**Assignment 3 -** Chat System for Client Support

**Student:** Andrei-Dorin Muth

**Group:** 30442

1. **Requirements and Objectives**

Develop a chat system to offer support for the clients of the energy platform if they have questions related with their energy consumption. The chat system should allow communication between the clients and the administrator of the system.

Functional requirements that need to be implanted in this assignment are:

* The client displays a chat box where he / she can type a message
* The message is sent asynchronously to the administrator, that receives the message together
* with the client identifier, being able to start a chat with the client
* Messages can be sent back and forth between the client and the administrator during chat session
* The administrator of the system can chat with multiple clients at once
* A notification is displayed for the user when the other user reads the message
* A notification is displayed for the user (e.g., typing) while the user from the other end of communication types its message.

The chat system was developed using Web Sockets, as were the notifications from the previous assignment.

Multiple subscriptions were needed to be registered in the front end side of the application for all the functionalities of this assignment to be successfully implemented: sending the instant messages between the administrator of the system and a client, the notifications when a user reads a message and the notifications when a user is typing his / her message.

1. **Conceptual architecture**

Much of the architecture of the current project was already implemented during the previous assignments.

Diagram

Description automatically generatedWhat is new regarding the architecture is a new class in back end side of the application, WebsocketController, whose purpose is to handle all the chat messages and notifications (read messages, *typing* notifications).

1. **Deployment Diagram**

**A picture containing letter

Description automatically generated**