

Build Interactive Apps with Google Assistant: Challenge Lab

GSP325



Google Cloud Self-Paced Labs

Overview

In a challenge lab you're given a scenario and a set of tasks. Instead of following step-by-step instructions, you will use the skills learned from the labs in the quest to figure out how to complete the tasks on your own! An automated scoring system (shown on this page) will provide feedback on whether you have completed your tasks correctly.

When you take a challenge lab, you will not be taught new Google Cloud concepts. You are expected to extend your learned skills, like changing default values and reading and researching error messages to fix your own mistakes.

To score 100% you must successfully complete all tasks within the time period!

This lab is only recommended for students who have completed the labs in the [OK Google: Build Interactive Apps with Google Assistant](#) Quest. Are you ready for the challenge?

Topics tested:

- Creating an Actions project
- Setup Dialogflow
- Configure Dialogflow intents
- Use a webhook in a Dialogflow intent
- Adding code to the right place to call the Google Translate API

Are you up for the challenge?

Setup

Before you click the Start Lab button

Read these instructions. Labs are timed and you cannot pause them. The timer, which starts when you click **Start Lab**, shows how long Google Cloud resources will be made available to you.

This Qwiklabs hands-on lab lets you do the lab activities yourself in a real cloud environment, not in a simulation or demo environment. It does so by giving you new, temporary credentials that you use to sign in and access Google Cloud for the duration of the lab.

What you need

To complete this lab, you need:

- Access to a standard internet browser (Chrome browser recommended).
- Time to complete the lab.

Note: If you already have your own personal Google Cloud account or project, do not use it for this lab.

Note: If you are using a Pixelbook, open an Incognito window to run this lab.

Challenge scenario

As a junior developer in Jooli Inc. and recently trained with Google Cloud and Dialogflow you have been asked to help a new team (Taniwha) set up their environment. The team has asked for your help and has done some work, but needs you to complete the work.

You are expected to have the skills and knowledge for these tasks so don't expect step-by-step guides.

Your challenge

You need to help the team with some of their initial work creating two new Dialogflow apps.

As soon as you sit down at your desk and open your new laptop you receive the following request to complete these tasks. Good luck!

Task 1: Create the Cloud Function for the Magic Eight Ball app for Google Assistant

Create a python Cloud Function that will produce the result. The code is below, make sure you set the **Entry point** name to **magic_eight_ball**. Make sure you grant **Cloud Functions Invoker** to `allUsers`.

MAIN.PY

```
import random
import logging
import google.cloud.logging
from google.cloud import translate v2 as translate
from flask import Flask, request, make_response, jsonify

def magic_eight_ball(request):

    client = google.cloud.logging.Client()
    client.get_default_handler()
    client.setup_logging()

    choices = [
        "It is certain.", "It is decidedly so.", "Without a doubt.",
        "Yes - definitely.", "You may rely on it.", "As I see it, yes.",
        "Most likely.", "Outlook good.", "Yes.", "Signs point to yes.",
        "Reply hazy, try again.", "Ask again later.",
        "Better not tell you now.", "Cannot predict now.",
        "Concentrate and ask again.", "Don't count on it.",
        "My reply is no.", "My sources say no.", "Outlook not so good.",
        "Very doubtful."
    ]

    magic_eight_ball_response = random.choice(choices)

    logging.info(magic_eight_ball_response)

    return make_response(jsonify({'fulfillmentText': magic_eight_ball_response}))
```

REQUIREMENTS.TXT

```
google-cloud-translate
google-cloud-logging
```

Use this event JSON object for testing your Cloud Function:

```
{
  "responseId": "5f996cad-5dfc-40f2-a43d-b6b20e8b24d2-a14fa99c",
  "queryResult": {
    "queryText": "Will I complete this challenge?",
    "action": "input.unknown",
    "parameters": {},
    "allRequiredParamsPresent": true,
    "outputContexts": [
      {
        "name": "projects/qwiklabs-gcp-02-b32433699489/agent/sessions/3767e11a-acf0-30f7-5a36-2e8e720f26cd/contexts/_system_counters_",
        "lifespanCount": 1,
        "parameters": {
          "no-input": 0,
          "no-match": 3
        }
      }
    ],
    "intent": {
      "name": "projects/qwiklabs-gcp-02-b32433699489/agent/intents/80346ab5-5af8-4f52-bc0c-784529bf6990",
      "displayName": "Default Fallback Intent",
      "isFallback": true,
      "endInteraction": true
    },
    "intentDetectionConfidence": 1,
    "languageCode": "en"
  },
  "originalDetectIntentRequest": {
    "payload": {},
    "session": "projects/qwiklabs-gcp-02-b32433699489/agent/sessions/3767e11a-acf0-30f7-5a36-2e8e720f26cd"
  }
}
```

Click *Check my progress* to verify the objective.

If you don't get a green check mark, click on the **Score** fly-out on the top right and click **Run Step** on the relevant step. A hint pop up opens to give you advice.

Task 2: Create the Lab Magic 8 Ball app for Google Assistant

Use the [Actions Console](#) to start creating an action that has the following flow:

- **App:** Welcome to the lab magic 8 ball, ask me a yes or no question and I will predict the future!
 - **User:** Will I complete this challenge lab?
 - **App:** Cannot predict now.
You need to configure:
 - a fulfillment that enables a webhook to your cloud function created in task 1.
 - the **Default Welcome Intent Text Response** to Welcome to the lab magic 8 ball, ask me a yes or no question and I will predict the future!
 - the **Default Fallback Intent** to enable **Set this intent as end of conversation** and enable **Enable webhook call for this intent**
- You can test in Dialogflow to ensure it works.

Click *Check my progress* to verify the objective.

If you don't get a green check mark, click on the **Score** fly-out on the top right and click **Run Step** on the relevant step. A hint pop up opens to give you advice.

Task 3: Add multilingual support to your magic_eight_ball Cloud Function

Add the following code to your `magic_eight_ball` cloud function. You need to determine where to insert the code.

```
request_json = request.get_json()
if request_json and 'queryResult' in request_json:
    question = request_json.get('queryResult').get('queryText')

    # try to identify the language
    language = 'en'
    translate_client = translate.Client()
    detected_language = translate_client.detect_language(question)
    if detected_language['language'] == 'und':
        language = 'en'
    elif detected_language['language'] != 'en':
        language = detected_language['language']

    # translate if not english
    if language != 'en':
        logging.info('translating from en to %s' % language)
        translated_text = translate_client.translate(
            magic_eight_ball_response, target_language=language)
        magic_eight_ball_response = translated_text['translatedText']
```

Test with the following sentences in non-English languages:

- 我会完成这个挑战实验室吗？
- ¿Completaré este laboratorio de desafío?
- இந்த சவால் ஆய்வகத்தை நான் முடிக்கலாமா?

Click *Check my progress* to verify the objective.

If you don't get a green check mark, click on the **Score** fly-out on the top right and click **Run Step** on the relevant step. A hint pop up opens to give you advice.

Congratulations!



Finish Your Quest

This self-paced lab is part of the [Build Interactive Apps with Google Assistant](#) quest. Completing this skill badge quest earns you the badge above, to recognize your achievement. Share your badge on your resume and social platforms, and announce your accomplishment using #GoogleCloudBadge. [See other available Qwiklabs Quests](#) available in the catalog.

Google Cloud Training & Certification

...helps you make the most of Google Cloud technologies. [Our classes](#) include technical skills and best practices to help you get up to speed quickly and continue your learning journey. We offer fundamental to advanced level training, with on-demand, live, and virtual options to suit your busy schedule. [Certifications](#) help you validate and prove your skill and expertise in Google Cloud technologies.

Manual Last Updated March 19, 2021

Lab Last Tested March 19, 2021

Copyright 2021 Google LLC All rights reserved. Google and the Google logo are trademarks of Google LLC. All other company and product names may be trademarks of the respective companies with which they are associated.

<https://www.youtube.com/watch?v=7njifKRuYU4>