

## Assignment Overview

**Note:** You are free to use the tools and helpers of your choice to meet the final objective, but the code and application should be built using either Go or Python.

We are serving a business called Moustache Escapes ([www.moustachescapes.com](http://www.moustachescapes.com)), where you are tasked with building APIs to assist their tele-calling team during conversations with customers regarding hotel rooms and properties.

Customers call from various parts of the country, expressing interest in visiting cities where Moustache Escapes has hotels or nearby areas.

To maximize customer conversions, the tele-calling team needs to know the distance of the location mentioned by the customer and identify the nearest available property. If a property is within a 50 km range of the location mentioned, it should be presented to the tele-calling agent.

You are required to create a backend service that considers these constraints and core requirements to build an API utilized by the team to display the nearest property. The only input will be the query entered by the tele-calling agent, and the output should be a list of properties available within a 50 km radius of the mentioned location. If no properties are available, the API should indicate this.

[List of Properties with Location]

## Core Requirements

- With the input coming in as a query (any city, state, or area in the country), output the list of properties within a 50 km radius.
- If no properties are available, indicate this in the output.
- Build only the backend API; no frontend is required.
- You are free to use LLMs and any tools such as Sambanova, OpenAI, Groq, etc., and any Python or Go libraries you deem necessary.

## Technical Constraints

- The API response time should be less than 2 seconds, as the tele-caller will use this for real-time communication.

- Due to fast typing by tele-callers, there might be spelling mistakes in the input (e.g., "delhi" → "delih", "bangalore" → "bangalre"). Spelling mistakes will be limited to 1 or 2 missing characters or character swaps.