DEVASC v1.0 Skills Assessment - version December 2021

# Objectives

* **Collect Required API Documentation**
* **Code a Webex Teams Bot**

# Background / Scenario

Python can be used to integrate API calls from different services. In this Skills Assessment, you will edit and modify Python code for a Webex Teams bot that integrates Webex, MapQuest, and Openweathermap APIs. The code continuously checks for messages in the **ITCProctoredExam2021** Webex Teams room that begins with a forward slash and your name **(/yourname**) followed by a location or city name (e.g. /chotipat Washington, DC). When such a message is found, the city name is extracted and used with the MapQuest API service to get the GPS coordinates (latitude and longitude). Next, these coordinates are used with the Openweathermap API to find the current weather description and temperature. A message is sent back to the Webex Teams room informing the user about the GPS coordinates, current weather description and temperature for the queried city.

When completed, the Webex Teams bot will:

* Use the hard-coded access token.
* Extract the location (city name) of a message starting with “/yourname location” (e.g. /chotipat Washington, DC -> Washington, DC) from **ITCProctoredFinal2021** Webex Teams room.
* Request the latitude and longitude of a specified city using the MapQuest API.
* Request the current weather description and current temperature in degree Celsius of the specified city using openweathermap API (current weather data for one location by geographic coordinates).
* Send the GPS coordinates, current weather description and temperature back to the **ITCProctoredFinal2021** Webex Teams room.

# Required Resources

* 1 PC with operating system of your choice, where Webex, Git and python 3.x are installed
* Github account – <https://github.com>
* MapQuest, Webex Teams and Openweathermap developer access and API keys
  1. <https://developer.webex.com/>
  2. <https://developer.mapquest.com/>
  3. <https://openweathermap.org/>
* The **devasc-sa-dec2021.py** student script
* Virtual Box or VMWare (Optional)
* DEVASC Virtual Machine (Optional)

**Note**: To protect application environments like Webex Teams from bots or malicious access attempts, most APIs rate limit availability. If you make a large number of the same API calls, your API call may be blocked for a specific amount of time. The timeout is usually less than 5 minutes.