# Rest API Design

## API Security

* Security of data in transit (This is typically achieved by SSL)
* Authentication and Authorization
* Token based security, JWT token (JSON Web Token)
* OAuth 2.0 — OAuth is very widelu used and popular for Rest API security

HTTP Request (Verb / Action to be performed on server)

* 1. GET - Request Resource
  2. POST - Create Resource
  3. PUT - Update Resource
  4. DELETE - Delete Resource
  5. PATCH - Update partial resource - This like this, We do not want to update whole Customer, instead we want to update address of Customer. This can be treated as update partial response (i.e - PATCH Request)

HTTP Request Headers - actually request metadata, examples are,

* Content Type
* Content Length
* Authorization
* Accept
* Cookies

HTTP Response format -

* Response status code.
* Response headers
* Response Content - HTML,CSS,JavaScript,XML,JSON etc. Note that sim

What is important part of designing restful api's ?

* Design URI (Q - What is an URI ? URI are just path to resources. Each resource is uniquely identified and so full form of URI is - Unique Resource Identifier
* Identify headers, if any
* Request body

Rest API response

* Status code
* Response headers
* Response Body

Important concept about API design -

* When designing, think about noun and not verbs - for example /customer is good , but /getCustomer or /saveCustomer is not a good example of URI
* Good example of API design are,

1. /customers
2. /products
3. /employees
4. /invoices