

## Task: Real-time Chat Application with Sentiment Analysis

**Objective:** Build a real-time chat application using Azure services, with an optional integration of sentiment analysis using Azure Cognitive Services.

**Notes:** For the backend, you should use **ASP.NET Core**. You can choose any framework you prefer for the frontend.

**Steps:**

1. **Register an account on Azure portal**
  - Visit [Azure portal](#) and create an account if you don't already have one.
2. **Create an Azure Web App for .NET Core and UI projects**
  - Configure the necessary settings such as resource group, service plan, and region.
3. **Create an Azure SignalR Service**
  - Create a new SignalR Service with the appropriate settings for your chat application.
4. **Create an ASP.NET Core Web application and UI app and deploy it to the Azure**

**Requirements:**

- **Real-time Chat Feature:**
    - Implement real-time chat functionality using Azure SignalR Service.
    - Ensure that users can send and receive messages in real-time.
  - **Optional Sentiment Analysis Integration:**

***Note:** This step is optional and not necessary to pass the test task. However, completing this will greatly enhance your chances of success.*

    - Integrate Azure Cognitive Services Text Analytics API to perform sentiment analysis on chat messages.
    - Display sentiment analysis results in real-time within the chat UI if integrated.
  - **Data Storage:**
    - Store chat messages and sentiment analysis results (if integrated) in Azure SQL Database.
  - **UI Enhancements:**
    - Highlight messages with positive, negative, or neutral sentiment in the chat UI for easy identification if sentiment analysis is integrated. (you can do it with color, text note, emoji, etc.)
  - **Deployment:**
    - Deploy the ASP.NET Core Web application and UI Web application to the Azure.
5. **Provide a result**
    - Send us link to the Azure Web Application.
    - Send us GitHub link to the source code.
    - Ensure that the source code is well-documented and accessible for review.