

Developing and Deploying Intelligent Chat Bots



Logging for Bots

Objectives

Unless your bot is logging the conversation data somewhere, the bot framework will not perform any logging for you automatically. This has privacy implications, and many bots simply can't allow that in their scenarios.

In this lab, we will demonstrate how you can log conversations using an activity logger. Logging in this lab is performed using Debug. However, you can decide where you want to store the log data using activity logger.

Setup

Create a new Bot Application project in Visual Studio. This will create a simple echo bot that echoes any message sent to the bot with the length of the message.

IActivityLogger

For C#, you must implement the `IActivityLogger` and log what you want in the `LogAsync` method. Create a new class called `DebugActivityLogger` as shown below:

```
public class DebugActivityLogger : IActivityLogger
{
    public async Task LogAsync(IActivity activity)
    {
        Debug.WriteLine($"From:{activity.From.Id} - To:{activity.Recipient.Id} - Message:{activity.AsMessageActivity()?.Text}");
    }
}
```

The logging activity is an event that takes place for the lifetime of the bot application. *Application_Start* method is called when the application starts and lasts for the lifetime of the application.

Global.asax allows us to write event handlers that react to global events. Global.asax events are never called directly by the user. They are called automatically in response to application events. For this lab, we must register *DebugActivityLogger* in *Application_Start* (in *Global.asax*) as follows.

```
var builder = new ContainerBuilder();  
builder.RegisterType<DebugActivityLogger>().AsImplementedInterfaces().InstancePerDependency();  
builder.Update(Conversation.Container);
```

Log Results

Run the bot application and test in the emulator with messages. The log data is written using *Debug.WriteLine*. You can view the result using Output window. Ensure *Debug* is selected for *Show output from*. If Output is not visible, select *View->Output* from the menu. You will see an entry such as *From:56800324 - To:2c1c7fa3 - Message:You sent hello which was 5 characters*.

