AEROASPIRE INTERN ASSESSMENT-02
KARTHIK TL

1. **What is difference between path parameters vs query parameters?**

Path parameters are part of the URL path itself and are used to uniquely identify specific resources. For example, in the URL /users/123, 123 is a path parameter that points to a user with ID 123. These parameters are essential and directly linked to the resource's identity. On the other hand, query parameters come after a question mark ? in the URL and provide additional information to filter, sort, or customize the request, for example /users?age=30&sort=name. Query parameters are optional and used when you want to narrow down or modify a list of resources rather than pinpoint one unique resource.

2. How to handle errors if client passes invalid id / resource not found.

When a client provides an invalid ID or requests a resource that doesn't exist, the backend should handle this gracefully by returning a clear error response. Typically, this involves checking whether the resource exists after extracting the ID. If not found, the API should return an HTTP 404 status code with a descriptive message like "Resource not found". This communicates to the client that their request was understood but the resource was not available.

3. Describe flow of updating a resource: client sends JSON → Flask handler → modify data → return response.

The client first sends a JSON payload with the data to update, usually via an HTTP PUT or PATCH request. The Flask handler extracts this JSON data using request.get_json() and also captures the resource identifier, often from a path parameter. The server then validates and modifies the relevant data in the database or storage. After successfully updating, the handler returns a response, typically including the updated resource data and a success status code such as 200 OK or 204 No Content