Kafka Chat Application using C# Windows Forms and Kafka

# 1. Windows Form - Chat Producer (Form1.cs)

using Confluent.Kafka;  
using System;  
using System.Windows.Forms;  
  
namespace KafkaChatProducer  
{  
 public partial class Form1 : Form  
 {  
 private IProducer<Null, string> producer;  
  
 public Form1()  
 {  
 InitializeComponent();  
 var config = new ProducerConfig { BootstrapServers = "localhost:9092" };  
 producer = new ProducerBuilder<Null, string>(config).Build();  
 }  
  
 private async void btnSend\_Click(object sender, EventArgs e)  
 {  
 string message = txtMessage.Text;  
 await producer.ProduceAsync("chat-topic", new Message<Null, string> { Value = message });  
 lstChat.Items.Add("You: " + message);  
 txtMessage.Clear();  
 }  
 }  
}

# 2. Console App - Chat Consumer (Program.cs)

using Confluent.Kafka;  
using System;  
  
namespace KafkaChatConsumer  
{  
 class Program  
 {  
 static void Main(string[] args)  
 {  
 var config = new ConsumerConfig  
 {  
 BootstrapServers = "localhost:9092",  
 GroupId = "chat-group",  
 AutoOffsetReset = AutoOffsetReset.Earliest  
 };  
  
 using var consumer = new ConsumerBuilder<Ignore, string>(config).Build();  
 consumer.Subscribe("chat-topic");  
  
 Console.WriteLine("Chat Consumer Started...");  
 while (true)  
 {  
 var result = consumer.Consume();  
 Console.WriteLine("Friend: " + result.Message.Value);  
 }  
 }  
 }  
}

# 3. Sample Output

Windows Form Chat Producer Output:

User types a message in the TextBox and clicks "Send".  
ListBox shows:  
You: Hello, how are you?  
You: What's up?

✅ Console Chat Consumer Output:

Chat Consumer Started...  
Friend: Hello, how are you?  
Friend: What's up?