

Dinner Chat

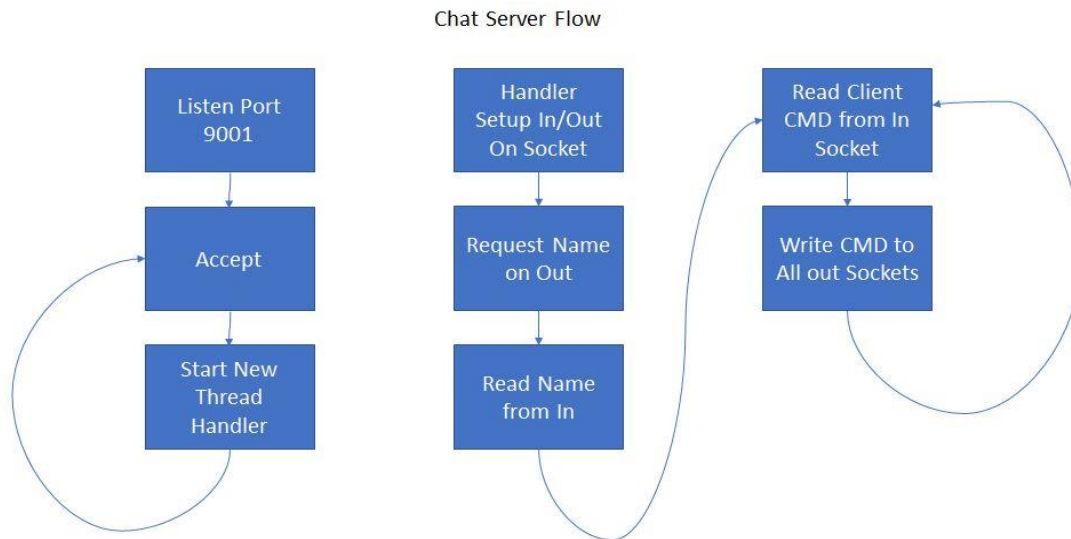
The Dinner Chat System is written as a Java Application program. It consists of 2 major components: Chat Server Application and a Dinner Order Application. The Dinner Order application has a UI which lets the user first select the kind of dinner, Pizza, Hero, or Burrito.

The users then select for example pizza toppings and size, and It also has a chat window so the users can discuss which toppings they like....

Java Chat Server – The Java Chat Server functions as an intermediary.

- 1) It Listens for Dinner Order Clients
- 2) It Requests the name of the client
- 3) If this is the first client it registers the kind of dinner that is being created
- 4) It sends "SYNC: name" to all connected clients
- 5) It registers the incoming socket information and associates that with the name
- 6) It Creates a new Handler Thread for each incoming connection
 - a. Handler Thread
 - i. Reads Client requests/commands
 - ii. Writes Server Commands to all clients
 1. Eg. It receives "+Onion", it sends "STUFF: +Onion", to all connected clients
 2. It receives "^+Small:", it sends "SIZE: ^+Small", to all connected clients

Server Flow Control

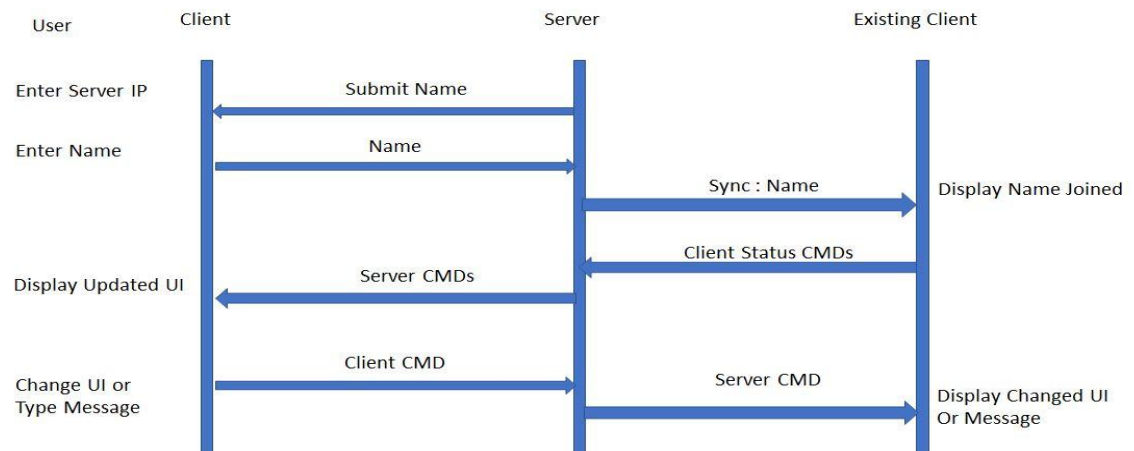


Dinner Order Client

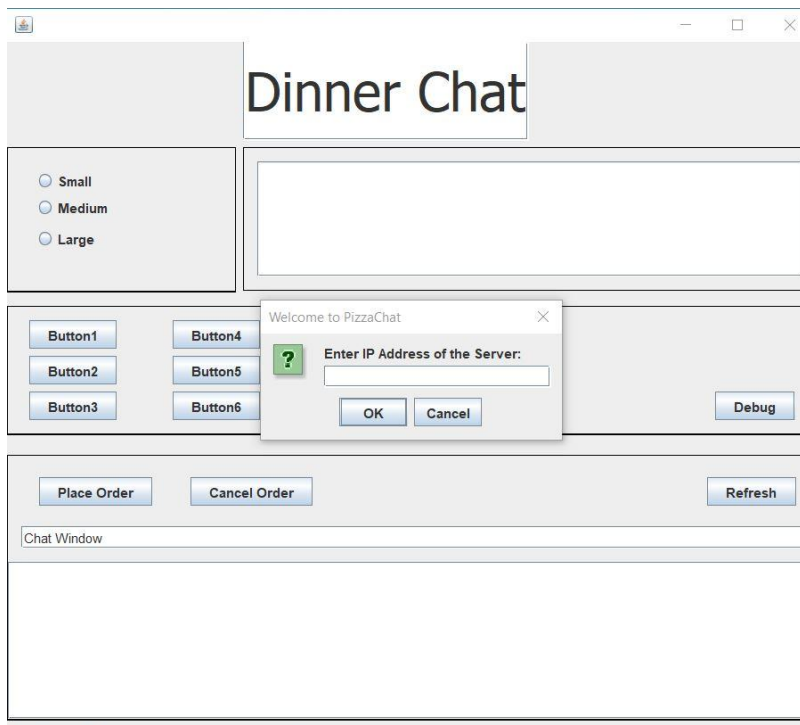
- 1) It requests server IP address from User
- 2) It connects to server
- 3) It requests name from User
- 4) It sends name to Server
- 5) If the client is the first on the chat it will ask the user to choose Pizza,Hero or Burrito
- 6) It stores all the state information as UI components.
 - a. Eg. Toppings, Size
- 7) It responds to User input by sending a command to the Server
 - a. User selects Size small, client sends "^+Small" to server
 - b. User selects "Meatballs", client sends "+Meatballs" to server
 - c. User types in chat windows, client sends text to server
 - d. User presses Refresh, client sends all state commands to server
 - e. User presses Place Order, client writes the current order in the Order Message area
- 8) It also receives commands from the server
 - a. It receives "SIZE: Small", it updates the UI with Small selection
 - b. It receives "STUFF: +Onion", it selects the Onion top in the UI
 - c. It receives "MESSAGE name : chat message", it types "name : chat message" in the UI's message area

- d. It receives “SYNC: name”, client sends all state commands to server and announces new client name in UI

Client/Server Protocol



Ask for Server IP address



Ask for Name

The screenshot shows a web application window titled "Dinner Chat". On the left, there are three radio buttons for "Small", "Medium", and "Large". Below these are six buttons labeled "Button1" through "Button6". A "Debug" button is on the right. A "Screen name selection" dialog box is open in the center, with the text "Choose a screen name:" and a text input field. Below the dialog, there are "Place Order", "Cancel Order", and "Refresh" buttons. At the bottom, there is a "Chat Window" section with a text area containing the code: `top input0` and `input<SUBMITNAME>`.

Ask for Type of dinner

The screenshot shows the same "Dinner Chat" application window. The "Screen name selection" dialog box is replaced by a "Pizza" dialog box. The "Pizza" dialog box has a green question mark icon and the text "Which Type of dinner". Below this is a dropdown menu with "Pizza" selected. There are "OK" and "Cancel" buttons. The "Debug" button is still present. The "Place Order", "Cancel Order", and "Refresh" buttons are also visible. The "Chat Window" section at the bottom now contains the code: `top input0`, `input<SUBMITNAME>`, `bottom input1`, `top input1`, and `input<NAMEACCEPTED 1>`.

Start Pizza Order

The screenshot shows the 'Pizza Chat' application window. The title bar includes a user icon, a maximize button, and a close button. The main header area contains the text 'Pizza Chat'. Below the header, on the left, are three radio buttons for size selection: 'Small', 'Medium', and 'Large'. To the right of these is a large, empty rectangular text input field. Below the size selection and input field is a grid of buttons for pizza toppings: 'Pepperoni', 'Bacon', 'Green Peppers', 'Ricotta Cheese', 'Sausage', 'Mushrooms', 'Spinach', 'Margherita', 'Meatballs', 'Black Olives', 'Onions', 'Extra Cheese', and a 'Debug' button. Below the toppings grid is a row of three buttons: 'Place Order', 'Cancel Order', and 'Refresh'. At the bottom of the window is a 'Chat Window' label above a large, empty rectangular area for chat messages.

Select Size, Toppings

This screenshot shows the 'Pizza Chat' application window after the user has made selections. The 'Medium' size radio button is now selected, indicated by a filled circle. The 'Debug' button in the toppings grid is highlighted with a blue border. The 'Place Order' button in the bottom row is also highlighted with a blue border. The 'Chat Window' area at the bottom remains empty.

Add a new Client

(John Just Joined the Chat)

The image displays two side-by-side screenshots of a web application titled "Pizza Chat". Each window has a title bar with standard OS controls. The main content area is divided into three horizontal sections. The top section contains three radio buttons for pizza size: "Small", "Medium" (selected), and "Large". Below this is a large, empty rectangular text input field. The middle section is a grid of buttons for pizza toppings: "Pepperoni", "Bacon", "Green Peppers", "Ricotta Cheese", "Sausage", "Mushrooms", "Spinach", "Margherita", "Meatballs", "Black Olives", "Onions", "Extra Cheese", and a "Debug" button. The bottom section contains three buttons: "Place Order", "Cancel Order", and "Refresh". Below these buttons is a "Chat Window" label and a large, empty rectangular area for chat messages.

Chat Windowlets them text back and forth

The image displays two side-by-side screenshots of the "Pizza Chat" application, identical in layout to the previous image. The left window's chat window now contains the message "John: Hi, I am here". The right window's chat window also contains the message "John: Hi, I am here". The rest of the UI, including the size and topping buttons, remains the same.

Add a third Client ... Mary

| Pizza Chat | Pizza Chat | Pizza Chat |
|--|--|--|
| <input type="radio"/> Small <input checked="" type="radio"/> Medium <input type="radio"/> Large | <input type="radio"/> Small <input checked="" type="radio"/> Medium <input type="radio"/> Large | <input type="radio"/> Small <input checked="" type="radio"/> Medium <input type="radio"/> Large |
| | Mary just joined the Chat | John just joined the Chat Mary just joined the Chat |
| <div>Pepperoni Bacon Green Peppers Sausage Mushrooms Spinach Meatballs Black Olives Onions</div> | <div>Pepperoni Bacon Green Peppers Sausage Mushrooms Spinach Meatballs Black Olives Onions</div> | <div>Pepperoni Bacon Green Peppers Ricotta Cheese Sausage Mushrooms Spinach Margherita Meatballs Black Olives Onions Extra Cheese</div> <div>Debug</div> |
| <div>Place Order Cancel Order</div> | <div>Place Order Cancel Order</div> | <div>Place Order Cancel Order Refresh</div> |
| Mary: I am here too! | John: Hi, I am here Mary: I am here too! | John: Hi, I am here Mary: I am here too! |

Place the Order...

| Pizza Chat | Pizza Chat | Pizza Chat |
|--|--|--|
| <input type="radio"/> Small <input checked="" type="radio"/> Medium <input type="radio"/> Large | <input type="radio"/> Small <input checked="" type="radio"/> Medium <input type="radio"/> Large | <input type="radio"/> Small <input checked="" type="radio"/> Medium <input type="radio"/> Large |
| | Mary just joined the Chat | John just joined the Chat Mary just joined the Chat Medium, Pepperoni, |
| <div>Pepperoni Bacon Green Peppers Sausage Mushrooms Spinach Meatballs Black Olives Onions</div> | <div>Pepperoni Bacon Green Peppers Sausage Mushrooms Spinach Meatballs Black Olives Onions</div> | <div>Pepperoni Bacon Green Peppers Ricotta Cheese Sausage Mushrooms Spinach Margherita Meatballs Black Olives Onions Extra Cheese</div> <div>Debug</div> |
| <div>Place Order Cancel Order</div> | <div>Place Order Cancel Order</div> | <div>Place Order Cancel Order Refresh</div> |
| Mary: I am here too! Jamie: Placed Order Medium, Pepperoni, | John: Hi, I am here Mary: I am here too! Jamie: Placed Order Medium, Pepperoni, | John: Hi, I am here Mary: I am here too! Jamie: Placed Order Medium, Pepperoni, |