

# Senior Software Engineer Take-Home Programming Assignment for Golang

**Story:** There are over 100,000 flights a day, with millions of people and cargo being transferred around the world. With so many people and different carrier/agency groups, it can be hard to track where a person might be. In order to determine the flight path of a person, we must sort through all of their flight records.

**Goal:** To create a simple microservice API that can help us understand and track how a particular person's flight path may be queried. The API should accept a request that includes a list of flights, which are defined by a source and destination airport code. These flights may not be listed in order and will need to be sorted to find the total flight paths starting and ending airports.

## Required JSON structure:

- `[["SFO", "EWR"]]`  $\Rightarrow$  `["SFO", "EWR"]`
- `[["ATL", "EWR"], ["SFO", "ATL"]]`  $\Rightarrow$  `["SFO", "EWR"]`
- `[["IND", "EWR"], ["SFO", "ATL"], ["GSO", "IND"], ["ATL", "GSO"]]`  $\Rightarrow$  `["SFO", "EWR"]`

## Specifications:

- Your microservice must listen on port `8080` and expose the flight path tracker under the `/calculate` endpoint.
- Create a private GitHub repo and add <https://github.com/taariq> as a collaborator to the project. *Please only add the collaborators when you are sure you are finished.*
- Define and document the format of the API endpoint in the README.
- Use Golang and/or any tools that you think will help you best accomplish the task at hand.
- When you are done with the assignment, follow up and reply-all to the email that directed you to this document. Include your private github link and an estimate of how long you spent on the task and any interesting ideas you wish to share.