

HATEOAS and Why It's Needed in RESTful API?

- **HATEOAS** stands for **Hypermedia as the Engine of Application State** and it is a component of **RESTful API** architecture and design.

With the use of **HATEOAS**, the client-side needs minimal knowledge about how to interact with a server. This is made possible by the network application responding to the client's requests with dynamically generated information through the use of hypermedia.



When accessing a webpage through a browser, users have the ability to interact with the webpage by using buttons, inputs, clicking on links, etc.

However, traditional API responses have no such functionality present to allow an application to interact with the server through the response.

HATEOAS acts as a way to address this. A **HATEOAS** request allows you to not only send the data but also specify the related actions.

It means your **REST responses include hyperlinks** to related actions or resources — making your API more **discoverable and self-navigating**.

Think of it like this: Instead of just returning data, your API also returns links that describe what can be done next.

Example

```
{  
  "id": 1,  
  "name": "Shekhar",  
  "_links": {  
    "self": {  
      "href": "http://localhost:8080/api/users/1"  
    },  
    "all-users": {  
      "href": "http://localhost:8080/api/users"  
    }  
  }  
}
```