

Google Project Challenge

Interview Day

Higher Level Apprenticeship in Digital Innovation

Please complete one of the assignment options below before attending the Interview Day onsite at Google.

For your selected assignment you must provide us with all the code and a file with instructions on how to build and install your application. Preferred option: upload your code to [GitHub](#) and provide us with a link to the source code.

You may use any available resources, tutorials, and assistance on these projects. What resources you used, how much you learned, and what you found challenging is of as much interest to us as how well you complete the task.

A few tips: While there are plenty of online resources where you can find code samples to get started, we'd like to see a significant amount of code written by you. You should understand any code you reuse. Including 3rd-party libraries is fine, and even encouraged rather than rewriting something very complex or very basic...as long as it's done smartly.

Option 1 - Android

Build a simple Android app that displays pictures of cats.

You can include the images inside your app or download the images while the app is running.

- Display at least 5 images.
- User must be able to view each image individually.
- User must be able to navigate between the different images.
- User must have an option to exit the app.

Some resources:

<https://developer.android.com/training/basics/firstapp/index.html>

<https://developer.android.com/training/building-graphics.html>

<https://placekitten.com/>

Option 2 - App Engine

Build a simple webapp, using Google App Engine that provides users with an ability to keep track of a shopping list

- Should be written in Python, Go, or Java.
- User must be able to add, delete and edit an item to the shopping list
- User must be able to view their whole shopping list
- User must be able to delete their whole shopping list (in addition to deleting individual items)
- Each user must be able to login with their Google account and their shopping list must persist between their logins

Some resources

<https://cloud.google.com/appengine/docs/python/getting-started/creating-guestbook>

Option 3 - Maps API

Create a webpage that uses the Google Maps JavaScript API to show a route from the user's current location to another fixed location (which could be anywhere: your favourite restaurant, Buckingham Palace, Google London, etc.)

- Allow the user to switch between walking, driving, and public transportation routes.
 - Bonus points for making it responsive and work well on small screens (phone, tablets) and with touch interactions.
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Option 4 - Data Display and Search

Create a catalogue (like encyclopedia) of data on adoptable pets (name, description, location, etc.) where one can browse and search the dataset. You can start with this [dataset](#), modify it, or use another dataset with similar fields.

1. Example search queries you'll want to be able to handle:
 - all dogs

- by pet's name
 - female cats with tabby colouring
- 2. Add search autocomplete
- 3. Bonus points for making it responsive and work well on small screens (phone, tablets) and with touch interactions.
- 4. Extra bonus points if you add animal images to the catalogue.