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2. REST API Design

Scenario: You need to design a REST API endpoint to retrieve user profile information. The endpoint should support fetching a user's profile by their username and include optional query parameters for filtering the results.

Requirements: v

- Define the endpoint URL and HTTP method.
- Specify the expected request parameters and response structure.
- Explain how you would handle errors (e.g., user not found) and validate input.

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1) Endpoint URL and HTTP Method:

HTTP Method: GET – as we need to retrieve the user info we will need a GET HTTP call.

ENDPOINT URL : /api/getUserProfile

We can add optional query parameters to filter the results.

2) Expected Request Parameters:

- username** – we need username as it is main parameter to fetch users profile info
- Optional query parameters** – The optional query parameters like email , age etc can be used to filter the results.

Eg - GET /api/ getUserProfile /swaraj?fields=email,age

3) Response Structure:

- 200 ok** – If the api request is successful then we get proper response with status code as 200 ok .

```
{
  "username": "swarajjadhav",
  "name": "Swaraj Jadhav",
  "email": "jswaraj48@gmail.com",
  "age": 22,
  "orders": [
    {
      "order_id": 123,
```

```
    "amount": 50.00,  
    "status": "completed"  
  }  
]  
}
```

- ii)** Error response – If the http request is not successful then we get error based on how error handling is done .