

SIT 788

Assignment 8.1: create a bot using Azure

In this task, the aim is to create an Azure Echo Bot using the bot framework SDK.

Step 1: To use the bot framework SDK, install the libraries required.

```
(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments\echo_bot>pip install botbuilder-core
Requirement already satisfied: botbuilder-core in c:\users\singh\anaconda3\lib\site-packages (4.14.2)
Requirement already satisfied: botframework-streaming==4.14.2 in c:\users\singh\anaconda3\lib\site-packages (from botbuilder-core) (4.14.2)
Requirement already satisfied: botframework-connector==4.14.2 in c:\users\singh\anaconda3\lib\site-packages (from botbuilder-core) (4.14.2)
Requirement already satisfied: jsonpickle<1.5,>=1.2 in c:\users\singh\anaconda3\lib\site-packages (from botbuilder-core) (1.4.2)
Requirement already satisfied: botbuilder-schema==4.14.2 in c:\users\singh\anaconda3\lib\site-packages (from botbuilder-core) (4.14.2)
Requirement already satisfied: msrest==0.6.19 in c:\users\singh\anaconda3\lib\site-packages (from botbuilder-schema==4.14.2->botbuilder-core) (0.6.19)
Requirement already satisfied: msal==1.6.0 in c:\users\singh\anaconda3\lib\site-packages (from botframework-connector==4.14.2->botbuilder-core) (1.6.0)
Requirement already satisfied: PyJWT<2.0.0,>=1.5.3 in c:\users\singh\anaconda3\lib\site-packages (from botframework-connector==4.14.2->botbuilder-core) (1.7.1)
Requirement already satisfied: requests<2.26,>=2.23.0 in c:\users\singh\anaconda3\lib\site-packages (from botframework-connector==4.14.2->botbuilder-core) (2.25.1)
Requirement already satisfied: cryptography<4,>=0.6 in c:\users\singh\anaconda3\lib\site-packages (from msal==1.6.0->botframework-connector==4.14.2->botbuilder-core) (3.4.7)
Requirement already satisfied: requests-oauthlib==0.5.0 in c:\users\singh\anaconda3\lib\site-packages (from msrest==0.6.19->botbuilder-schema==4.14.2->botbuilder-core) (1.3.1)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\singh\anaconda3\lib\site-packages (from msrest==0.6.19->botbuilder-schema==4.14.2->botbuilder-core) (2020.12.5)
Requirement already satisfied: isodate>=0.6.0 in c:\users\singh\anaconda3\lib\site-packages (from msrest==0.6.19->botbuilder-schema==4.14.2->botbuilder-core) (0.6.1)
Requirement already satisfied: cffi>=1.12 in c:\users\singh\anaconda3\lib\site-packages (from cryptography<4,>=0.6->msal==1.6.0->botframework-connector==4.14.2->botbuilder-core) (1.14.5)
Requirement already satisfied: pycparser in c:\users\singh\anaconda3\lib\site-packages (from cffi>=1.12->cryptography<4,>=0.6->msal==1.6.0->botframework-connector==4.14.2->botbuilder-core) (2.20)
Requirement already satisfied: six in c:\users\singh\anaconda3\lib\site-packages (from isodate==0.6.0->msrest==0.6.19->botbuilder-schema==4.14.2->botbuilder-core) (1.15.0)
Requirement already satisfied: idna<3,>=2.5 in c:\users\singh\anaconda3\lib\site-packages (from requests<2.26,>=2.23.0->botframework-connector==4.14.2->botbuilder-core) (2.10)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\singh\anaconda3\lib\site-packages (from requests<2.26,>=2.23.0->botframework-connector==4.14.2->botbuilder-core) (1.26.4)
Requirement already satisfied: charset>=3.0.2 in c:\users\singh\anaconda3\lib\site-packages (from requests<2.26,>=2.23.0->botframework-connector==4.14.2->botbuilder-core) (4.0.0)
Requirement already satisfied: oauthlib==3.0.0 in c:\users\singh\anaconda3\lib\site-packages (from requests-oauthlib==0.5.0->msrest==0.6.19->botbuilder-schema==4.14.2->botbuilder-core) (3.2.0)

(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments\echo_bot>pip install asyncio
Requirement already satisfied: asyncio in c:\users\singh\anaconda3\lib\site-packages (3.4.3)

(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments\echo_bot>pip install aiohttp
Requirement already satisfied: aiohttp in c:\users\singh\anaconda3\lib\site-packages (3.7.4.post0)
Requirement already satisfied: yarl<2.0,>=1.0 in c:\users\singh\anaconda3\lib\site-packages (from aiohttp) (1.4.2)
Requirement already satisfied: charset>=5.0,>=2.0 in c:\users\singh\anaconda3\lib\site-packages (from aiohttp) (4.0.0)
Requirement already satisfied: attrs>=17.3.0 in c:\users\singh\anaconda3\lib\site-packages (from aiohttp) (20.3.0)
Requirement already satisfied: typing-extensions>=3.6.5 in c:\users\singh\anaconda3\lib\site-packages (from aiohttp) (3.7.4.3)
Requirement already satisfied: multidict<7.0,>=4.5 in c:\users\singh\anaconda3\lib\site-packages (from aiohttp) (6.0.2)
Requirement already satisfied: async-timeout<4.0,>=3.0 in c:\users\singh\anaconda3\lib\site-packages (from aiohttp) (3.0.1)
Requirement already satisfied: idna>=2.0 in c:\users\singh\anaconda3\lib\site-packages (from yarl<2.0,>=1.0->aiohttp) (2.10)

(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments\echo_bot>pip install cookiecutter==1.7.0
Requirement already satisfied: cookiecutter==1.7.0 in c:\users\singh\anaconda3\lib\site-packages (1.7.0)
Requirement already satisfied: whichcraft>=0.4.0 in c:\users\singh\anaconda3\lib\site-packages (from cookiecutter==1.7.0) (0.6.1)
```

Step 2: Once the libraries are installed, fetch the echo bot template and the dependencies. Provide the bot with a name and description.

```
Anaconda Prompt (anaconda3)
(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments>cookiecutter https://github.com/microsoft/BotBuilder-Samples/releases/download/Templates/echo.zip
You've downloaded C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments\cookiecutters\echo.zip before. Is it okay to delete and re-download it? [yes]: yes
bot_name [my_chat_bot]: echo_bot
bot_description [Demonstrate the core capabilities of the Microsoft Bot Framework]: A bot that echoes back user response

(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments>
```

Step 3: After fetching the template, change the working directory to the template and install the prerequisites.

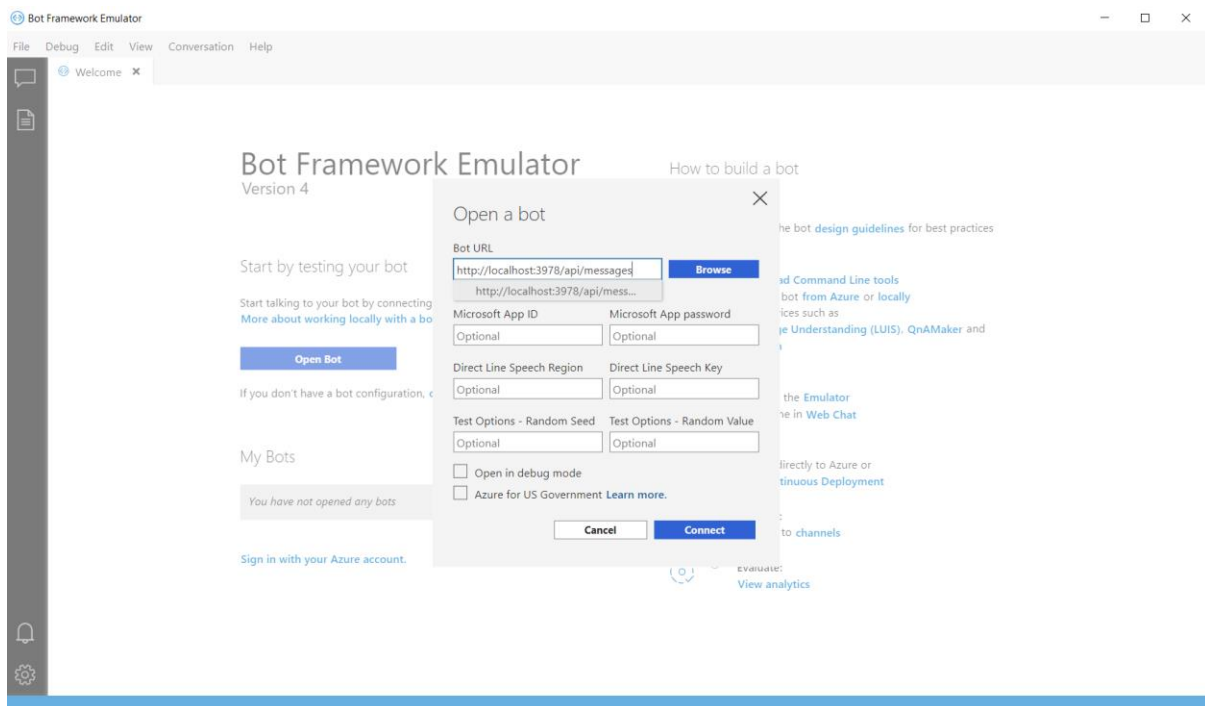
```
(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments>cd echo_bot

(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments\echo_bot>pip install -r requirements.txt
Collecting botbuilder-integration-aiohttp==4.14.0
  Downloading botbuilder-integration-aiohttp-4.14.0-py3-none-any.whl (18 kB)
Requirement already satisfied: botframework-connector==4.14.2 in c:\users\singh\anaconda3\lib\site-packages (from botbuilder-integration-aiohttp==4.14.0->-r requirements.txt (line 1)) (4.14.2)
Requirement already satisfied: botbuilder-schema==4.14.2 in c:\users\singh\anaconda3\lib\site-packages (from botbuilder-integration-aiohttp==4.14.0->-r requirements.txt (line 1)) (4.14.2)
Requirement already satisfied: botbuilder-core==4.14.2 in c:\users\singh\anaconda3\lib\site-packages (from botbuilder-integration-aiohttp==4.14.0->-r requirements.txt (line 1)) (4.14.2)
```

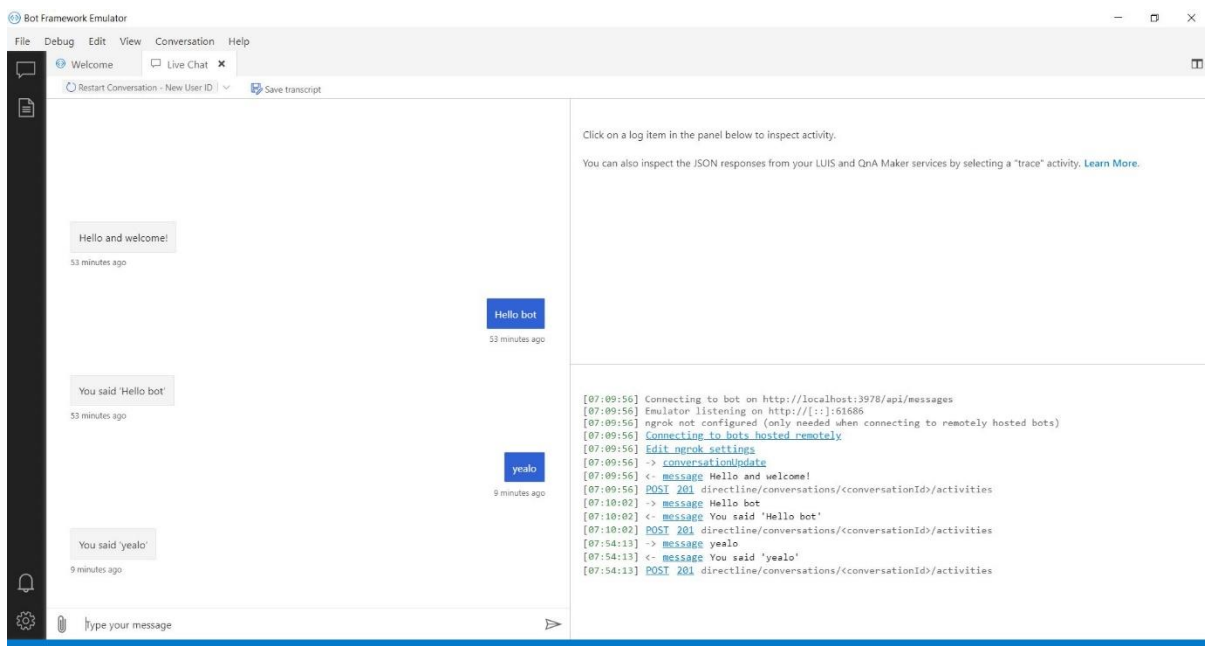
Step 4: Once the dependencies are installed then simply run app.py.

```
(base) C:\Users\singh\Documents\MastersAppliedAI\Deakin\SIT788_Engineering_AI_Solutions\Assignments\echo_bot>python app.py
===== Running on http://localhost:3978 =====
(Press CTRL+C to quit)
```

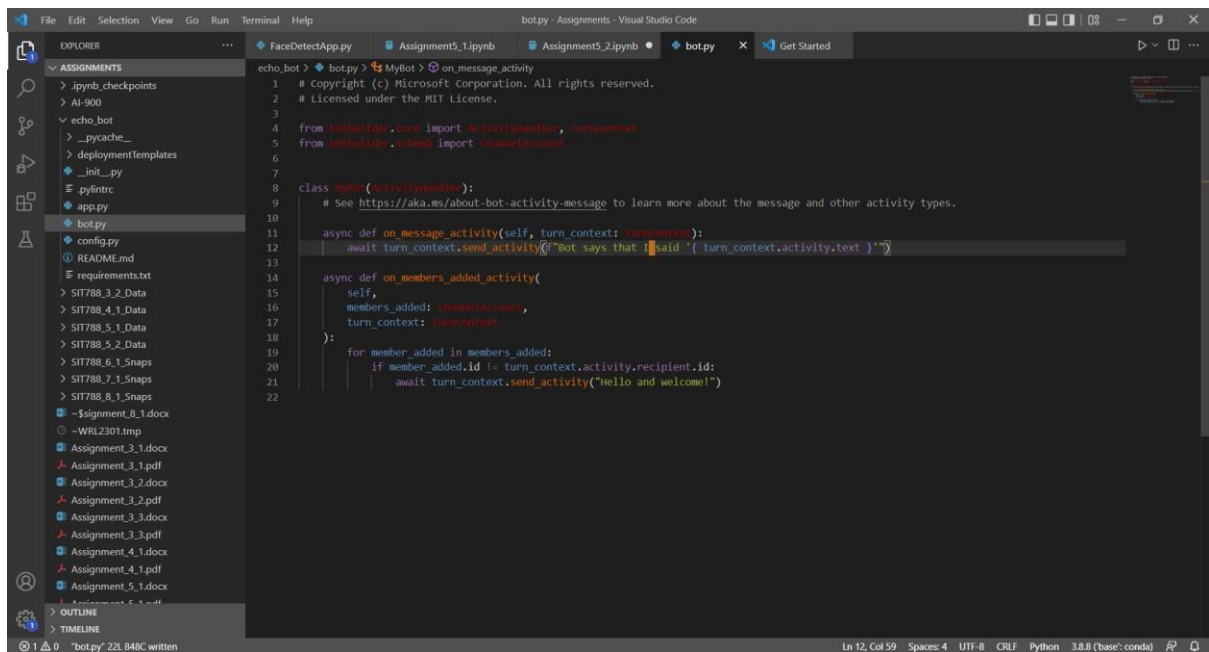
Step 5: To test this bot, download the bot emulator framework and connect to the address in step 4.



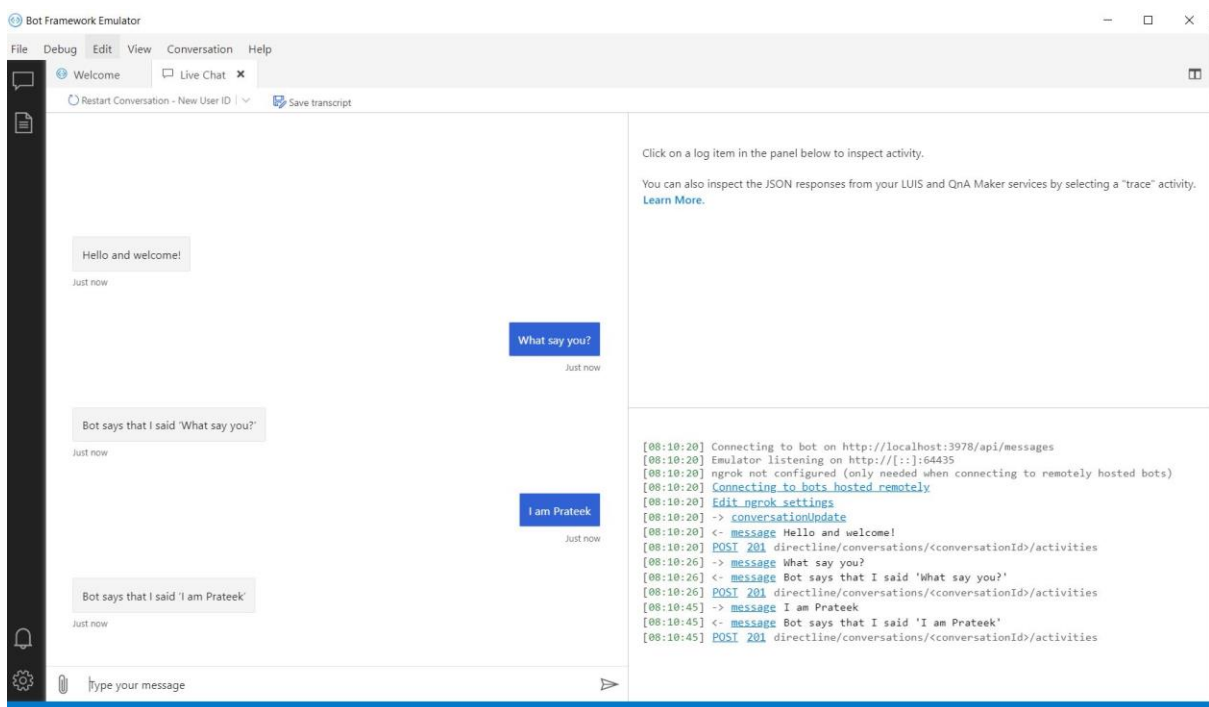
Step 6: Once the emulator is connected, test the bot with user response.



Step 7: To change the bot response modify the bot.py file in the template (working) directory.



Step 8: Once the response is changed then rerun app.py with the updated bot.py and test in emulator. The bot now responds with updated messages.



**bot.py file can be customized to run with various real-world use cases.*