Server.rb

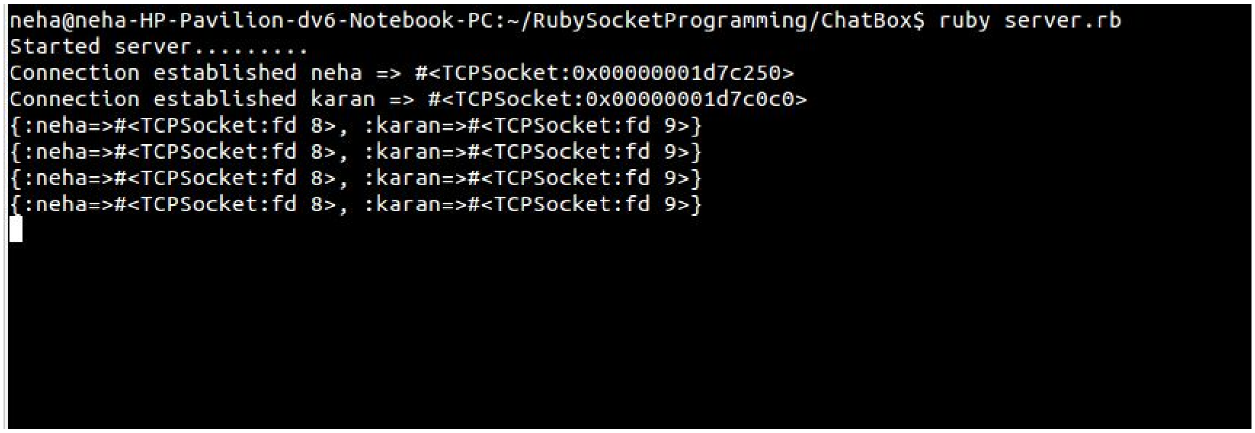
```ruby
require 'socket'

class Server
  def initialize(socket_address, socket_port)
     @server_socket = TCPServer.open(socket_port, socket_address)

     @connections_details = Hash.new
     @connected_clients = Hash.new

     @connections_details[:server] = @server_socket
     @connections_details[:clients] = @connected_clients

     puts 'Started server.........'
     run

  end

  def run
     loop{
        client_connection = @server_socket.accept
        Thread.start(client_connection) do |conn|
           conn_name = conn.gets.chomp.to_sym
           if(@connections_details[:clients][conn_name] != nil)
              conn.puts "This username already exist"
              conn.puts "quit"
              conn.kill self
           end

           puts "Connection established #{conn_name} => #{conn}"
           @connections_details[:clients][conn_name] = conn
           conn.puts "Connection established successfully #{conn_name}
=> #{conn}, you may continue with chatting....."

           establish_chatting(conn_name, conn)
        end
     }.join
  end

  def establish_chatting(username, connection)
    loop do
      message = connection.gets.chomp
      puts @connections_details[:clients]
      (@connections_details[:clients]).keys.each do |client|
        @connections_details[:clients][client].puts "#{username} :
#{message}"
      end
    end
  end
end


Server.new( 8080, "localhost" )
```

Client.rb

```
require 'socket'

class Client
  def initialize(socket)
    @socket = socket
    @request_object = send_request
    @response_object = listen_response

    @request_object.join
    @response_object.join
  end

  def send_request
    puts "Please enter your username to establish a connection..."
    begin
      Thread.new do
        loop do
```

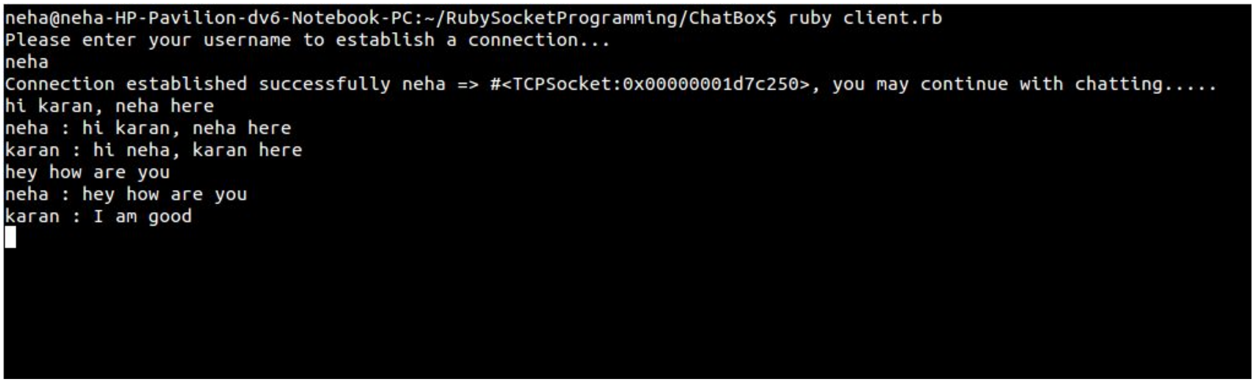
```
              message = $stdin.gets.chomp
              @socket.puts message
           end
        end
     rescue IOError => e
        puts e.message
        # e.backtrace
        @socket.close
     end

  end

  def listen_response
     begin
        Thread.new do
           loop do
              response = @socket.gets.chomp
              puts "#{response}"
              if response.eql?'quit'
                 @socket.close
              end
           end
        end
     rescue IOError => e
        puts e.message
        # e.backtrace
        @socket.close
     end
  end
end



socket = TCPSocket.open( "localhost", 8080 )
Client.new( socket )
```

Server Console



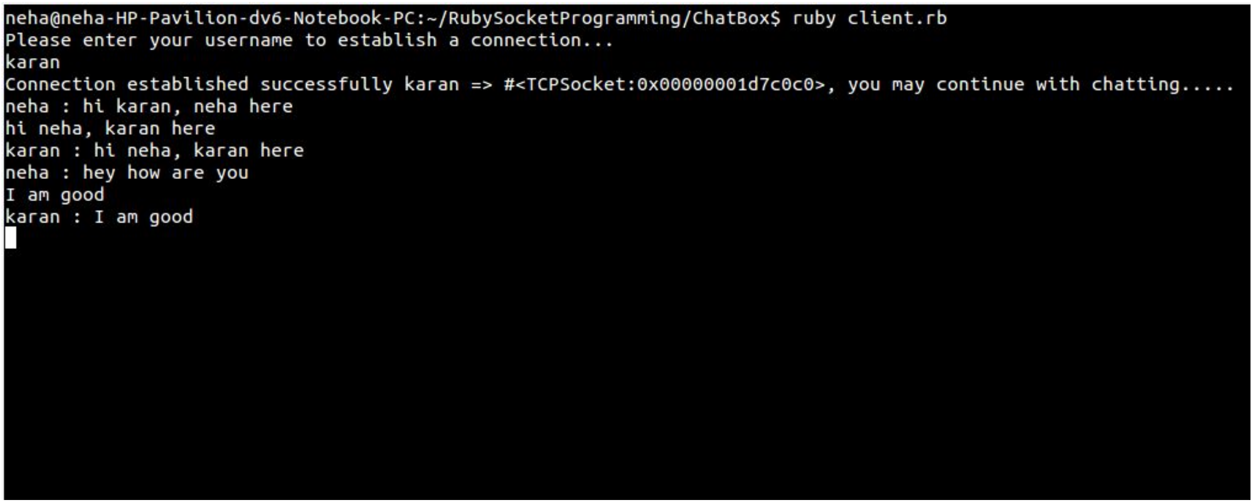
```
neha@neha-HP-Pavilion-dv6-Notebook-PC:~/RubySocketProgramming/ChatBox$ ruby server.rb
Started server.........
Connection established neha => #<TCPSocket:0x00000001d7c250>
Connection established karan => #<TCPSocket:0x00000001d7c0c0>
{:neha=>#<TCPSocket:fd 8>, :karan=>#<TCPSocket:fd 9>}
{:neha=>#<TCPSocket:fd 8>, :karan=>#<TCPSocket:fd 9>}
{:neha=>#<TCPSocket:fd 8>, :karan=>#<TCPSocket:fd 9>}
{:neha=>#<TCPSocket:fd 8>, :karan=>#<TCPSocket:fd 9>}
```

User1 Console



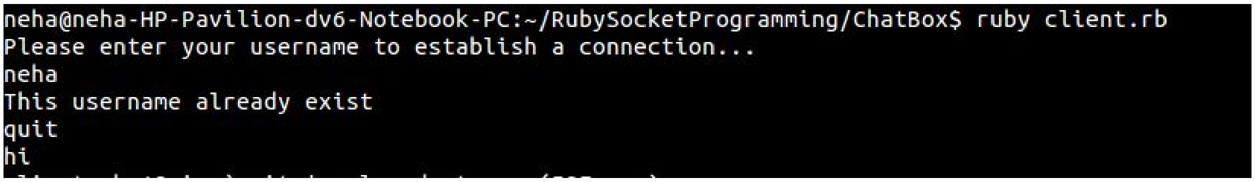
```
neha@neha-HP-Pavilion-dv6-Notebook-PC:~/RubySocketProgramming/ChatBox$ ruby client.rb
Please enter your username to establish a connection...
neha
Connection established successfully neha => #<TCPSocket:0x00000001d7c250>, you may continue with chatting.....
hi karan, neha here
neha : hi karan, neha here
karan : hi neha, karan here
hey how are you
neha : hey how are you
karan : I am good
```

User2 Console



```
neha@neha-HP-Pavilion-dv6-Notebook-PC:~/RubySocketProgramming/ChatBox$ ruby client.rb
Please enter your username to establish a connection...
karan
Connection established successfully karan => #<TCPSocket:0x00000001d7c0c0>, you may continue with chatting.....
neha : hi karan, neha here
hi neha, karan here
karan : hi neha, karan here
neha : hey how are you
I am good
karan : I am good
```

User who already built the connection again ready to build connection throw error



```
neha@neha-HP-Pavilion-dv6-Notebook-PC:~/RubySocketProgramming/ChatBox$ ruby client.rb
Please enter your username to establish a connection...
neha
This username already exist
quit
hi
```