Rubicon Global Azure Bootcamp 2018

Version 20180413 – 1

LAB 2: Step 1 – Create a LUIS Bot in Azure Bot Services

We start by creating a new Bot Service in Azure. These steps will also create a new LUIS app for us for step 2.

1. Login to your azure portal (https://portal.azure.com)
2. Click on '+Create new resource"
3. Search for "bot service"
4. In the search results, look for "Web App Bot" and click on it
5. Click Create
6. Give the bot a name "GAB2018BOT-<YOURINITIALS>"
   (Replace <YOURINITIALS> with your initials!)
7. In location select "West Europe"
8. In pricing tier, select "F0" as your pricing tier
9. Click on bot template
10. Click on "Language understanding" box (SDK Language is default set on C#)
11. In Luis App location, select "West Europe"
12. Click Select
13. Check "I confirm I have read and understand the notice below"
14. Click "Pin to dashboard" for easy access
15. Click Create

LAB 2: Step 2 – Create a LUIS App & Train LUIS

We have created the bot, now we are going to build the vocabulary we need with LUIS and train some language understanding for our AI part of the chatbot.

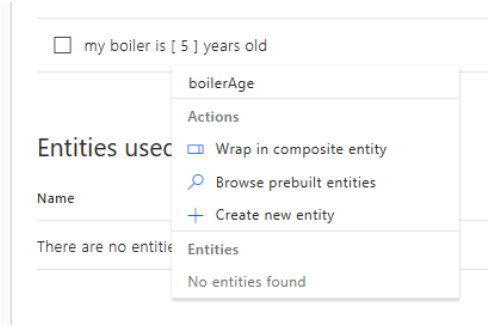
1. Open your web browser and surf to https://www.luis.ai
2. Click on Sign In
3. Sign in with the same Azure credentials as the one used in Step 1
4. You might get an introduction page. If so, scroll down and click on [create Luis app].
5. You will get a list of all your Luis applications including the one that already was created for us in step 1
6. Select the application (in our example “GAB2018BOT-<YOURINITIALS>”)

You will now get to your applications default page. You can choose to "Create new intent" or "Add prebuild domain intent"

1. The template used in step 1 has already created several Intents (Cancel, Greeting, Help and None)
2. Click "Create new intent"
3. Fill in a descriptive name for your intent. i.e. "Warranty"
4. Now add the sentences that will be typical to trigger this event. Add the following sentences:
    a. is my warranty still good
    b. when will my warranty expire
    c. is this repair still covered by my warranty
    d. how much will this repair cost me
    e. do I have to pay to get this fixed

Let’s create a second Intent

5. Select Intents
6. Click [Create new intent]
7. Type “BoilerAge”
8. Click [Done]
9. Type the following sentence in the first input field: “My boiler is 5 years old”
10. Click on “[5]”
11. Enter the name for this entity “boilerAge” and click Create new entity’

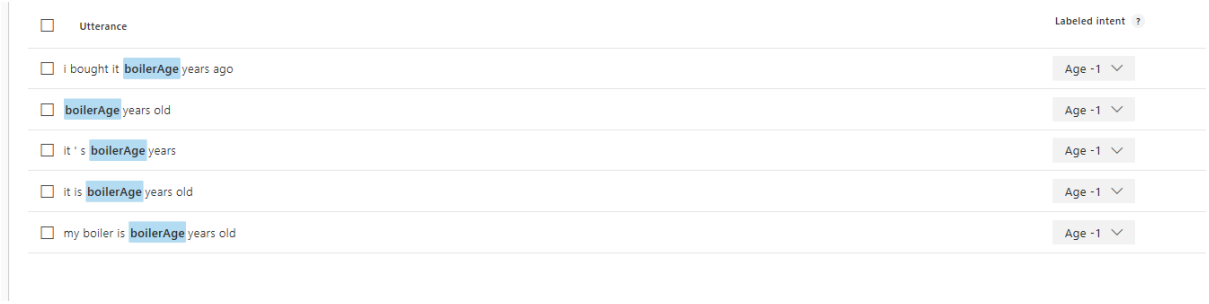


12. In the popup, select “Simple” as entity type
13. Click Done

Repeat steps 16 to 18 for the following 4 sentences. For each sentence select the numerical value (“5” or “15”) and select ‘boilerAge’ from the entities:

- I bought it 5 years ago
- 5 years ago
- it’s 5 years old
- it is 15 years old

14. Your intent should look like this:



We can now train our app.

15. Click [Train] on the top menu
16. After training is done.
17. Click on [Publish] on top menu
18. Select ‘Production’ in the Publish To option.
19. Leave all other settings default.
20. Click [Publish to production slot]

You can now test your app

1. Click on [Test] in the top menu.
2. Type a sentence (different from the once you used to train)

Lab 2: Step 3 – Customize BOT

We have built the base of our bot. Trained and published our AI using a LUIS app. Now let's go ahead and customize our bot.

1. Login/return to the Azure portal
2. Select the app you built in step 1
3. Click on 'Build' (below BOT MANAGEMENT section)
4. Click on 'Download zip file' to get the source code
5. Wait until the zip file is created and click on the button [Download zip file]
6. Extract the Zip file to a folder (your development folder of choice)
7. Start Visual Studio
8. Click File -> Open -> Project/solution
9. Select *.sln file in the directory you have extracted the solution

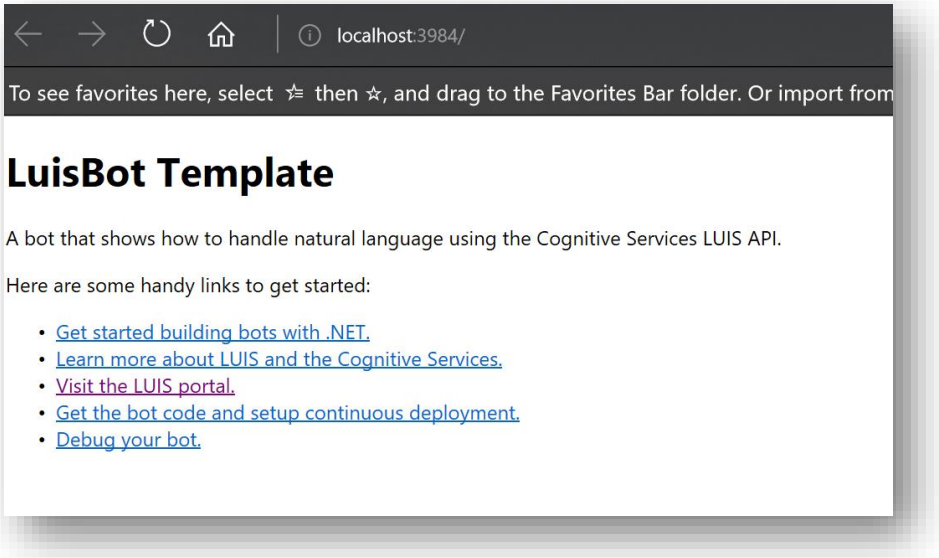
THE NEXT STEPS ARE ONLY NECESSARY IF YOU WANT TO TEST LOCALLY. YOU CAN SKIPP THESE AND CONTINUE WITH STEP 17.

You need to add the following keys to the web.config for local build and run.

10. Open the web.config file.
11. Add the following keys to <appSettings>
    <add key="AzureWebJobsStorage" value="" />
    <add key="LuisAPIKey" value="" />
    <add key="LuisAppId" value="" />
    <add key="LuisAPIHostName" value="" />
12. To get the values for the keys, go to the Bot app in your Azure portal.
13. Click on Application Settings
14. Copy the values from the settings page to your web.config keys.

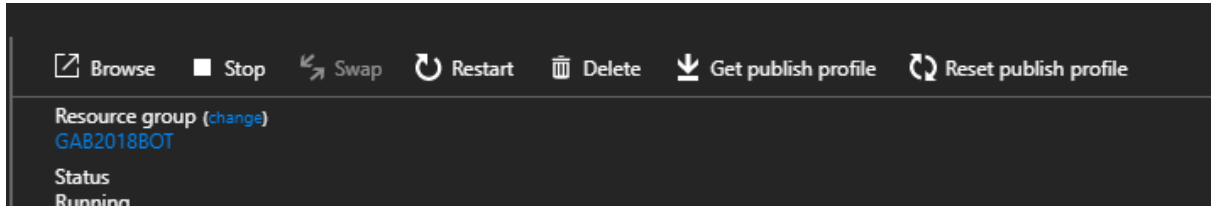
Let's run the application to see if everything is working.

15. Click run
16. If everything goes well your default browser is opened to http://localhost:3984
    You should see something like this



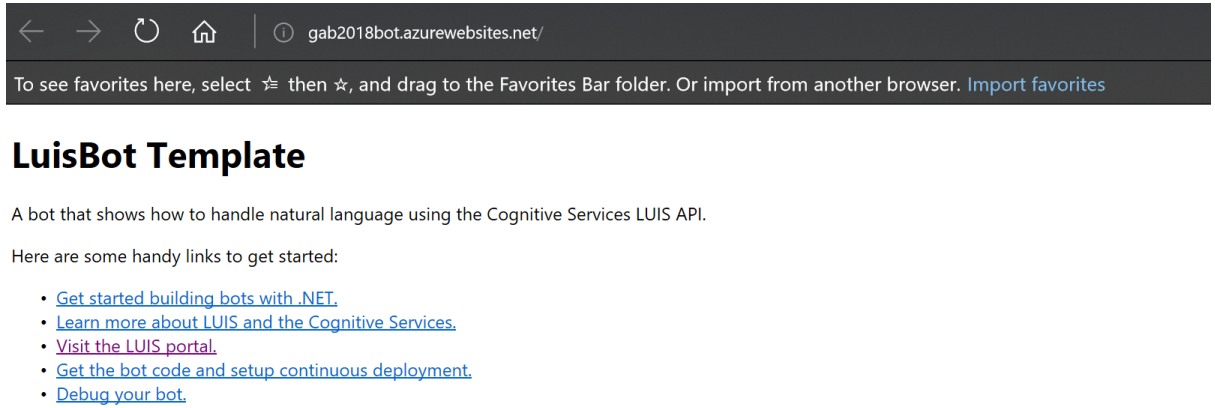
Let's publish to Azure for a first time. For this you need to get the publish profile from Azure.

17. Go to the Azure portal
18. Select the resource group created for you Bot (GAB2018BOT-<YOURINITIALS>)
19. Select the App Service (GAB2018BOT-<YOURINITIALS>)
20. In the overview you can download "Get publish profile" from the top menu



21. Click Get publish profile to download the file
22. Open Visual Studio
23. Select the project overview

24. Click Publish
25. Below the drop box, select Create new profile
26. Select Import profile
27. Click Publish
28. Select the downloaded file
29. The project should build and publish to Azure and the following website will be opened in a new browser window.



Let's test the bot

30. Go to the Azure portal
31. Open your bot
32. Click "Test in web chat"
33. Try a typing "hi" in the chat window
34. The response should be "You have reached Greeting. You said: hi"

Next, we are going to customize the dialog.

35. Go to your project in Visual Studio
36. Open “BasicLuisDialog.cs” in the Dialogs folder
37. Study this file and try to understand how LuisDialog works. A dialog specialized to handle intents and entities from LUIS. You can find more info about dialogs in bots here: https://docs.microsoft.com/en-us/azure/bot-service/nodejs/bot-builder-nodejs-dialog-manage-conversation-flow
38. Try to add the intent for Warranty by copying one of the other ones.
39. Publish your bot
40. Test it in Azure

You should have added something like this:

```
[LuisIntent("Warranty")]
 public async Task WarrantyIntent(IDialogContext context, LuisResult result)
 {
     await this.ShowLuisResult(context, result);
 }
```

Let’s build on this.

41. In the class BasicLuisDialog, add the following

```
private bool _hasWarranty = false;
```

42. Replace the code for the Warranty intent you added in the last steps, with the code snippet below.
    Go through the code line by line and try to understand what it is doing. Finish the missing code to get it working.
    You can find a completed version of this code snippet in the GitHub repository (https://github.com/Rubicon-BV/GlobalAzureBootcamp2018/blob/master/Lab2/Example%20Warranty%20Snippet.cs)

```
[LuisIntent("Warranty")]
    [LuisIntent("BoilerAge")]
    public async Task WarrantyIntent(IDialogContext context, LuisResult result)
    {
            if (!_hasWarranty)
            {
                    _hasWarranty = true;

                    <TODO: ADD CODE HERE TO RESPOND WITH "Hello, when did you purchase the device?”>

                    context.Wait(MessageReceived);
                    return;
            }

            if (_hasWarranty)
            {
                    var boilerAge = result.Entities.FirstOrDefault(x => x.Type == "boilerAge")?.Entity;
                    var boilerBuildYear = result.Entities.FirstOrDefault(x => x.Type == "boilerBuildYear")?.Entity;

                    int age;
                    if (!int.TryParse(boilerAge, out age))
                    {
                            await context.PostAsync("I'm a very simple bot, I only understand numbers... Please improve me!!!");
                            return;
                    }

                    <TODO: ADD CODE HERE TO RESPONG WITH "Good news, your device has warranty!" IF THE AGE IS 2 YEARS OR LES, ELSE
                    RESPOND WITH "We are sorry, but you warranty has expired. The warranty is 2 years.">

            }

    }
}
```

43. Publish your code
44. Go to your bot in Azure
45. Test your bot with the following dialog:
    - You: Do I have warranty
    - Bot: Hello, when did you purchase the device
    - You: 5 years ago
    - Bot: We are sorry, but you warranty has expired. The warranty is 2 years.

This is the end of this LAB. If you finished early, go ahead and experiment with your bot:

- Try more sentences.
- Add sentences to the LUIS app and retrain and publish it.
- Add more intents you can use in the dialog, for example ask what color the boiler has.

LAB 2: Bonus step

You are a wiz and found this easy as pie and have some time to the next LAB. In that case:

- Connect your bot to the Skype channel and test it using skype.