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REST Architecture Principles

1. Unique Address ✓
2. Uniform Constraint interfaces
3. Media Representation → JSON / XML
4. Communication Stateless, HATEOAS
5. Hateoas γ

JSON / XML

bind methods to
HTTP method:
GET / POST / PUT / DELETE

UDDI

Availability / Adoptability

Interoperability

Consumer XML

WebService

WSDL

Producer

⇒ RESTful Service → 100% interoperability → XML → JSON

RESTful Service

Source

Backend API / → binded
HTTP method

RestSources

Resource /
Rest API

client → JSON
XML

=γ { QueryParam → @RequestParam
PathParam → @PathVariable

↓
404

=γ spring-mvc → static

=γ { @RestController → responds → raw Data ✓

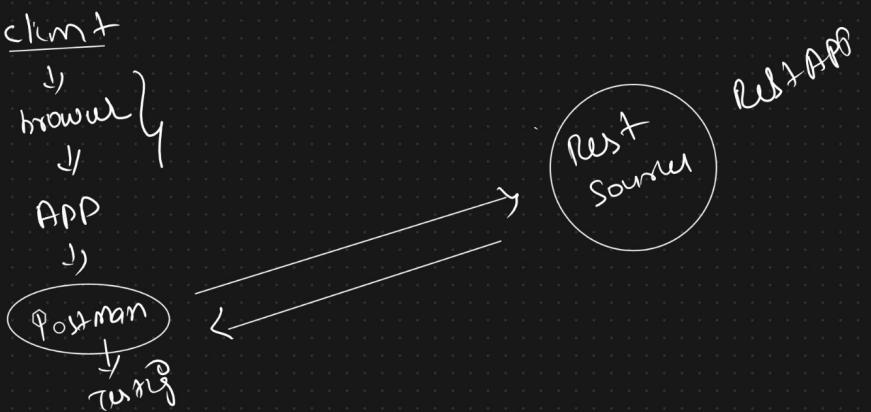
↓

=⇒ required methods within ~~@Controller~~ @RestController annotated class

should be binded to HTTP Request method → unique url-pattern

@GetMapping
@PostMapping
@PutMapping
@DeleteMapping

≡



@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

serve through VR

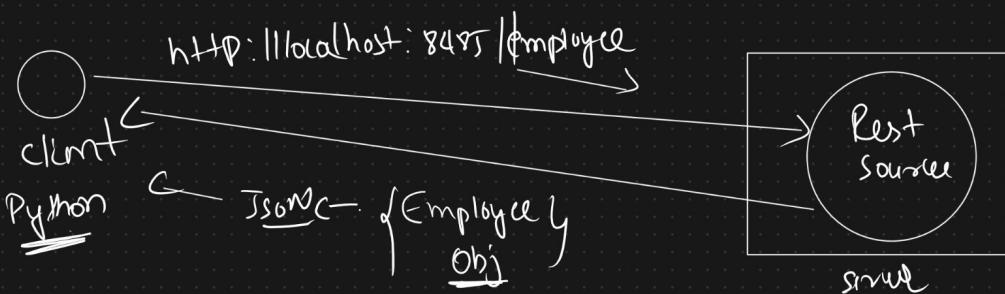
-> data will be in key-value pair -> directly values in URL

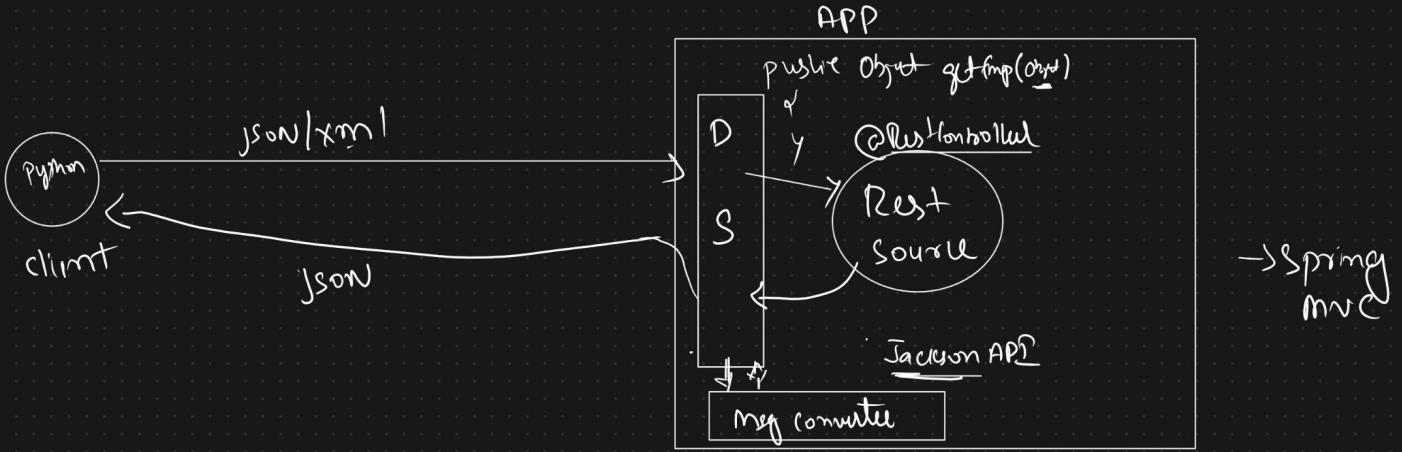
→ present at the end of , -y anywhere in URL
URL-

→ It starts with ? & if , It starts with / more data then we use

-> @RequestBody is used to read query param

@PathVariable is used to read data.





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 Parse)

JSON → Universal

JavaObj → Java's 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 str = mapper.writerWithDefaultPrettyPrinter().writeValueAsString(st);
String str = mapper.writeValueAsString(st);
System.out.println(str);
```