Backend send C2D message

What to do ?

Develop a back-end application to send message to device via Azure IoT Hub

Great Friends

Open Visual Studio / Create C# Console App .NET Core / Name = backC2D

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NuGet Microsoft.Azure.Devices

NuGet: 030 backend

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Microsoft.Azure.Devices by Microsoft   v1.18.1
Service SDK for Azure IoT Hub
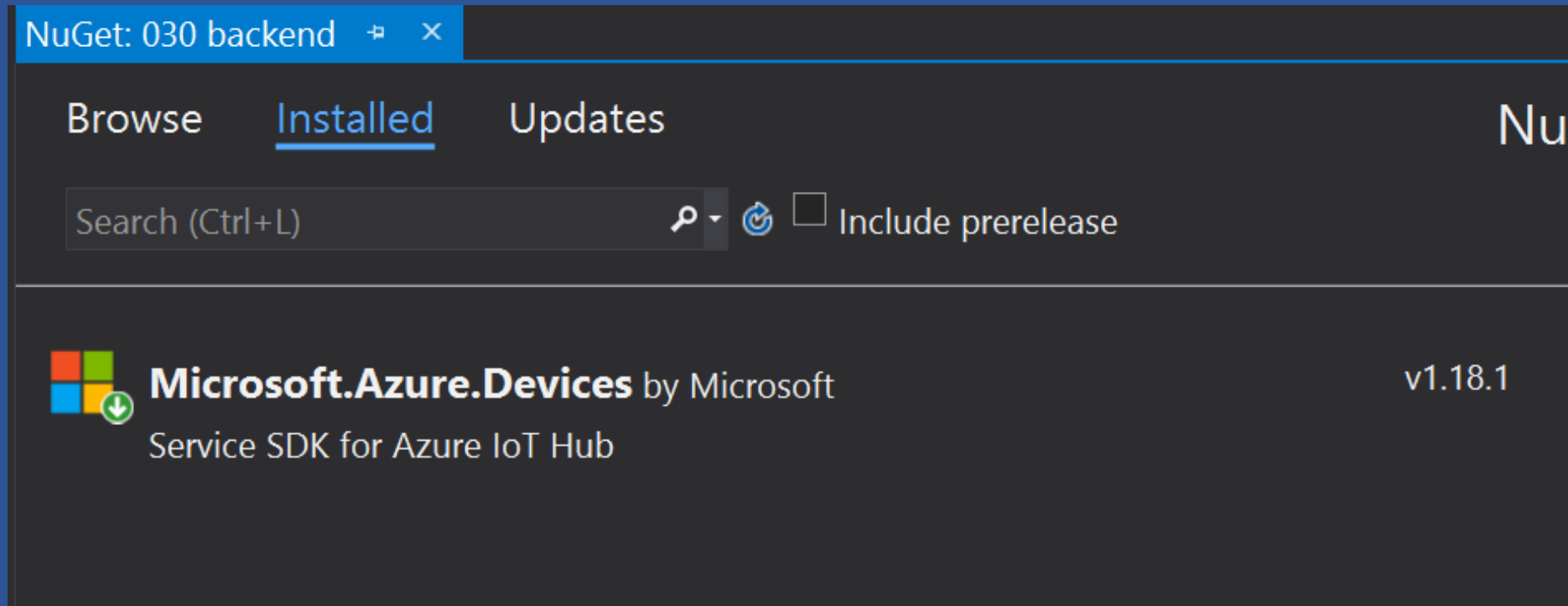
Add namespace

```csharp
 7   using Microsoft.Azure.Devices;
 8   using System;
 9   using System.Linq;
10   using System.Text;
11   using System.Threading.Tasks;
```

- Declare two class fields
- connectionString = Azure IoT connection string

```csharp
17            static ServiceClient serviceClient;
18            static string connectionString = "HostName=loyiothub1.a
19
```

- Add method SendCloudToDeviceMessageAsync()
- Change device ID at line 25

```
20    private async static Task SendCloudToDeviceMessageAsync()
21    {
22        var commandMessage = new
23         Message(Encoding.ASCII.GetBytes(DateTime.Now + " Hello from backend"));
24        commandMessage.Ack = DeliveryAcknowledgement.Full;
25        await serviceClient.SendAsync("loy-iot-device-1", commandMessage);
26    }
```
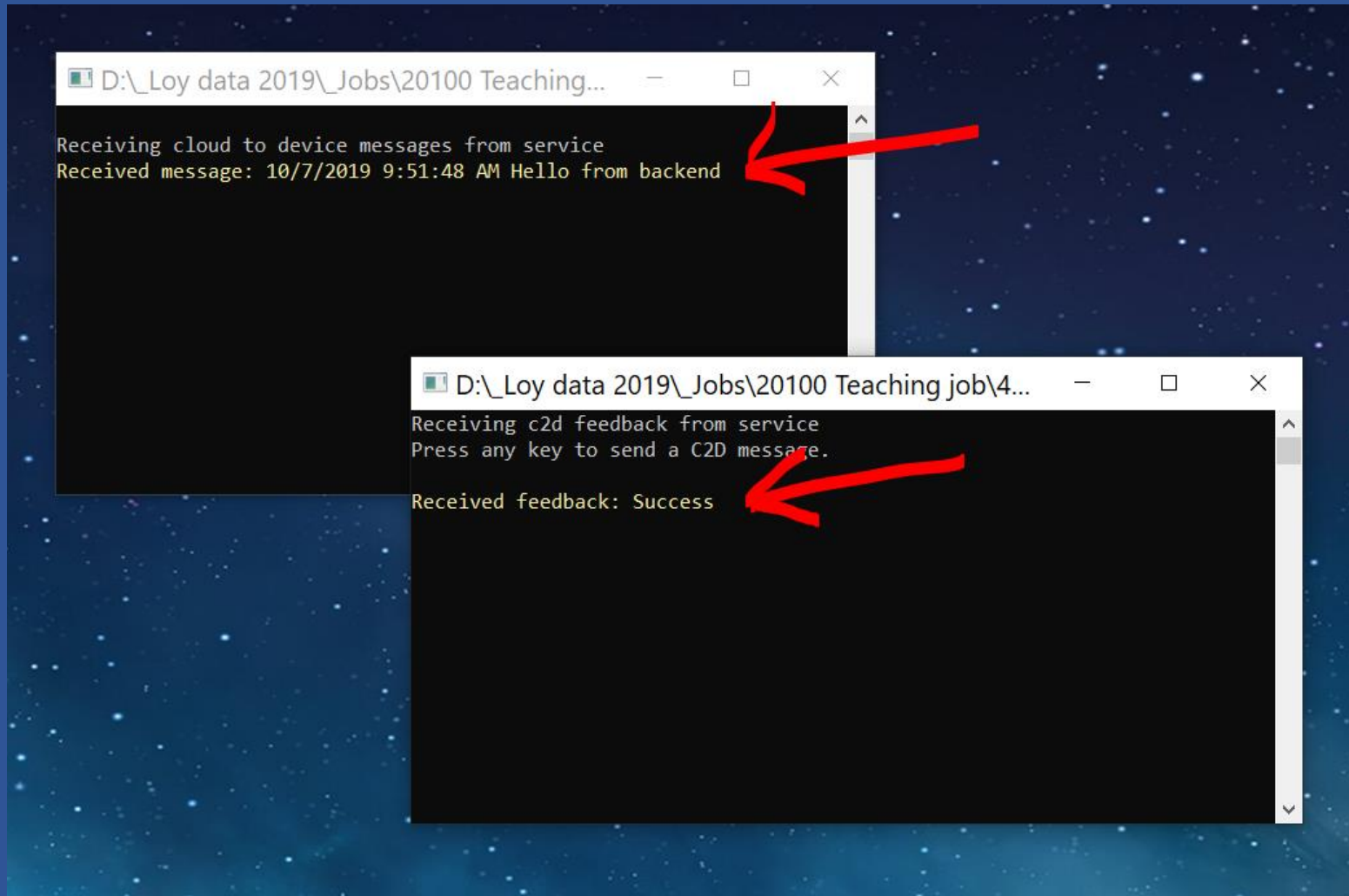
Add method ReceiveFeedbackAsync()

```csharp
27      private async static void ReceiveFeedbackAsync()
28      {
29          var feedbackReceiver = serviceClient.GetFeedbackReceiver();
30
31          Console.WriteLine("Receiving c2d feedback from service");
32          while (true)
33          {
34              var feedbackBatch = await feedbackReceiver.ReceiveAsync();
35              if (feedbackBatch == null) continue;
36
37              Console.ForegroundColor = ConsoleColor.Yellow;
38              Console.WriteLine("Received feedback: {0}",
39                  string.Join(", ", feedbackBatch.Records.Select(f => f.StatusCode)));
40              Console.ResetColor();
41
42              await feedbackReceiver.CompleteAsync(feedbackBatch);
43          }
44      }
```

Add code to Main

```
45      static void Main(string[] args)
46      {
47          serviceClient = ServiceClient.CreateFromConnectionString(connectionString);
48          ReceiveFeedbackAsync();
49          Console.WriteLine("Press any key to send a C2D message.");
50          Console.ReadLine();
51          SendCloudToDeviceMessageAsync().Wait();
52          Console.ReadLine();
53      }
```

Run this program and run program C2D

What's next?