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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:

- 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.

#### 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 /harshali?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":
    "harshalideore", "name":
    "harshali deore",
    "email":
    "harshalideore2002@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 .