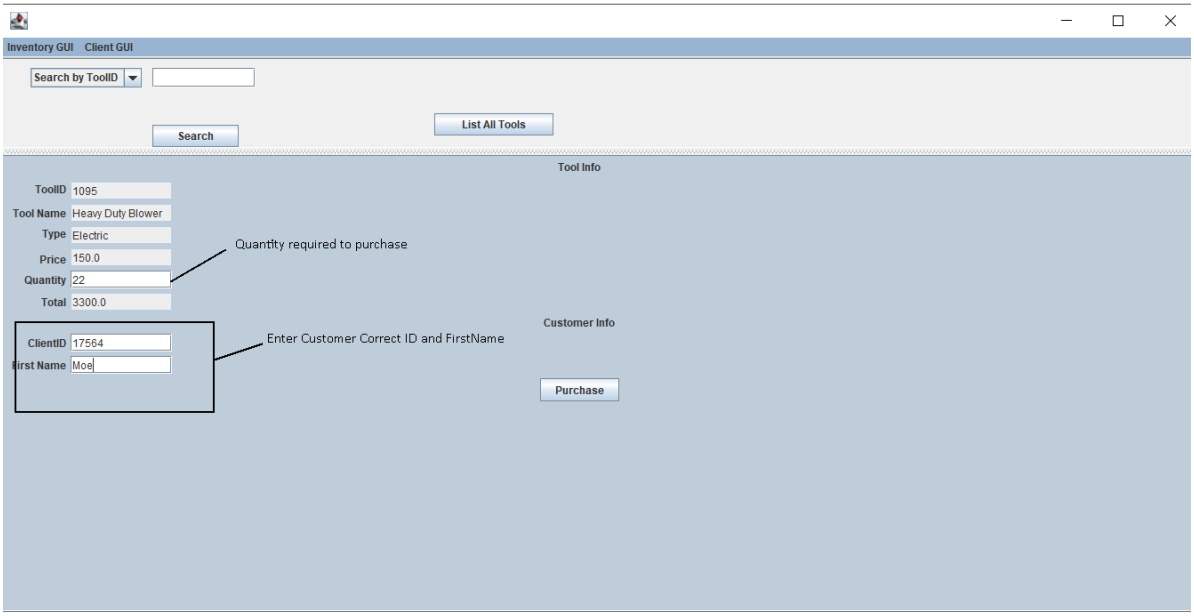
Note: If you press List All Tools or Search (with correct ToolID or Tool Name) the following table is generated



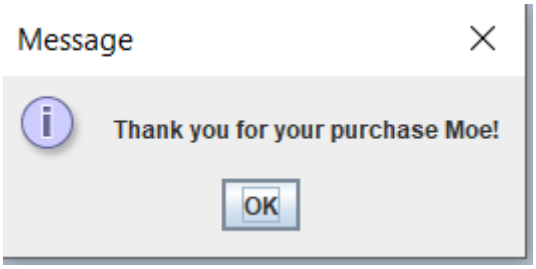
ToolID	Name	Type	Quantity	Price	SupplierID	PowerType
8000	Knock Bitzzz	Electric	70	15.0	8004	
1095	Heavy Duty Blower	Electric	50	150.0	8022	
1094	Tester	Electric	50	150.0	8022	Battery
1042	Circular Saw	Electric	42	300.0	8022	
1041	Cordless Drill	Electric	50	200.0	8022	USB
1040	Inny Outies	Non_Electric	219	3.45	8010	
1039	Handy Pandies	Non_Electric	298	4.35	8017	
1038	Googly Eyes	Non_Electric	726	6.99	8001	
1037	Foo Figs	Non_Electric	194	5.89	8018	
1036	Erk Orks	Non_Electric	498	3.99	8017	
1035	Ding Darns	Non_Electric	1208	0.15	8019	
1034	Cork Handles	Non_Electric	654	2.66	8016	
1033	Minnie Morks	Non_Electric	800	1.95	8007	
1032	Lilly Larks	Non_Electric	56	12.99	8007	
1031	Tork Tins	Non_Electric	376	0.95	8012	
1030	Nic Nacs	Non_Electric	238	2.99	8015	
1029	Oof Tongs	Non_Electric	345	8.49	8011	
1028	Pong Pangs	Non_Electric	2345	0.1	8002	
1027	Flap Wrappers	Non_Electric	89	44.88	8009	
1026	Barn Bins	Non_Electric	45	88.67	8006	
1025	Fling Flobs	Non_Electric	254	2.33	8009	
1024	Thinga-ma-bobs	Non_Electric	40	10.98	8012	
1023	Tin Wits	Non_Electric	50	5.67	8014	
1022	Tic Tocs	Non_Electric	87	1.36	8014	
1021	Piddley Pins	Non_Electric	340	0.25	8020	
1020	Knit Piks	Non_Electric	66	6.75	8015	

2. Purchase Panel

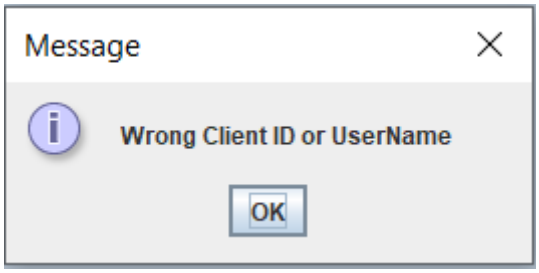
After selecting a row from the table, purchase panel will appear



if the customer ID/First Name are correct then purchase will be generated and the following pop-up will appear

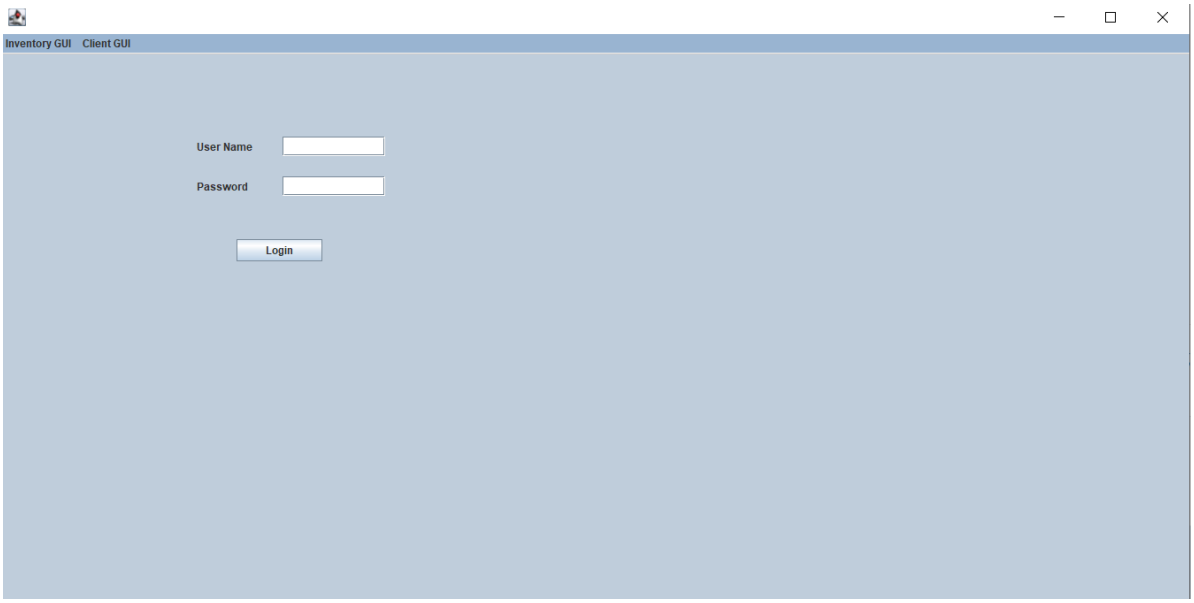


else this pop-up will appear

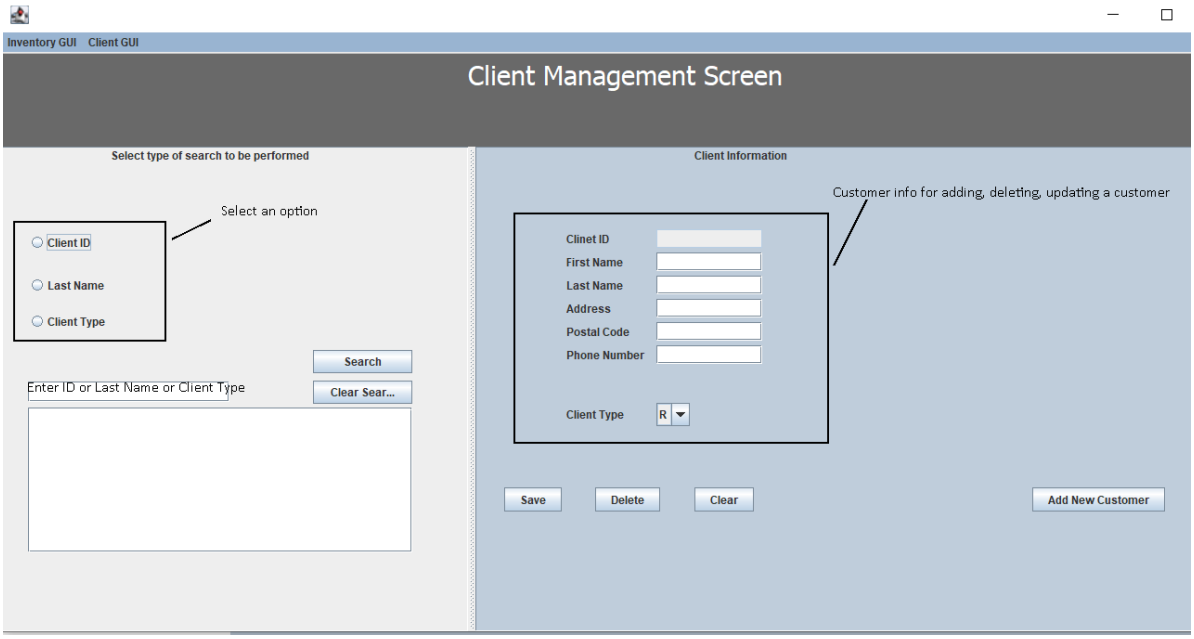


3. CMS Panel

press on ClientGUI option from the menu bar, it will direct you to a Login panel

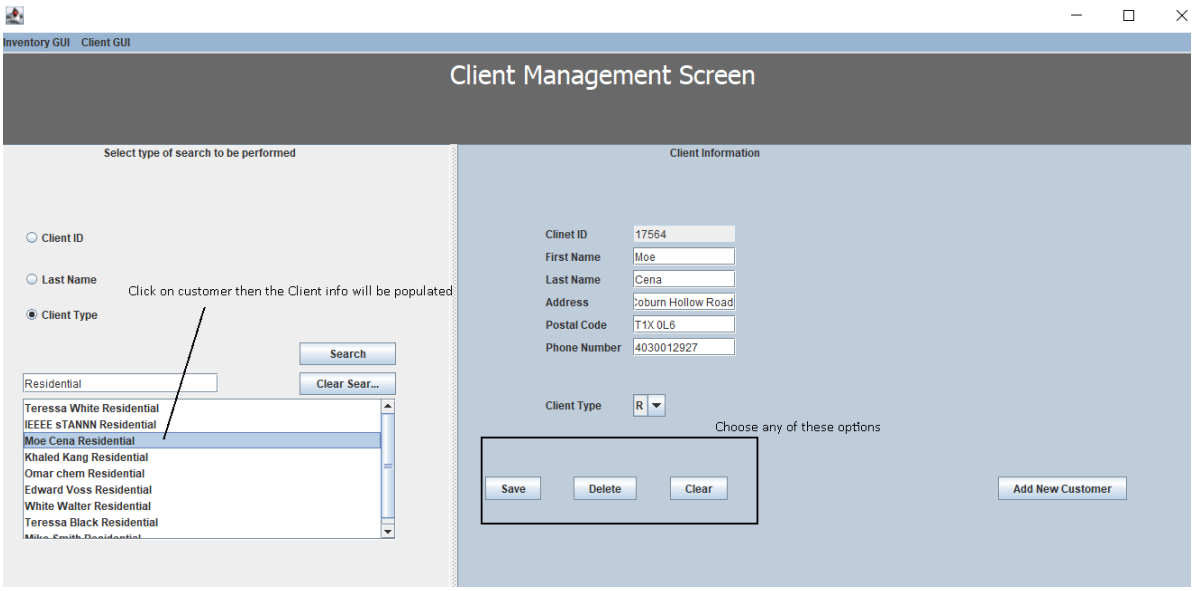


If username/password are correct then the client management panel will show



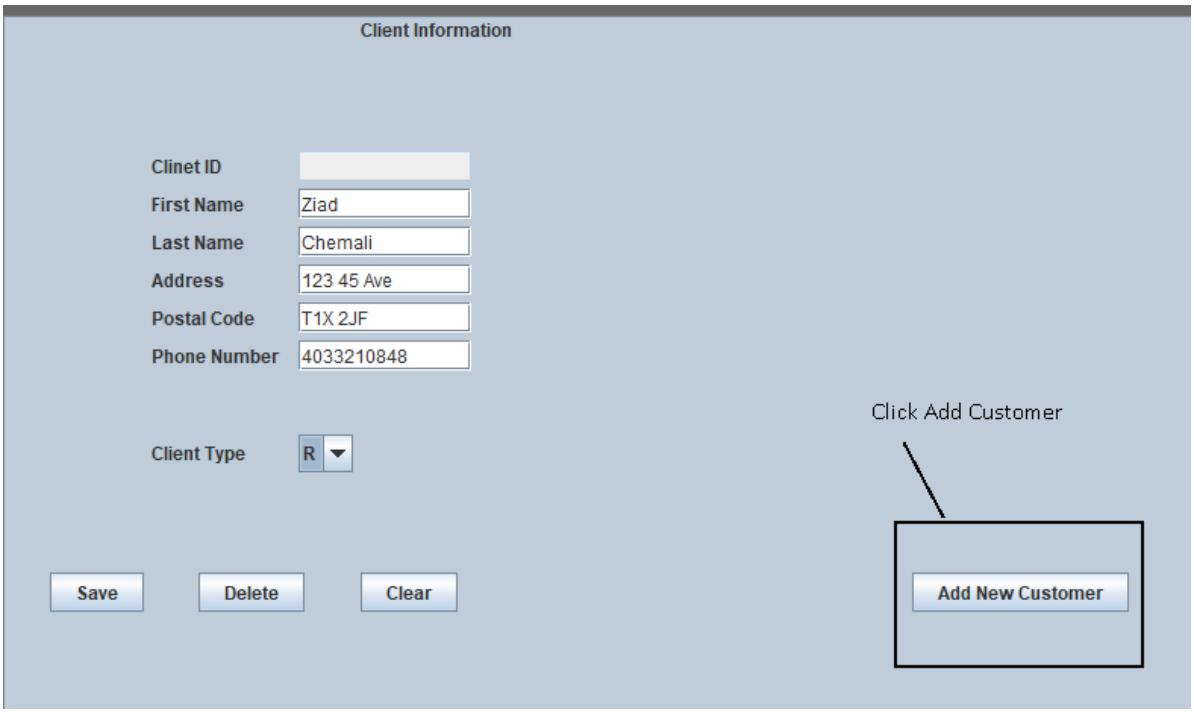
Updating/Deleting a customer

First search for a customer then select the customer from the JList. After selecting a row, the Client Information in the right side will be populated automatically

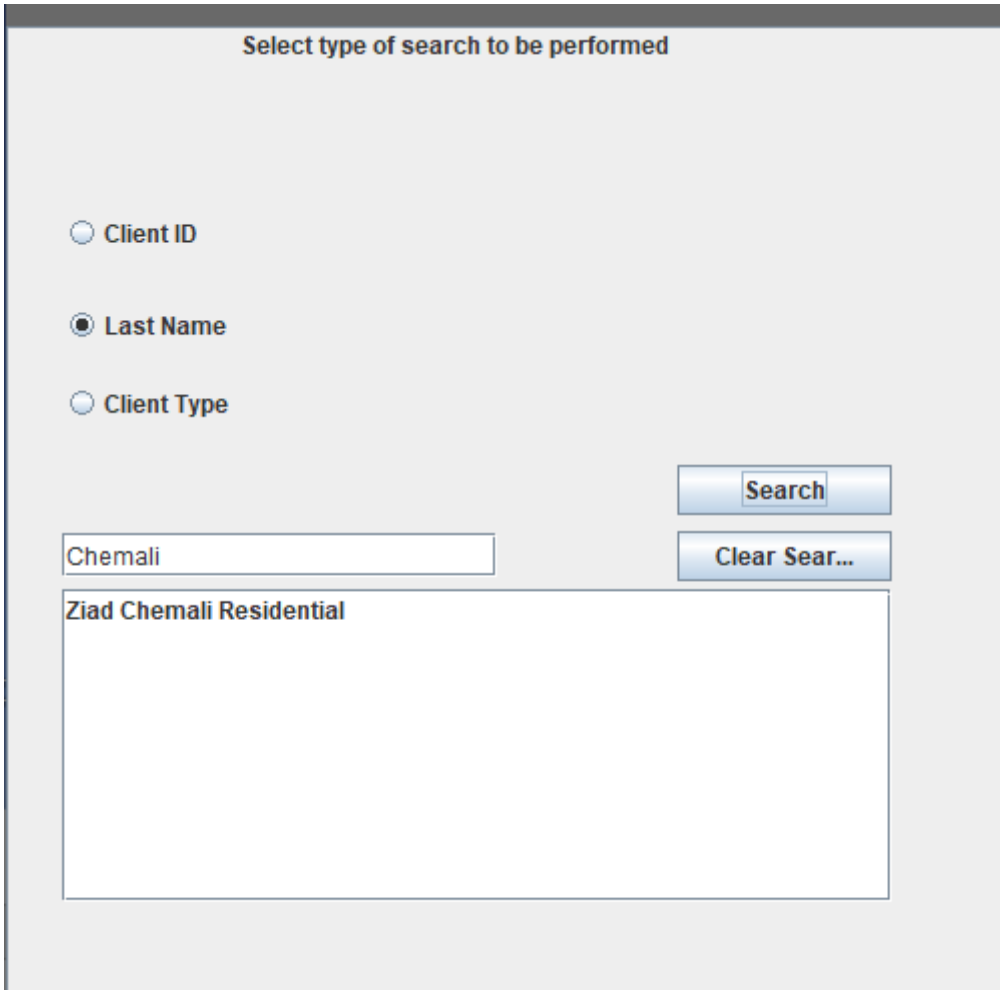


Adding new customer

Simply fill in all the fields required, and click Add New Customer. Note: a unique client Id will be generated



Double check by searching for the newly added customer



Customer successfully added

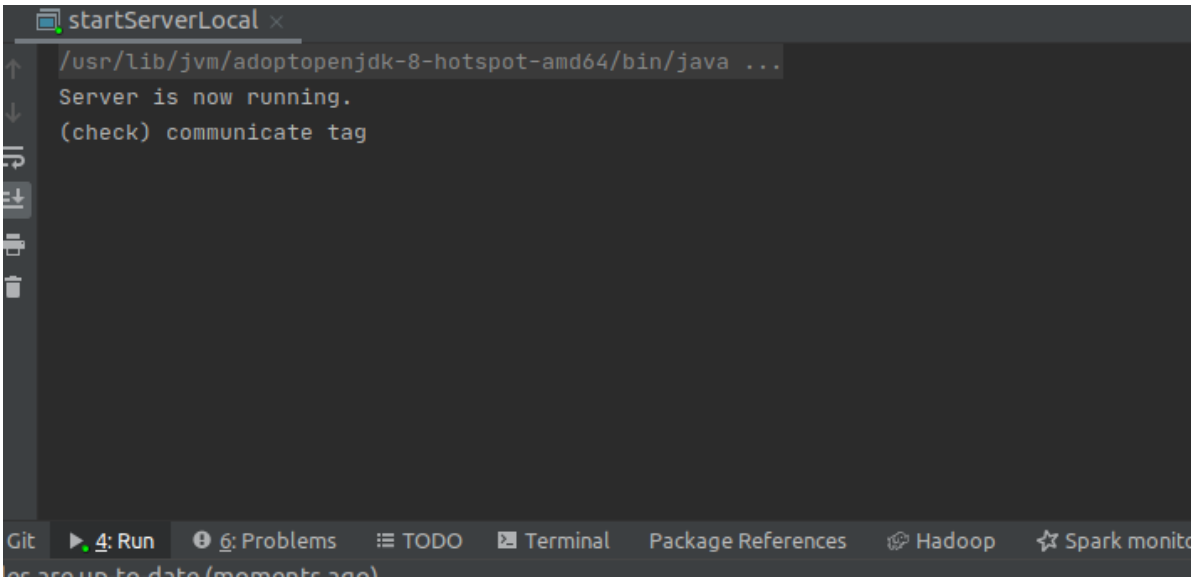
Back-End

How to start local backend server

to start the local backend server, compile and run

```
src/server/startServerLocal.java
```

if the console prints the following, it means the server is ready.



How to start remote backend server

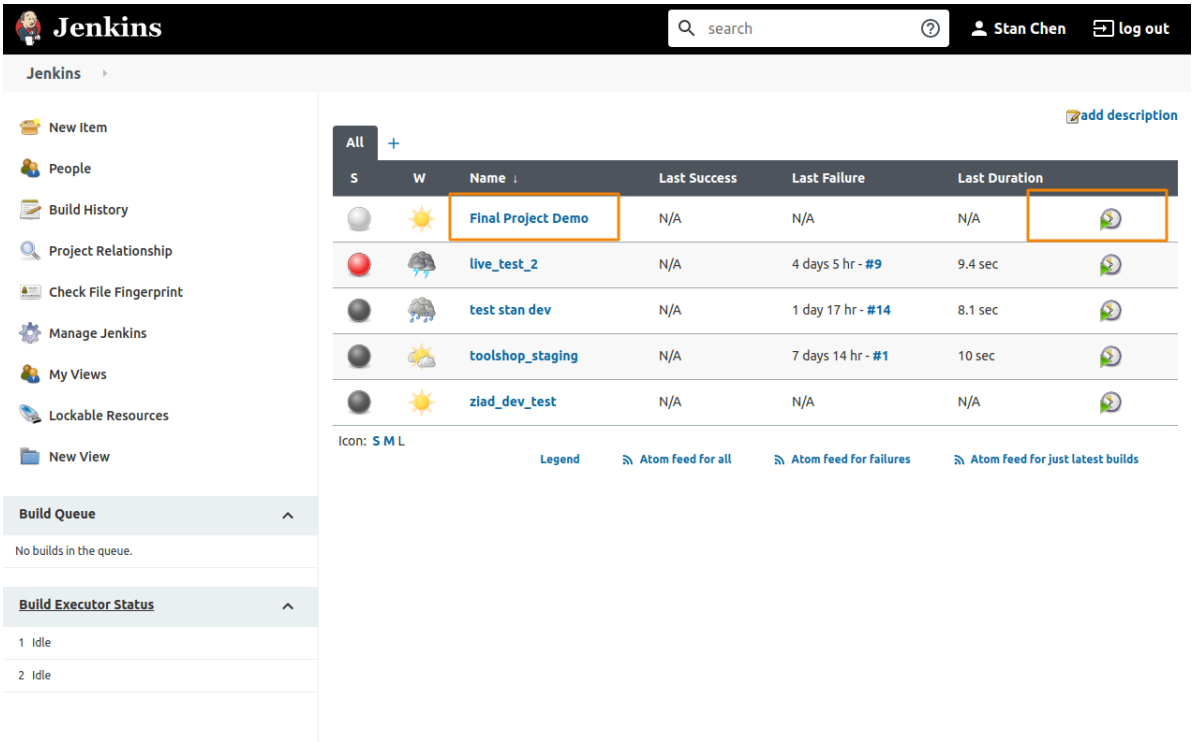
Note: For temporary demo purpose, Prof & TA can access:

Our jenkins build server http://54.185.156.100:8080/

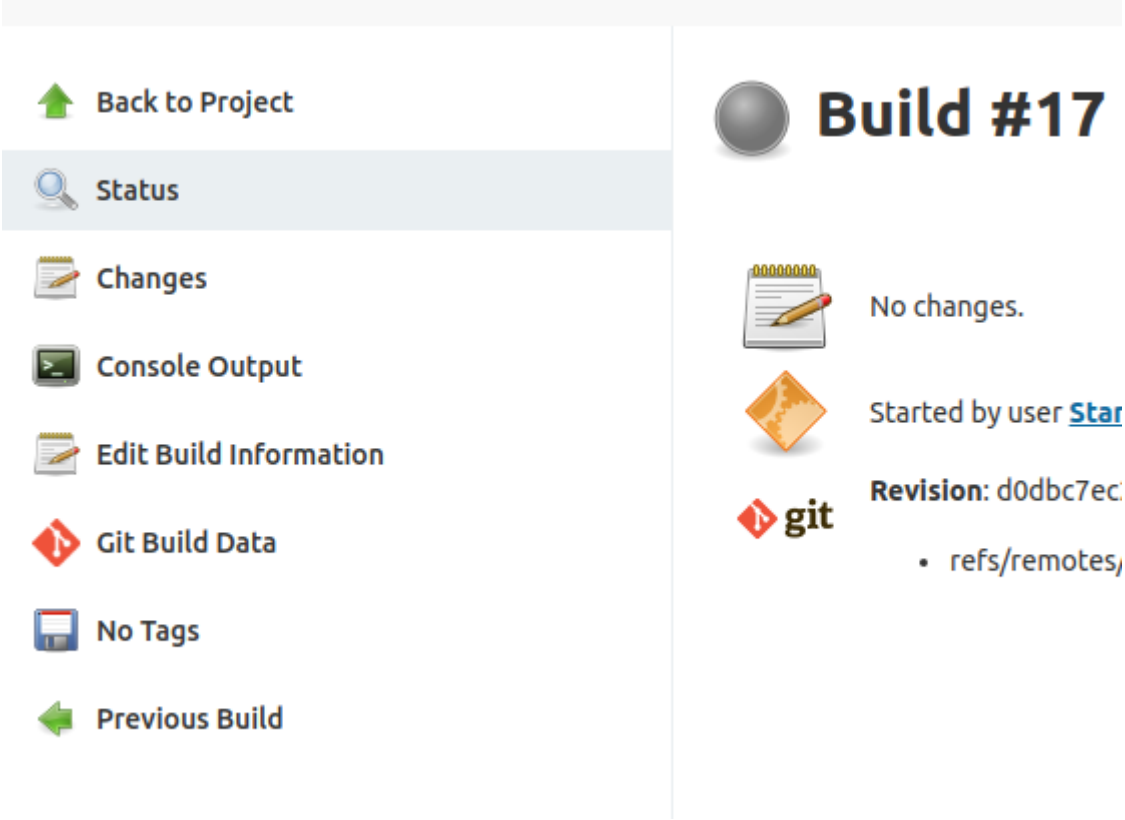
username: `ensf`

password: `ensf607`

If server is not running, build the job "Final Project Demo" to start the backend server.



click into the project



In this job page, click `Console Output`,

```
[□[1;33mWARNING□[m]
[□[1;33mWARNING□[m] It is highly recommended to fix these problems because they threaten the stability of your
build.
[□[1;33mWARNING□[m]
[□[1;33mWARNING□[m] For this reason, future Maven versions might no longer support building such malformed projects.
[□[1;33mWARNING□[m]
[□[1;34mINFO□[m]
[□[1;34mINFO□[m] □[1m-------------------< □[0;36morg.example:toolshop-server□[0;1m >--------------------□[m
[□[1;34mINFO□[m] □[1mBuilding toolshop-server 1.0-SNAPSHOT□[m
[□[1;34mINFO□[m] □[1m--------------------------------[ jar ]---------------------------------□[m
[□[1;34mINFO□[m]
[□[1;34mINFO□[m] □[1m--- □[0;32mexec-maven-plugin:3.0.0:java□[m □[1m(default-cli)□[m @ □[36mtoolshop-server□[0;1m --
-□[m
Server is now running.
(check) communicate tag
```

REST API Jenkins 2.249.3

If the end of the console log prints the logs as above, this means the server is ready to serve.

Testing

Jenkins were introduced as a tool to help with the deployment/testing purposes. Script used for compiling and running the backend server in Jenkins build execute shell:

```
# export CLASSPATH=jars/*.jar
mvn -v
echo "building maven package"
mvn clean install -U
mvn clean package
echo "initing server"
echo "building maven package"
mvn package
echo "initing server"
mvn exec:java -Dexec.mainClass="server.controller.ServerController" -
Dexec.classpathScope=runtime
```

Develop setup

1. this is classic java project. `jars/mysql-connector-java-8.0.22.jar` needs to be added to class path.
2. Alternatively, if using maven, just use pom.xml to fullfil the dependencies.