

=>

## REST Architecture Principles

1. Unique Address
2. Uniform Constraint interfaces
3. Media Representation -> 100%
4. Communication Stateless
5. Hateos

json/xml

Consumer

xml

Producer

webservices

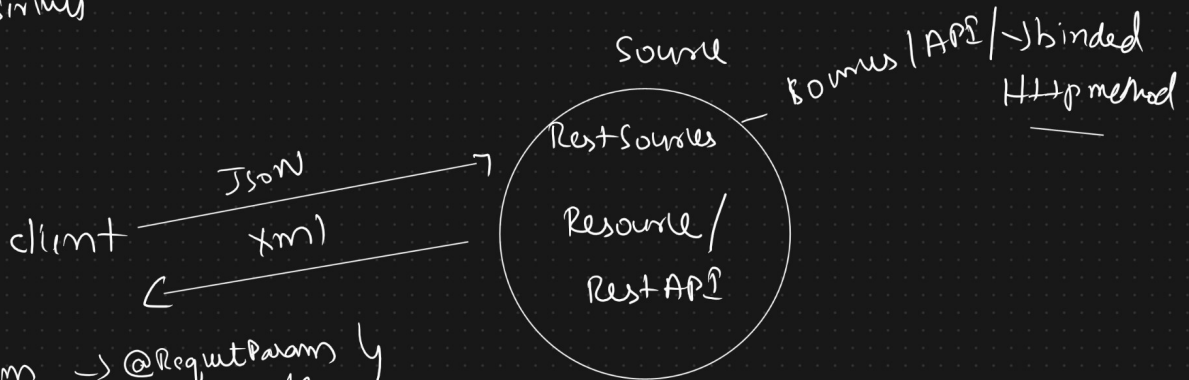
wsdl

Interoperability

bind methods to HTTP method:  
Accuracy / Adaptability  
UDDI

=> Restful services: -> 100% interoperability -> xml / json

## Restful services



=> QueryParam -> @RequestParam  
PathParam -> @PathVariable

=> spring-mvc -> state

=> { @RestController -> response -> raw data

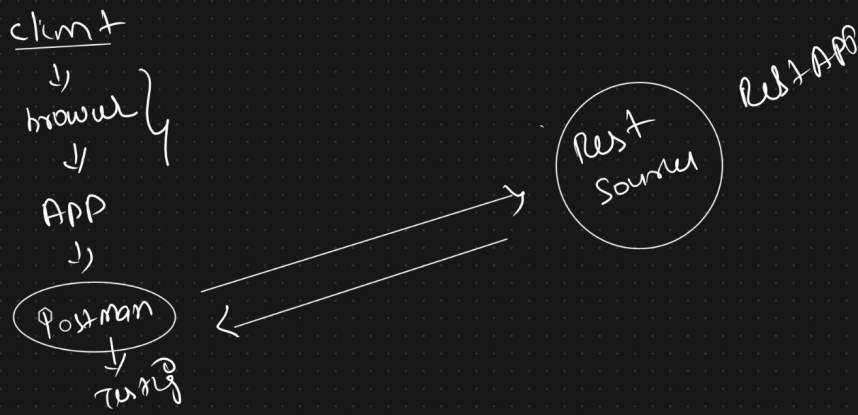
=> required methods within @RestController annotated class should be binded to HTTP Request method -> unique url-pattern

@GetMapping

@PostMapping

@PutMapping

==



@Rest Controller :- (Spring 4.0) @Controller + @ResponseBody

Rest source:- Provides business service to other applications

Rest Client:- Who seek other application services (Device, Application, Human accessing from browser)  
(Any one capable of sending HTTP Request)

UI to Controller

1. Queryparam ( <http://localhost:8085/MyApp/message2?name=janardhana&course=java> )

2. Pathparam ( <http://localhost:8086/MyApp/message2/janardhana/microservices> )

Whenever resource (Rest) Send data to client then we must bind method to GET Request method.

example: client want to access some data (Product details/Employee details)

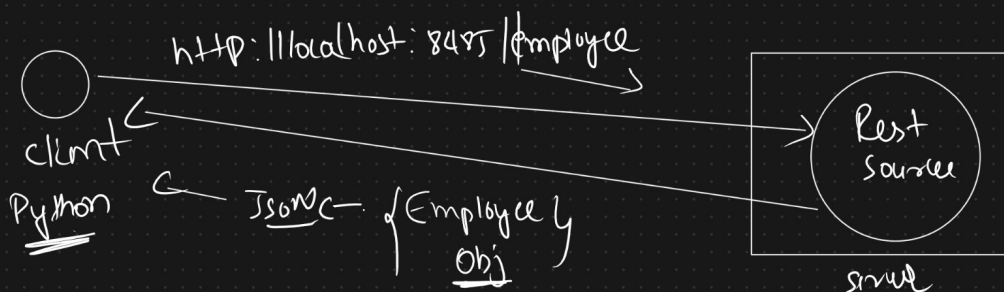
Http Get Method is safe idempotent

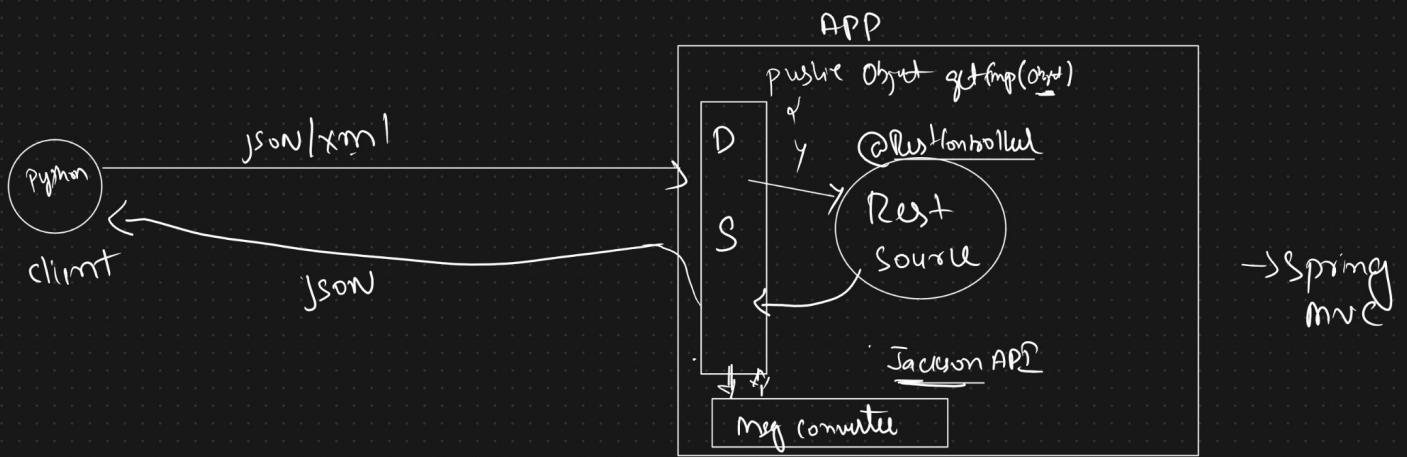
### Query Parameter

- send data → client to server through URL
- data will in key-value pair
- present at the end of URL
- It starts with ? & if more data then separated with &
- @RequestParam is used to read query param

### Path Parameter

- send data → client to server - URL
- directly value in URL
- anywhere in URL
- It starts with / more data then we use / as separator
- @PathVariable is used to read data.





## Java

JSON --> Java Script Object Notation

==> It is very lightweight compare to XML

==> Its one the most popular or defacto standard to exchange data over network

syntax ==>

```
{
  "id": 102,
  "name": "Rohan",
  "city": "Bengaluru"
}
```

Jackson API :-> JSON processor for java

↳ convert java object to JSON & json data to  
Java object  
(JSON parser)

JSON -> universal

Jackson -> Java specific

ObjectMapper class provided by Jackson api is used to convert Java obj to JSON format

```
Student st = new Student();
st.setId(101);
st.setName("Rohit");
st.setCity("Bengaluru");

ObjectMapper mapper = new ObjectMapper();
String json = mapper.writerWithDefaultPrettyPrinter().writeValueAsString(st);
// String str = mapper.writeValueAsString(st);
System.out.println(json);
```