PROTOTYPE DEVELOPMENT

Task 1: Chat Application

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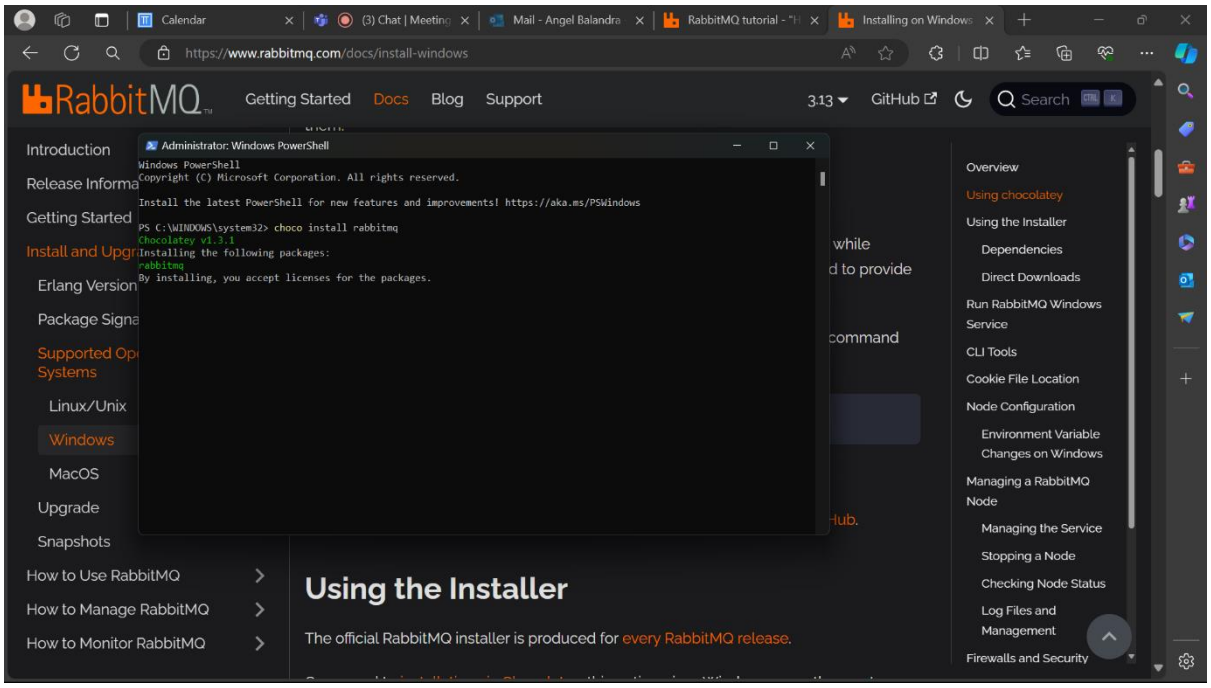
Group 4

This report will contain a detailed information of the task one of assessment one, which is creating a basic command line chat application. The original draft of the code was originally created on 15th March, the chosen middleware is RabbitMQ.Net, the chosen code editor is Visual Studio, and the chosen programming language is C#. Following the brief instructions is a must when creating the chat application.

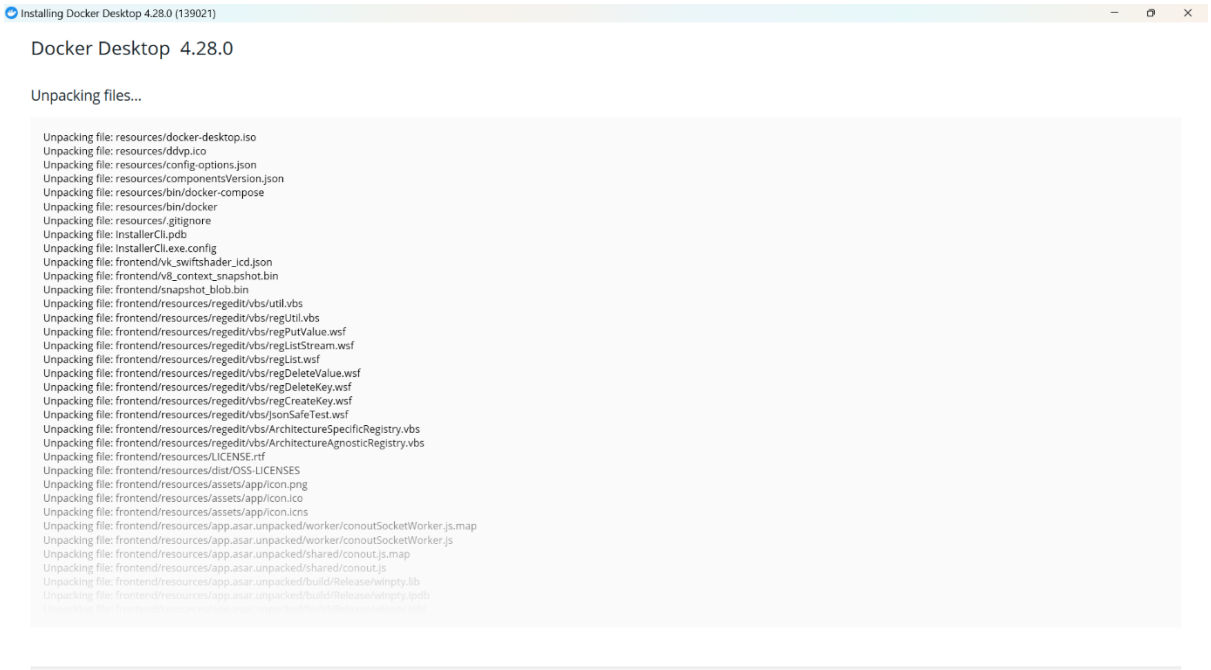
Below are the steps I have took to create the chat application.

1. Setting up the middleware

Since I am using Windows and have already installed chocolatey in my operating system before, I had to double check that I have the updated version of the chocolatey and used the command “choco install RabbitMQ”.

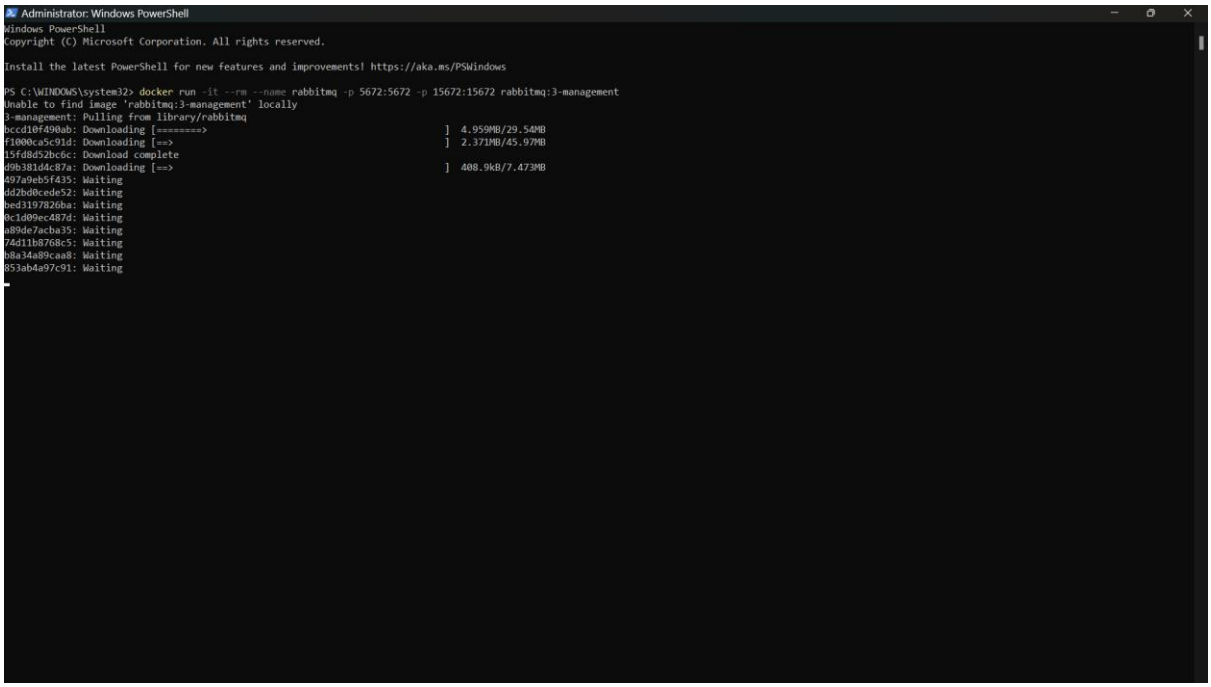


Now that the RabbitMQ has been installed, I also must install Docker to completely set up the middleware for me to achieve the utilization of the message broker.



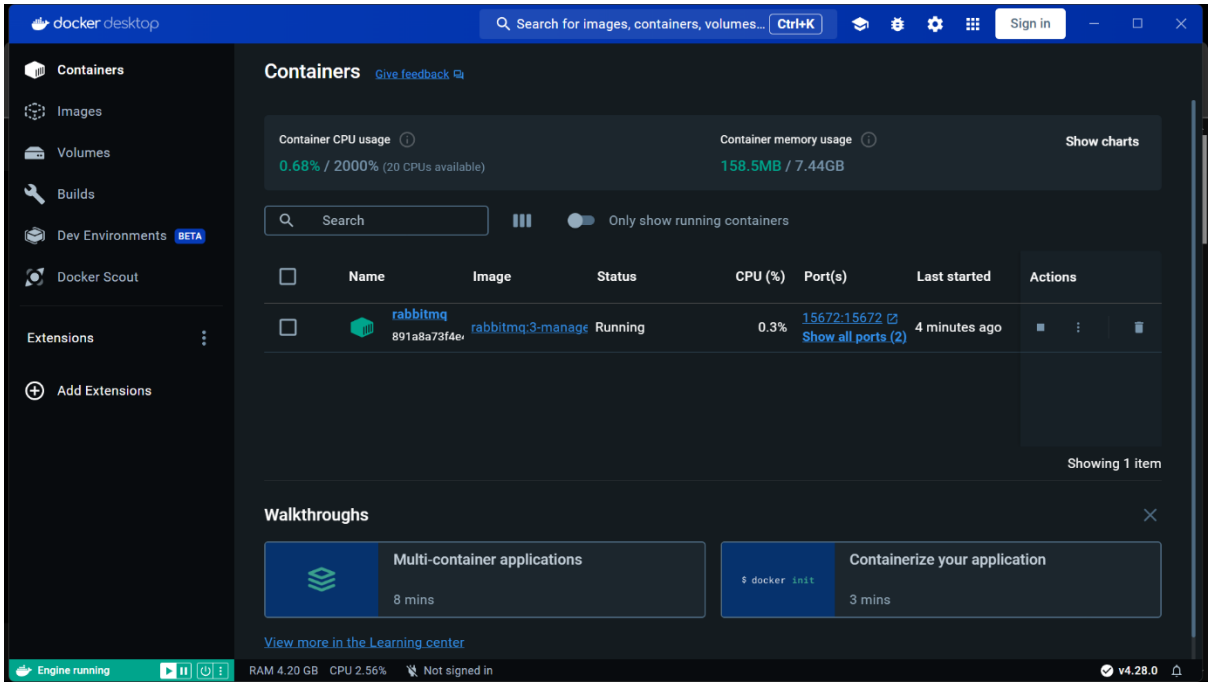
2. Getting the middleware up and running

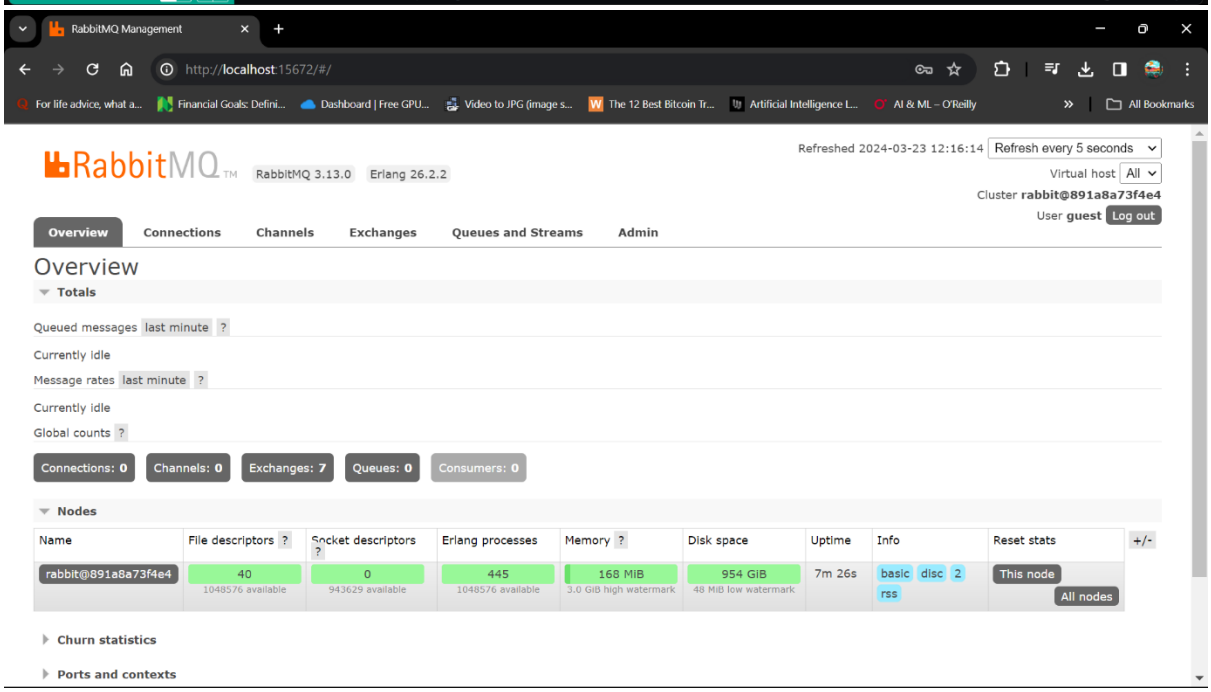
For me to achieve this, I have followed the original documentation from the RabbitMQ and along with following additional resources that may help me. After a thorough read through the resources, I came into a realisation that I must use this command to run the middleware so it can be use as a message broker “docker run -it --rm --name rabbitmq -p 5672:5672 -p 15672:15672 rabbitmq:3-management”.

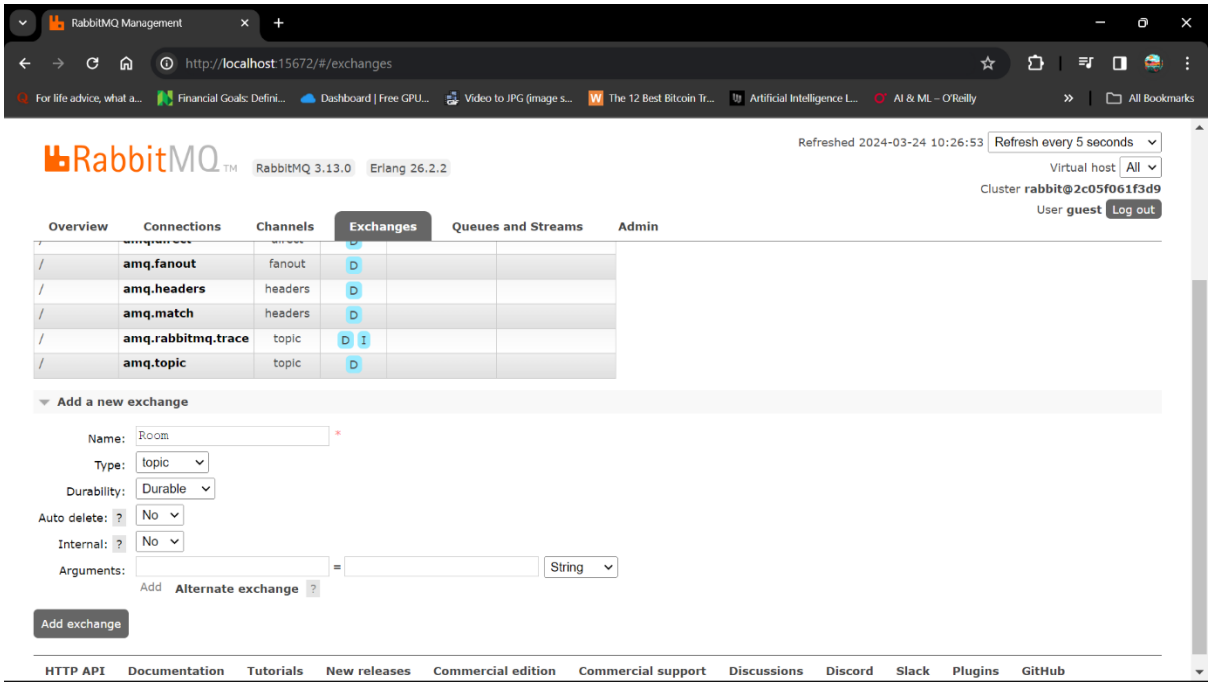


3. Aftermath of running the command

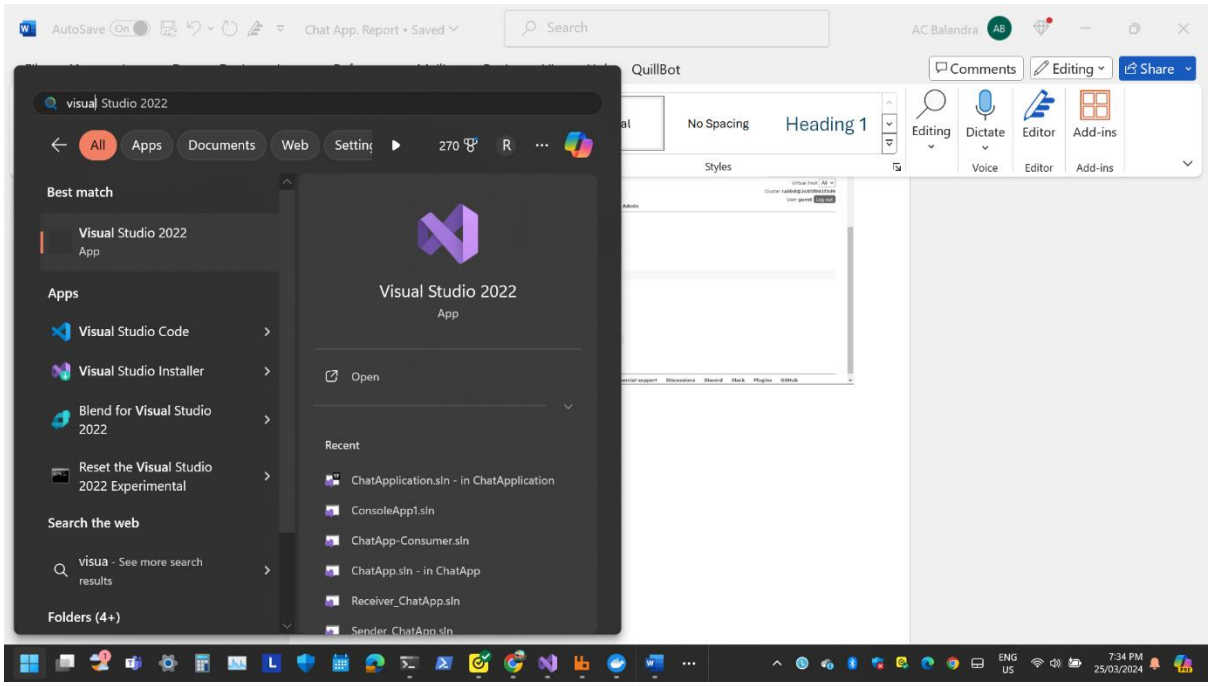
After I have ran the command in my Power Shell, I then opened my docker and clicked on the local host ports. Both local host ports will directly lead me to the same webpage.

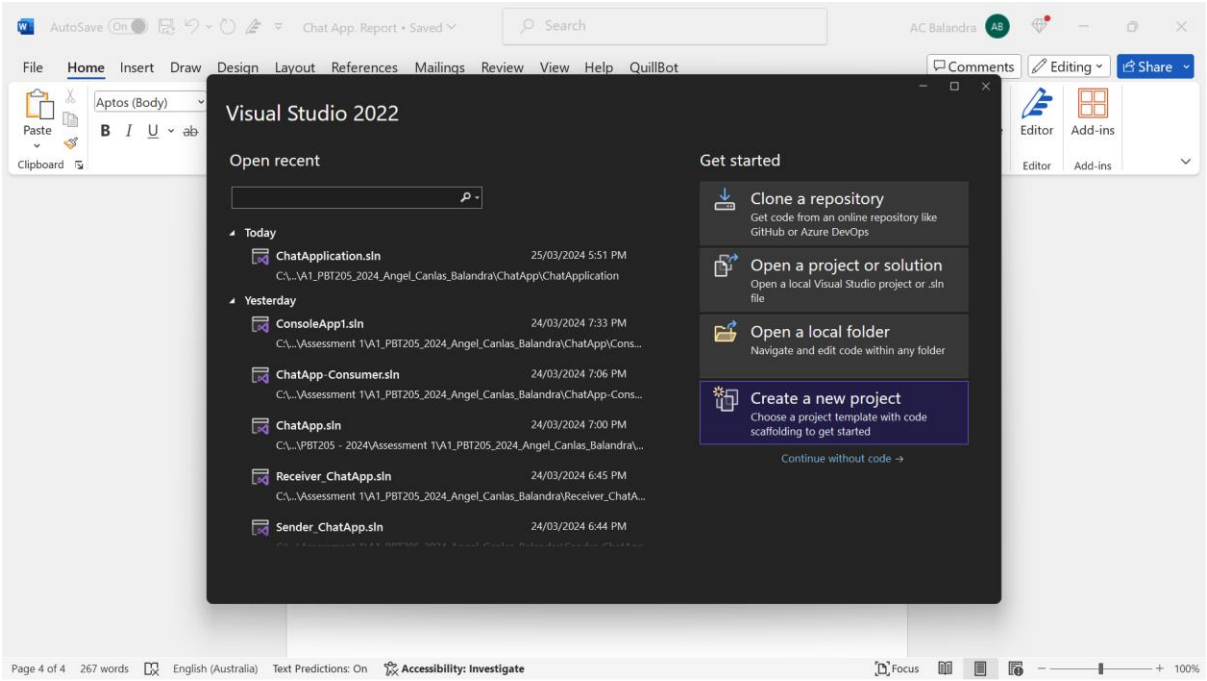


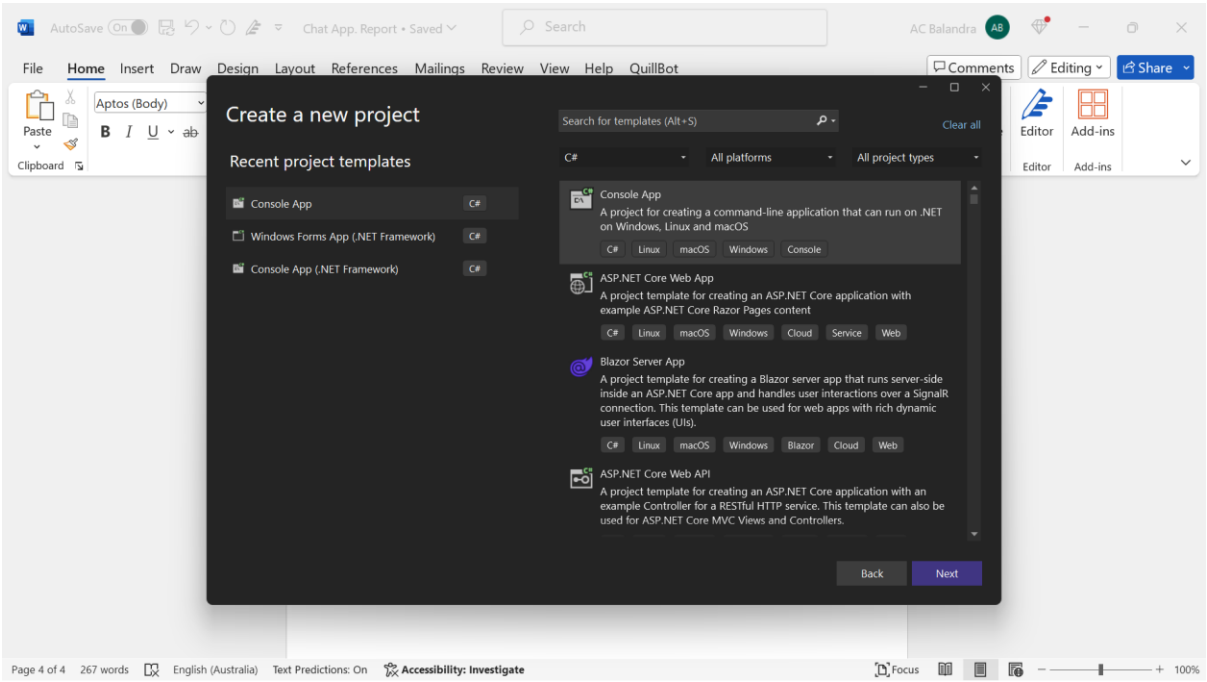


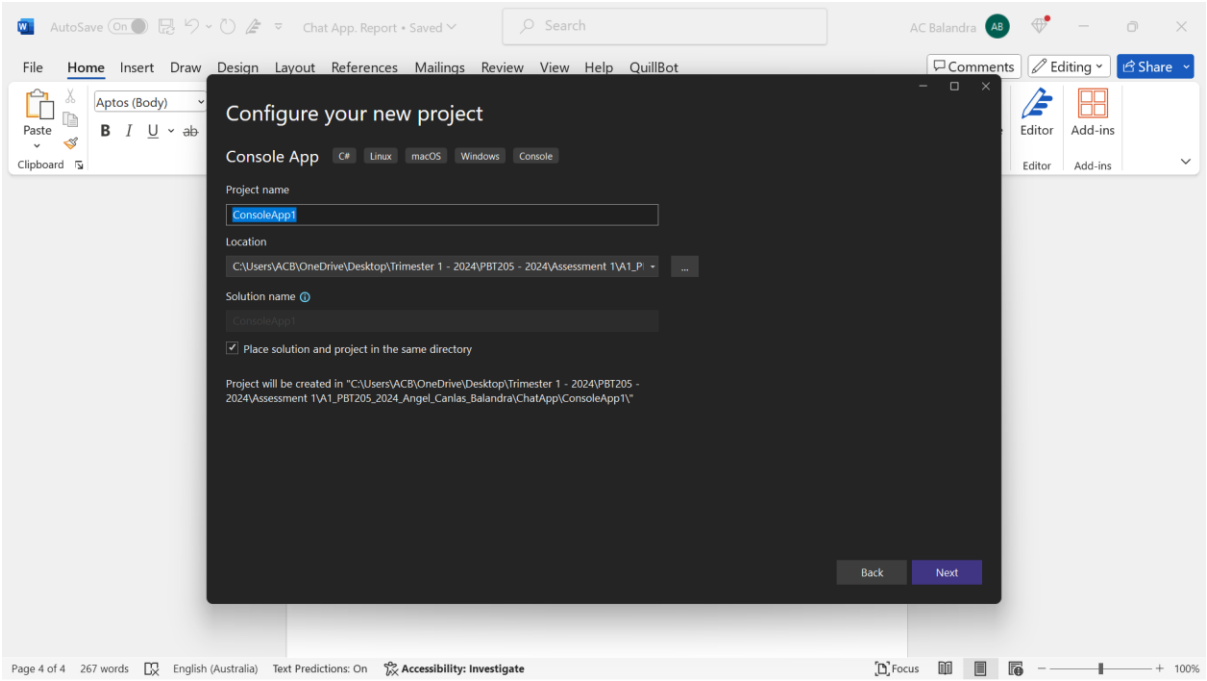


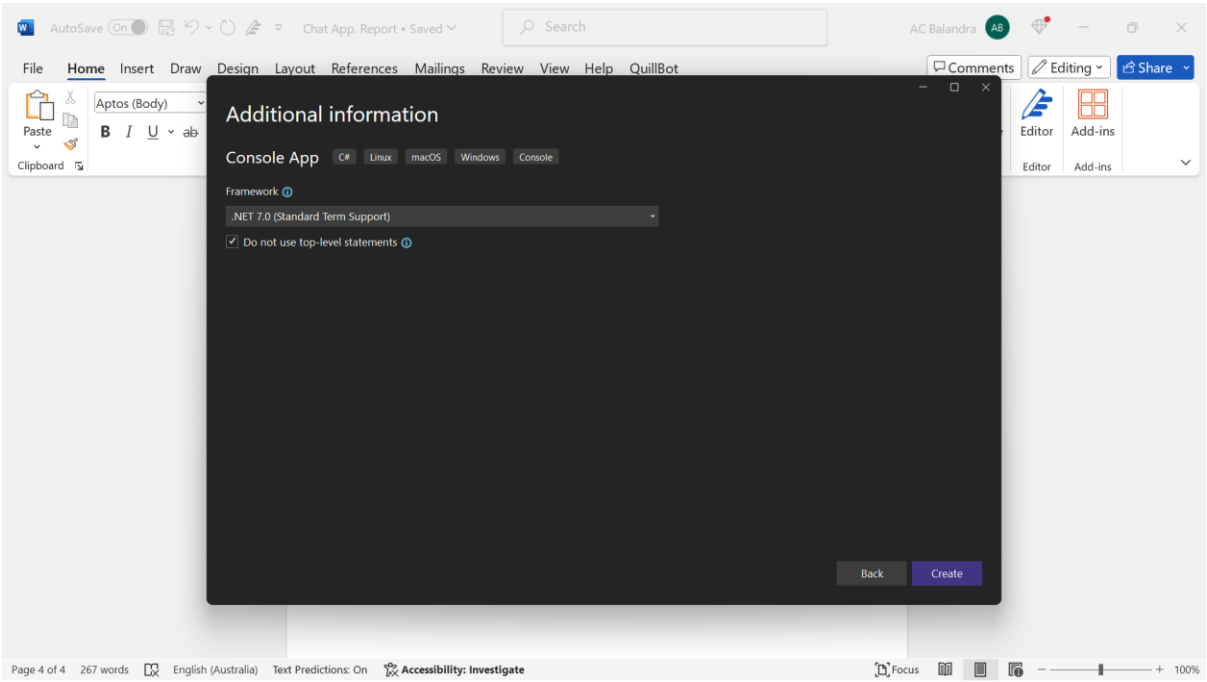
4. Creating the chat application

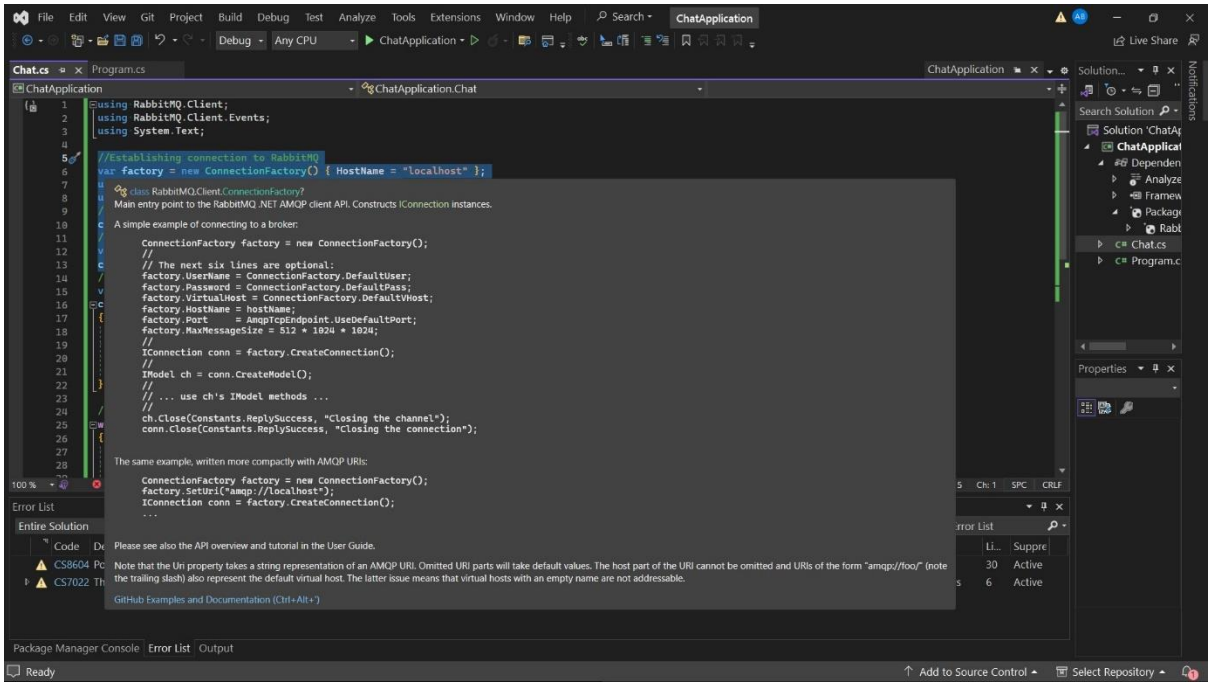


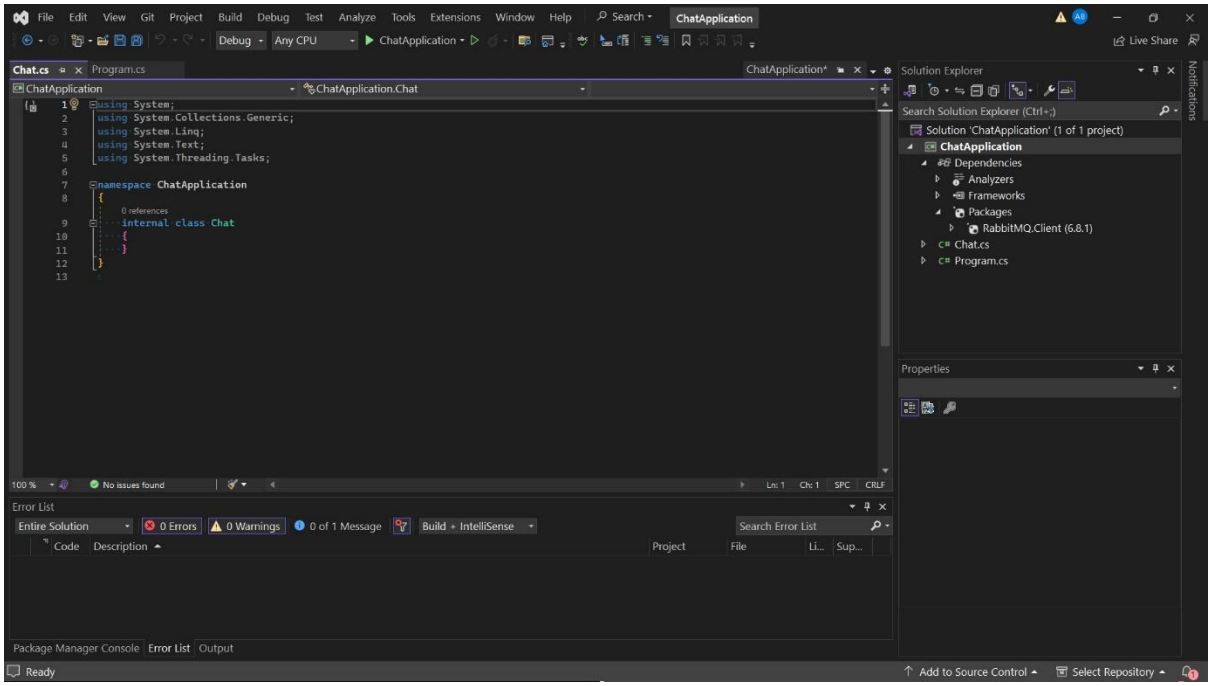

Visual Studio 2022
Open recent
Today
ChatApplication.sln 25/03/2024 5:51 PM
C:\...\A1_PBT205_2024_Angel_Canlas_Balandra\ChatApp\ChatApplication
Yesterday
ConsoleApp1.sln 24/03/2024 7:33 PM
C:\...\Assessment 1\A1_PBT205_2024_Angel_Canlas_Balandra\ChatApp\Cons...
ChatApp-Consumer.sln 24/03/2024 7:06 PM
C:\...\Assessment 1\A1_PBT205_2024_Angel_Canlas_Balandra\ChatApp-Cons...
ChatApp.sln 24/03/2024 7:00 PM
C:\...\PBT205 - 2024\Assessment 1\A1_PBT205_2024_Angel_Canlas_Balandra\...
Receiver_ChatApp.sln 24/03/2024 6:45 PM
C:\...\Assessment 1\A1_PBT205_2024_Angel_Canlas_Balandra\Receiver_ChatA...
Sender_ChatApp.sln 24/03/2024 6:44 PM
Get started
Clone a repository
Get code from an online repository like GitHub or Azure DevOps
Open a project or solution
Open a local Visual Studio project or .sln file
Open a local folder
Navigate and edit code within any folder
Create a new project
Choose a project template with code scaffolding to get started
Continue without code →


Create a new project
Recent project templates
Console App C#
Windows Forms App (.NET Framework) C#
Console App (.NET Framework) C#
Search for templates (Alt+S)
Clear all
C#
All platforms
All project types
Console App
A project for creating a command-line application that can run on .NET on Windows, Linux and macOS
C# Linux macOS Windows Console
ASP.NET Core Web App
A project template for creating an ASP.NET Core application with example ASP.NET Core Razor Pages content
C# Linux macOS Windows Cloud Service Web
Blazor Server App
A project template for creating a Blazor server app that runs server-side inside an ASP.NET Core app and handles user interactions over a SignalR connection. This template can be used for web apps with rich dynamic user interfaces (UIs).
C# Linux macOS Windows Blazor Cloud Web
ASP.NET Core Web API
A project template for creating an ASP.NET Core application with an example Controller for a RESTful HTTP service. This template can also be used for ASP.NET Core MVC Views and Controllers.
Back
Next

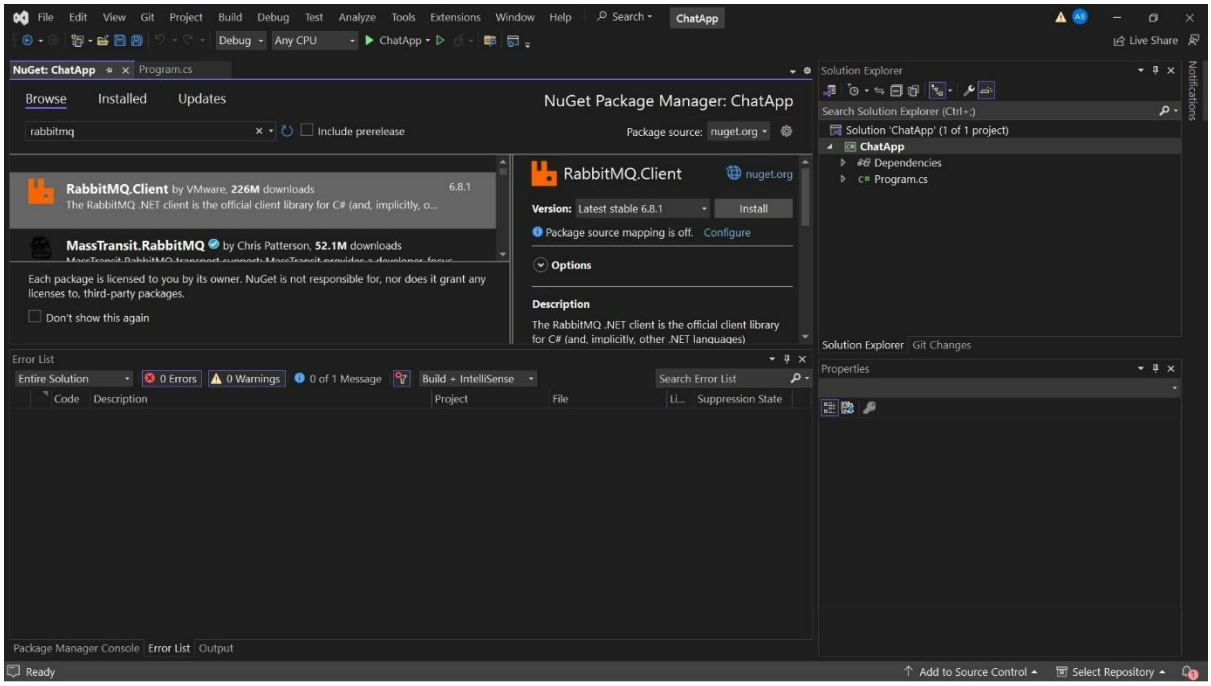

Configure your new project
Console App
C#
Linux
macOS
Windows
Console
Project name
ConsoleApp1
Location
C:\Users\ACB\OneDrive\Desktop\Trimester 1 - 2024\PBT205 - 2024\Assessment 1\A1_P
Solution name
ConsoleApp1
Place solution and project in the same directory
Project will be created in "C:\Users\ACB\OneDrive\Desktop\Trimester 1 - 2024\PBT205 - 2024\Assessment 1\A1_PBT205_2024_Angel_Canlas_Balandra\ChatApp\ConsoleApp1\"
Back
Next


Additional information
Console App
C#
Linux
macOS
Windows
Console
Framework
.NET 7.0 (Standard Term Support)
Do not use top-level statements
Back
Create

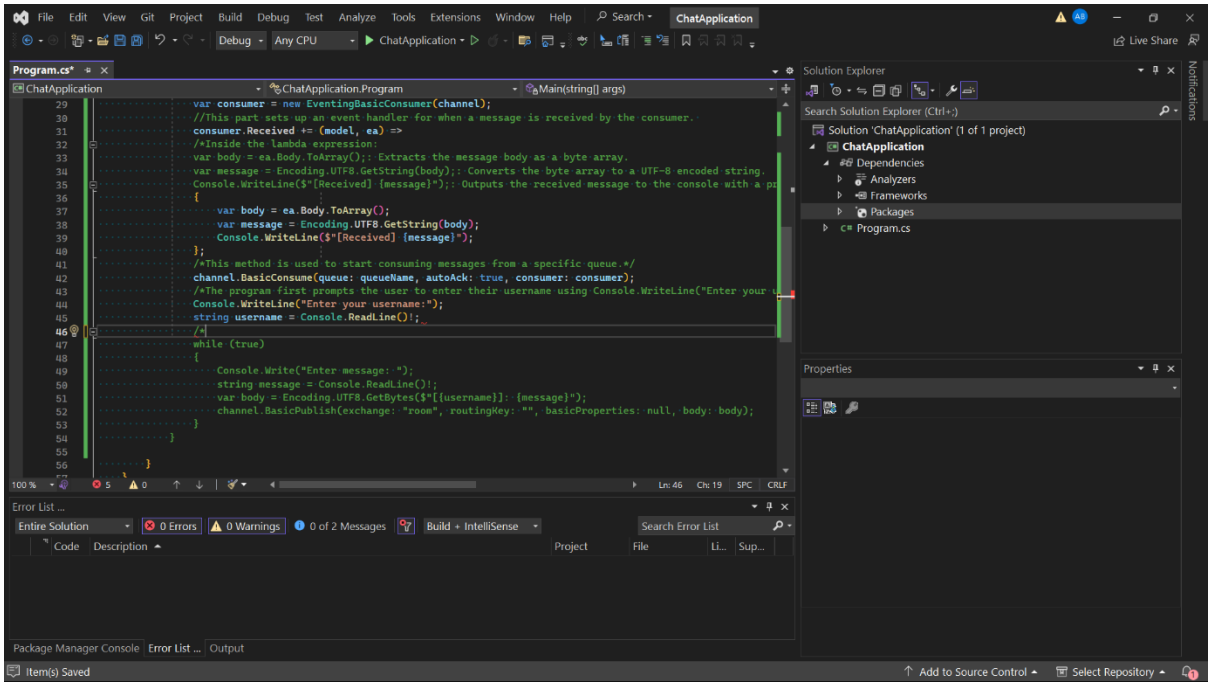




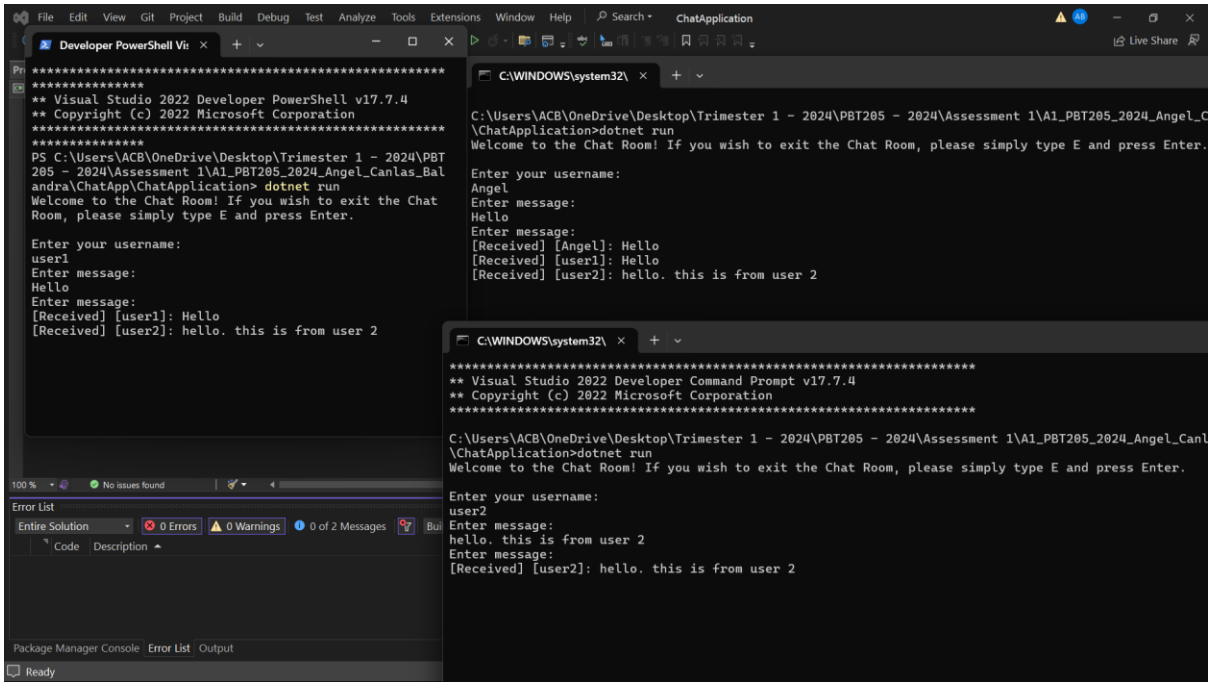
5. Installing RabbitMQ. Client package library



6. Touching up the chat application code



7. Testing the build and the chat application code



Conclusion

RabbitMQ is one of the most important aspects of creating a versatile communication application that allows developers to create instances that will suit their application needs. In this report, I have included how I have created a simple command line based chat application with the use of RabbitMQ and Docker.

References

C# Read (Consume) Messages from RabbitMQ Queue - Tutlane. (n.d.). Www.tutlane.com. Retrieved March 26, 2024, from https://www.tutlane.com/tutorial/rabbitmq/csharp-read-messages-from-rabbitmq-queue

Dyrrachitis, G. (2020, September 2). .*NET Core and RabbitMQ*. Medium. https://medium.com/@giorgos.dyrrahitis/net-core-and-rabbitmq-5f3c76f39de6

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