

# Spring CRM REST - Add Customer





# Real-Time Project

HTTP Method		CRUD Action
POST	/api/customers	<u>C</u> reate a new customer
GET	/api/customers	<u>R</u> ead a list of customers
GET	/api/customers/{customerId}	<u>R</u> ead a single customer
PUT	/api/customers	<u>U</u> pdate an existing customer
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Checkpoint

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# Application Interaction

REST  
Client

Customer  
REST  
Controller



# Application Interaction

REST  
Client

POST

/api/customers

```
{  
  "firstName": "Juan",  
  "lastName": "Perez",  
  "email": "juan.perez@luv2code.com"  
}
```

Customer  
REST  
Controller



# Application Interaction

Since new customer,  
we are not  
passing id / primary key

REST  
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  "firstName": "Juan",  
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```

Customer  
REST  
Controller

```
{  
  "id": 7,  
  "firstName": "Juan",  
  "lastName": "Perez",  
  "email": "juan.perez@luv2code.com"  
}
```



# Application Interaction

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REST  
Client

POST

/api/customers

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{  
  "firstName": "Juan",  
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}
```

Customer  
REST  
Controller

Response contains  
new id / primary key

```
{  
  "id": 7,  
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# Access the Request Body



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@PostMapping("/customers")
public Customer addCustomer(@RequestBody Customer theCustomer) {

    ...

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# Access the Request Body

- Jackson will convert request body from JSON to POJO
- **@RequestBody** annotation binds the POJO to a method parameter

```
@PostMapping("/customers")  
public Customer addCustomer(@RequestBody Customer theCustomer) {  
  
    ...  
  
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```

Now we can access the request body as a POJO



# Add Customer

**File: CustomerRestController.java**



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```
@RestController
@RequestMapping("/api")
public class CustomerRestController {
    ...

    // add mapping for POST /customers - add new customer

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Use **@RequestBody** to access the request body as a POJO



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        theCustomer.setId(0);

        customerService.saveCustomer(theCustomer);

        return theCustomer;
    }
}
```



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Delegate call  
to customer service



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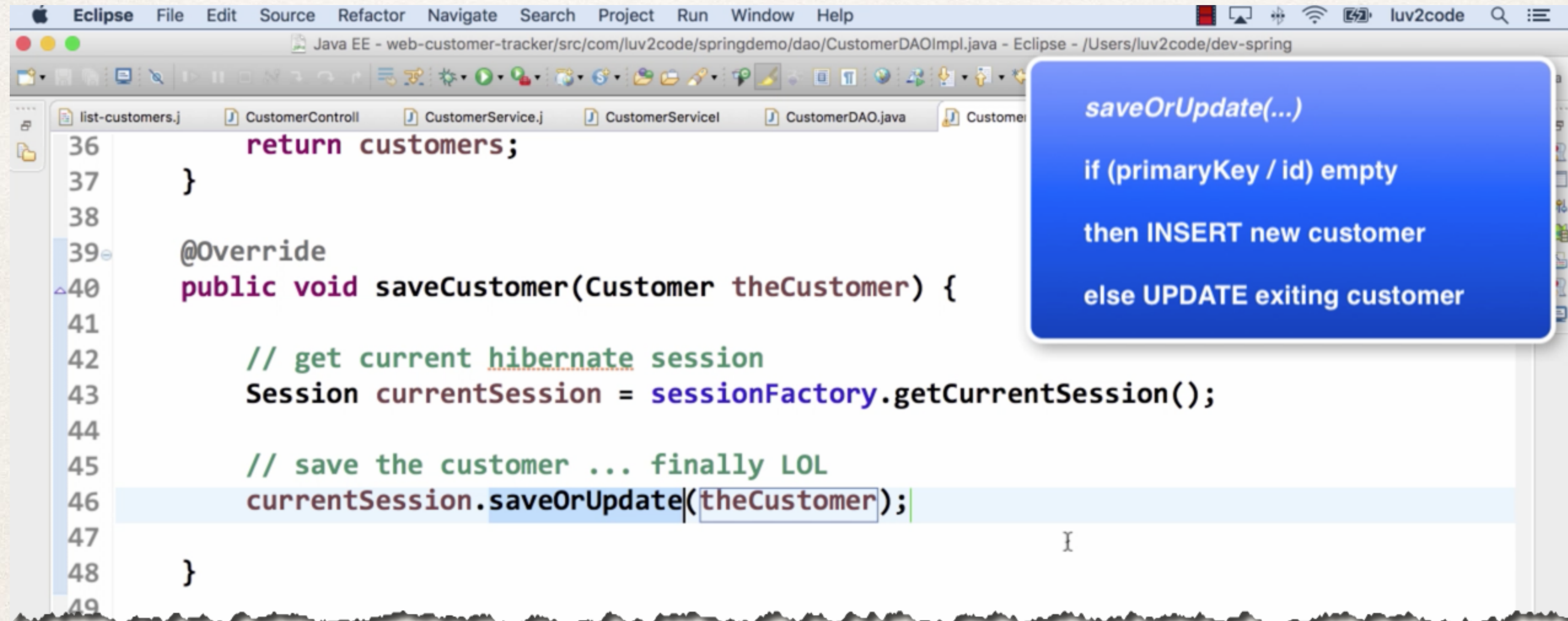
- In the REST controller, we explicitly set the customer id to 0
- Because our backend DAO code uses Hibernate method
  - `session.saveOrUpdate(...)`



# Recall: CustomerDAOImpl



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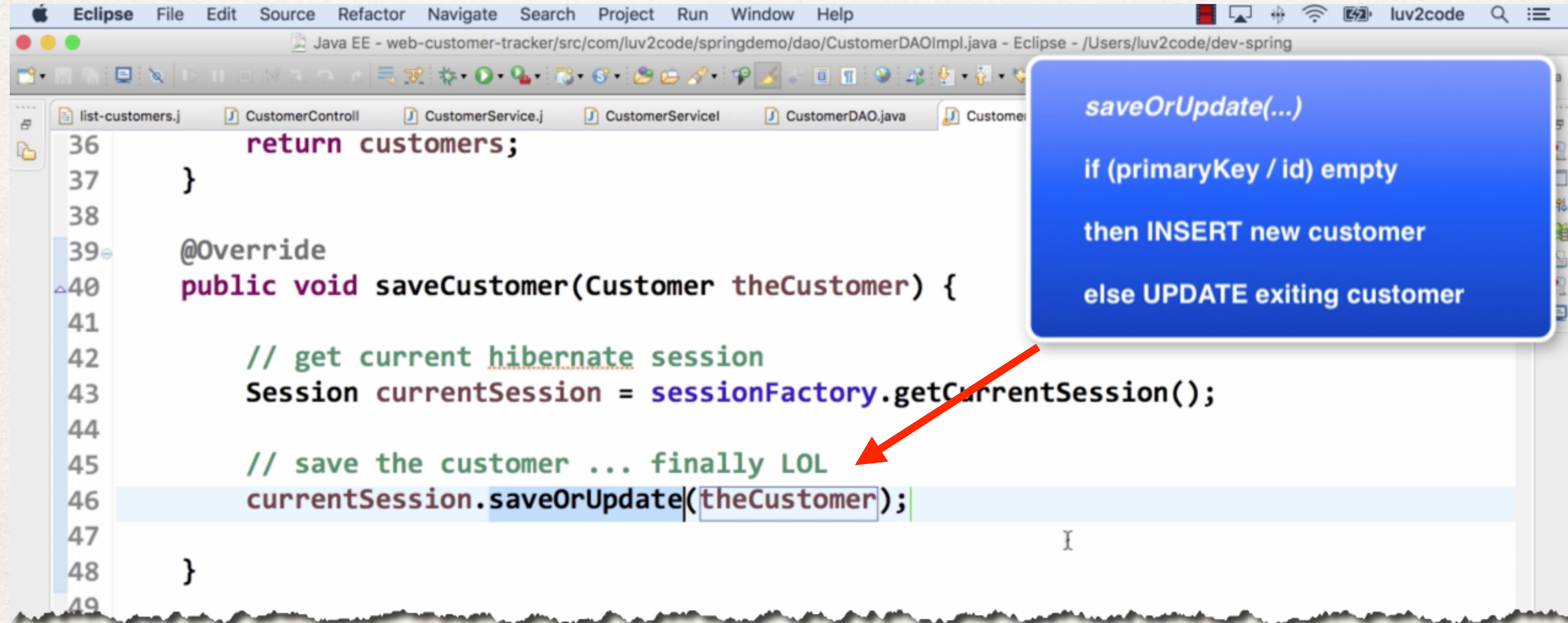


```
36     return customers;
37 }
38
39 @Override
40 public void saveCustomer(Customer theCustomer) {
41
42     // get current hibernate session
43     Session currentSession = sessionFactory.getCurrentSession();
44
45     // save the customer ... finally LOL
46     currentSession.saveOrUpdate(theCustomer);
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48 }
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```

*saveOrUpdate(...)*  
if (primaryKey / id) empty  
then INSERT new customer  
else UPDATE exiting customer



# Recall: CustomerDAOImpl



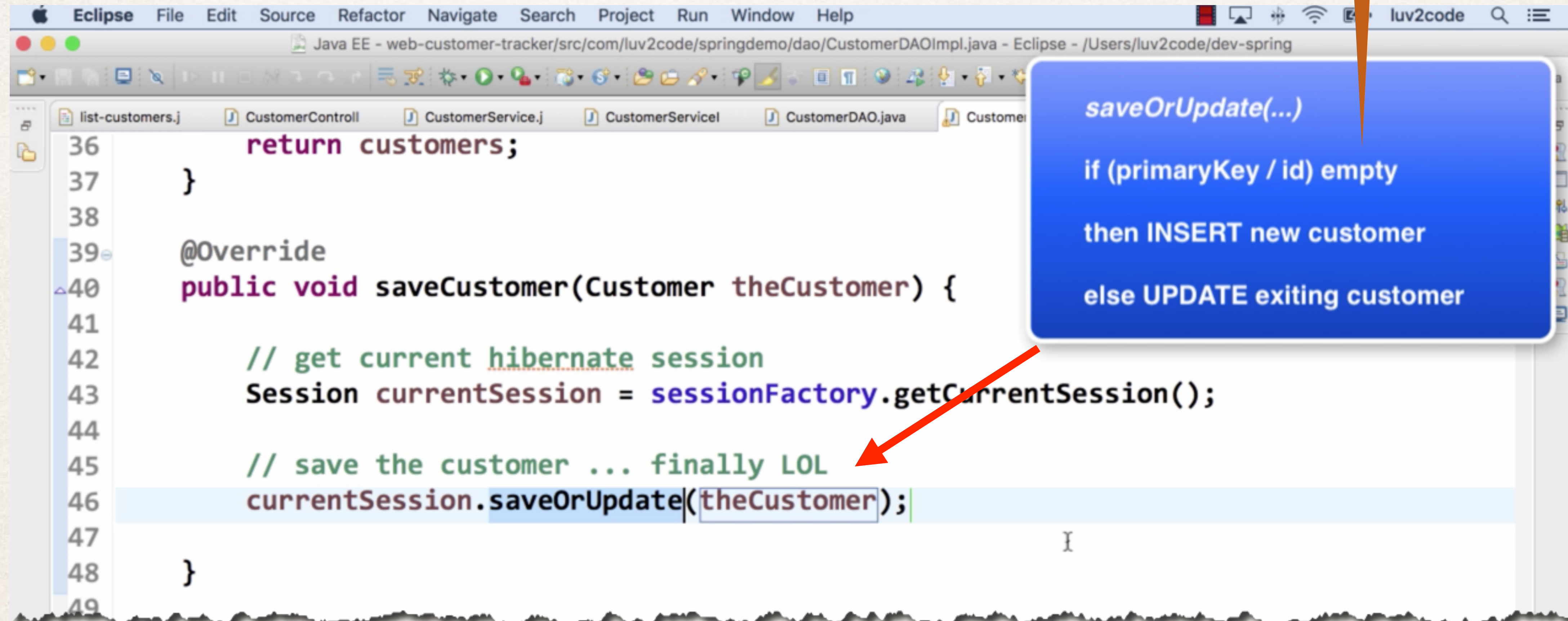
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# Recall: CustomerDAOImpl

Here: “empty” means  
null or 0



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# Adding customer with HTTP POST

- If REST client is sending a request to “add”, using HTTP POST
- Then we ignore any id sent in the request
- We overwrite the id with 0, to effectively set it to null / empty
- Then our backend DAO code will “INSERT” new customer



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```

ID of 0 means  
DAO code will  
“INSERT” new customer



# Sending JSON to Spring REST Controllers



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# Sending JSON to Spring REST Controllers

- When sending JSON data to Spring REST Controllers
- For controller to process JSON data, need to set a HTTP request header
  - `Content-type: application/json`
- Need to configure REST client to send the correct HTTP request header



# Postman - Sending JSON in Request Body



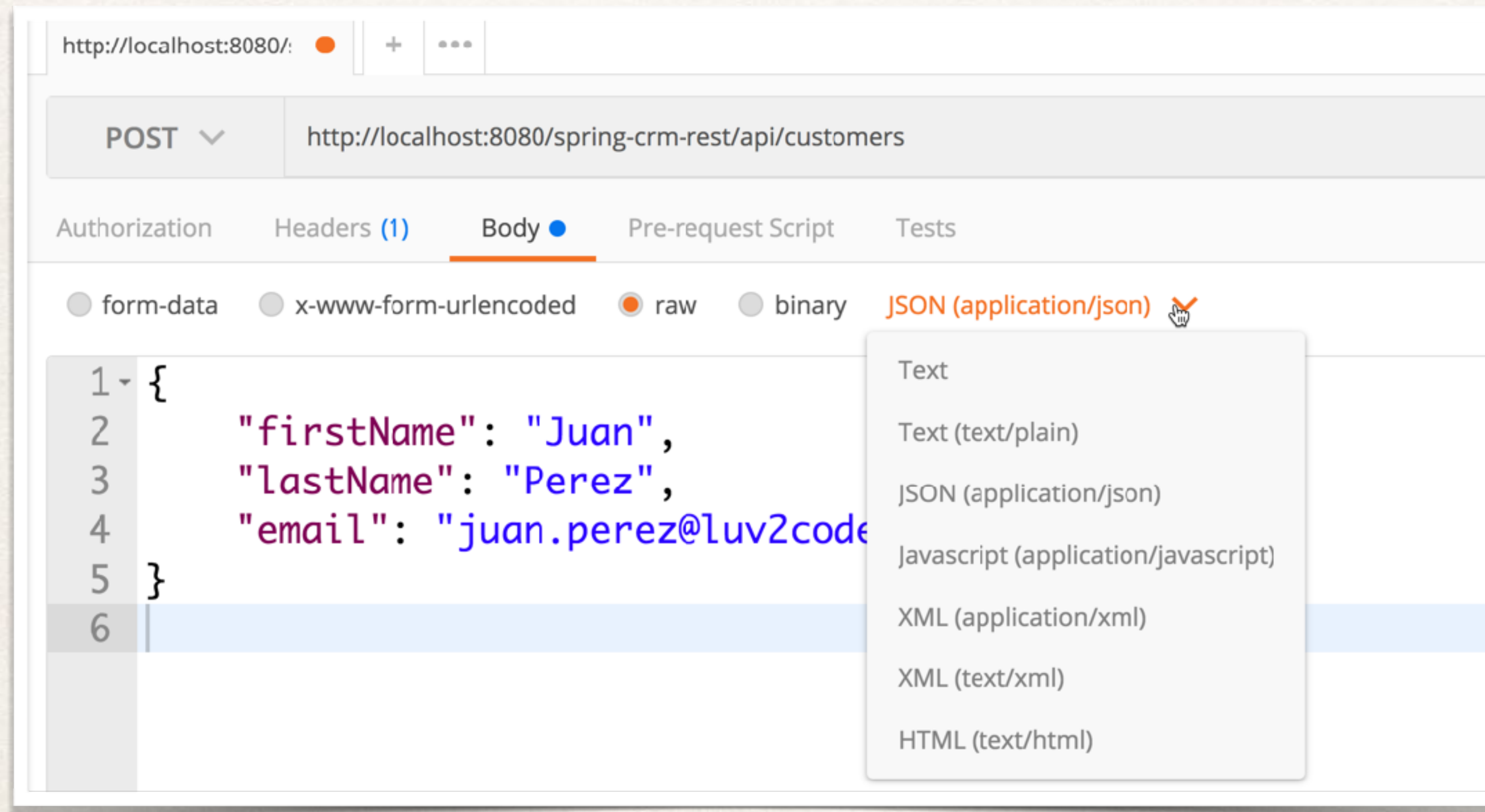
# Postman - Sending JSON in Request Body

- Must set HTTP request header in Postman



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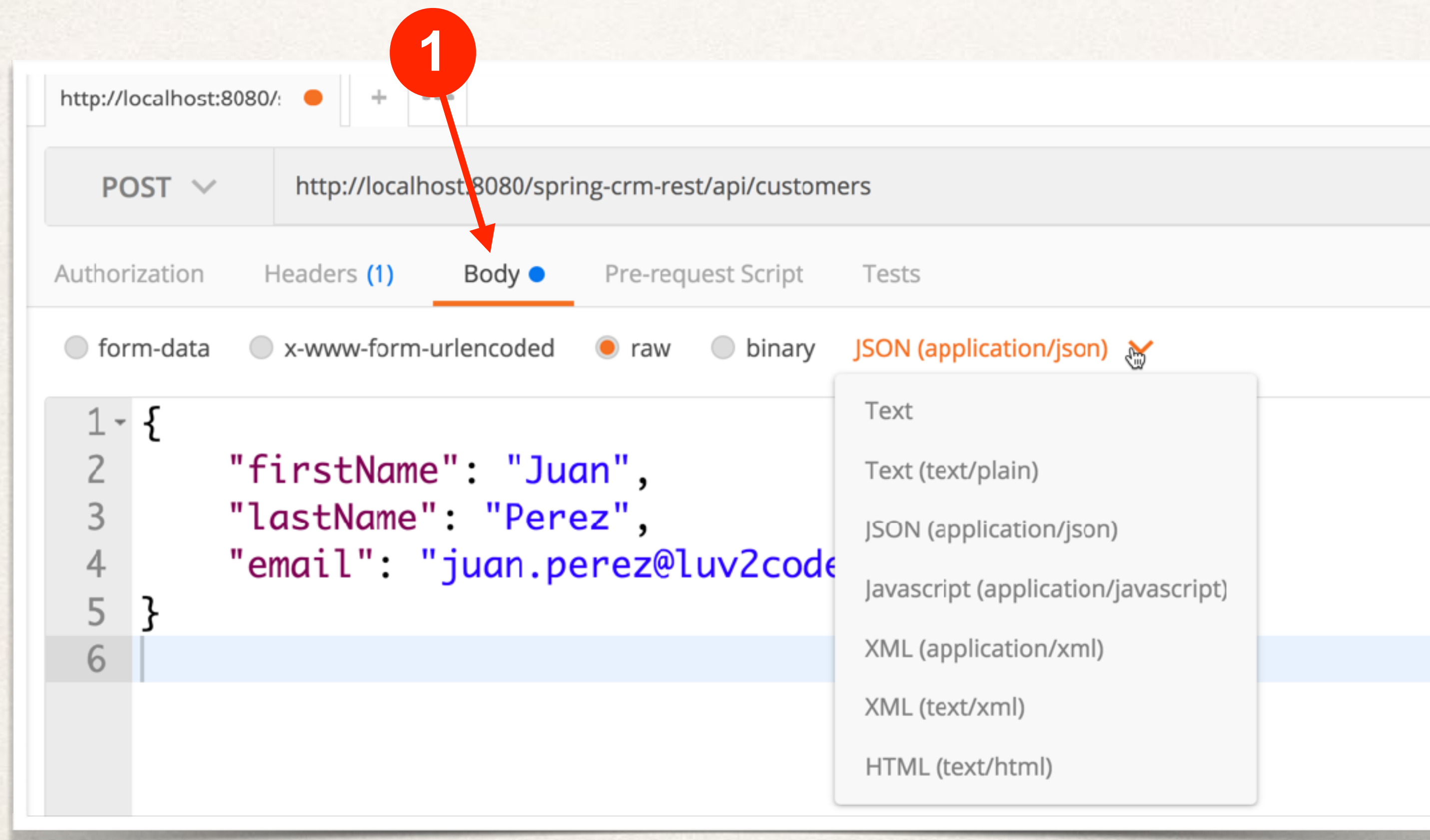
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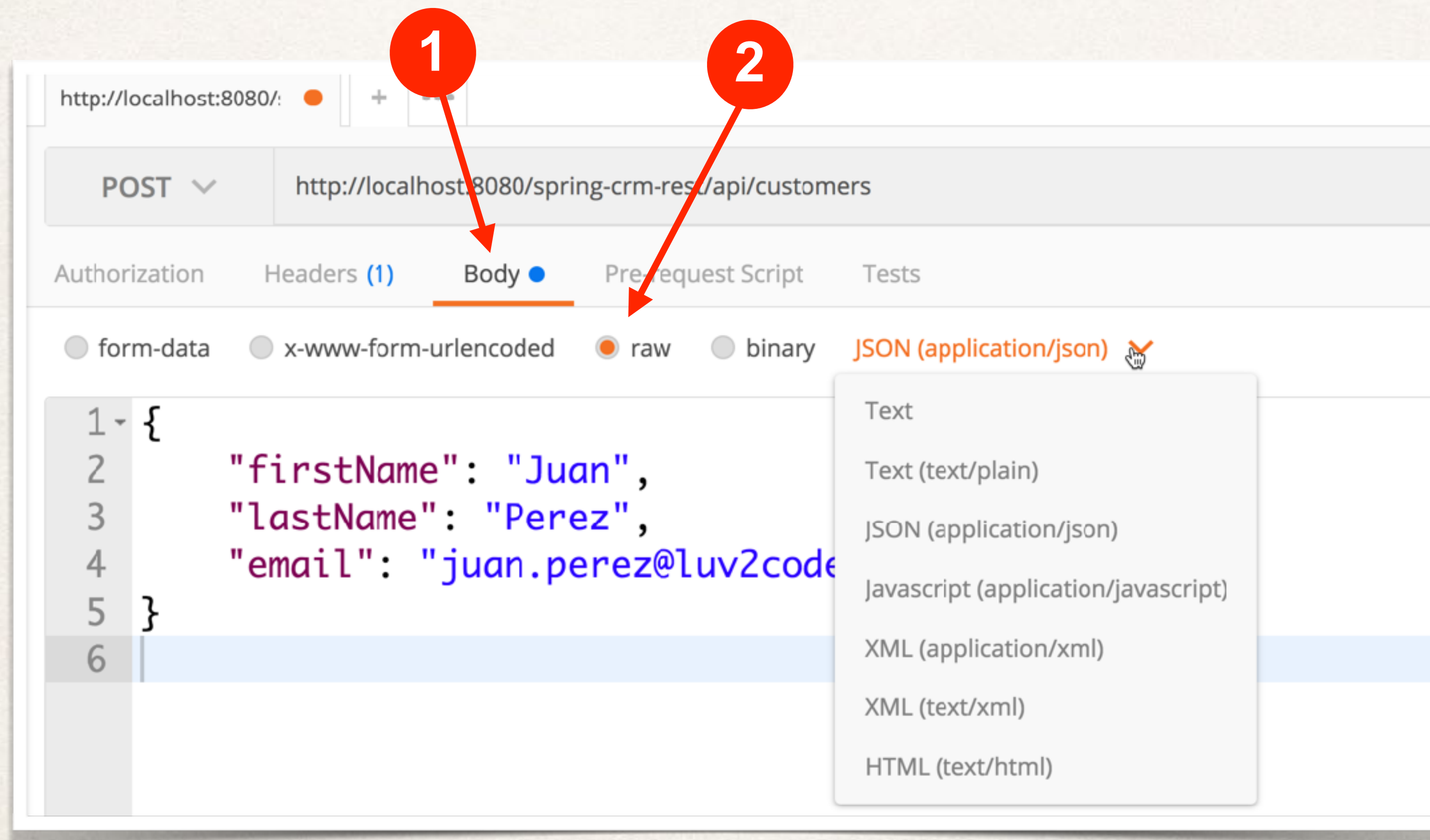
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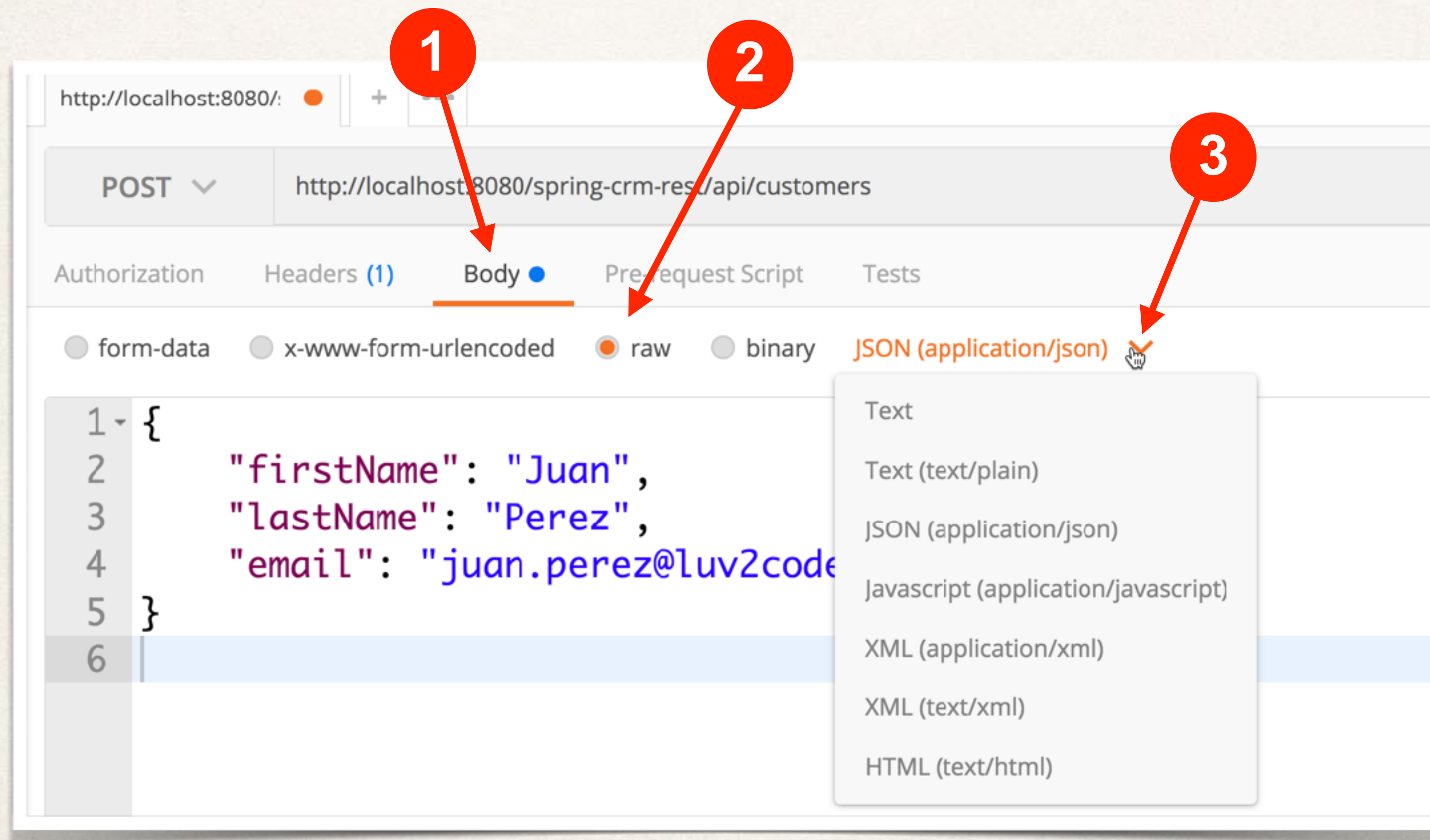
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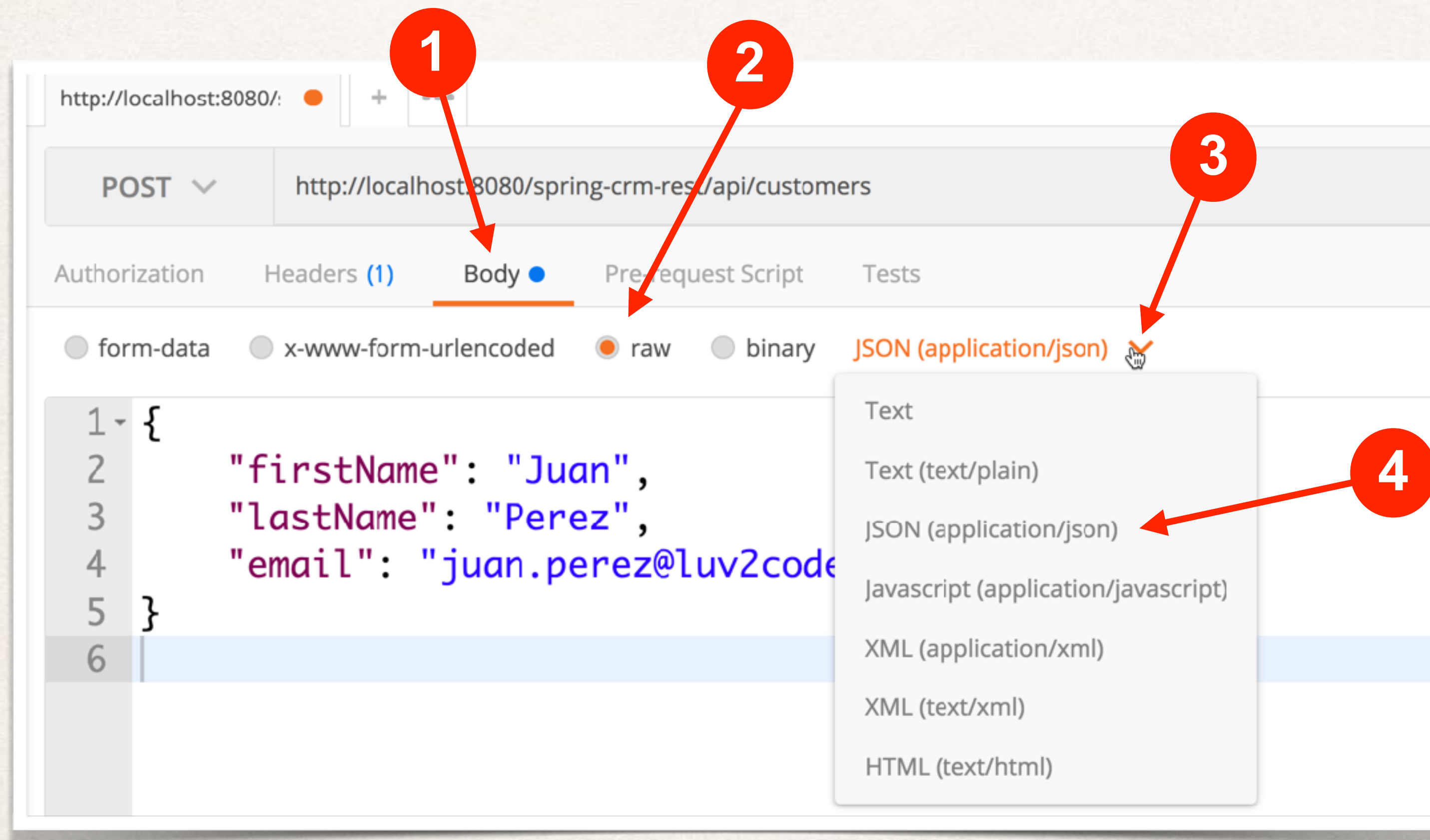
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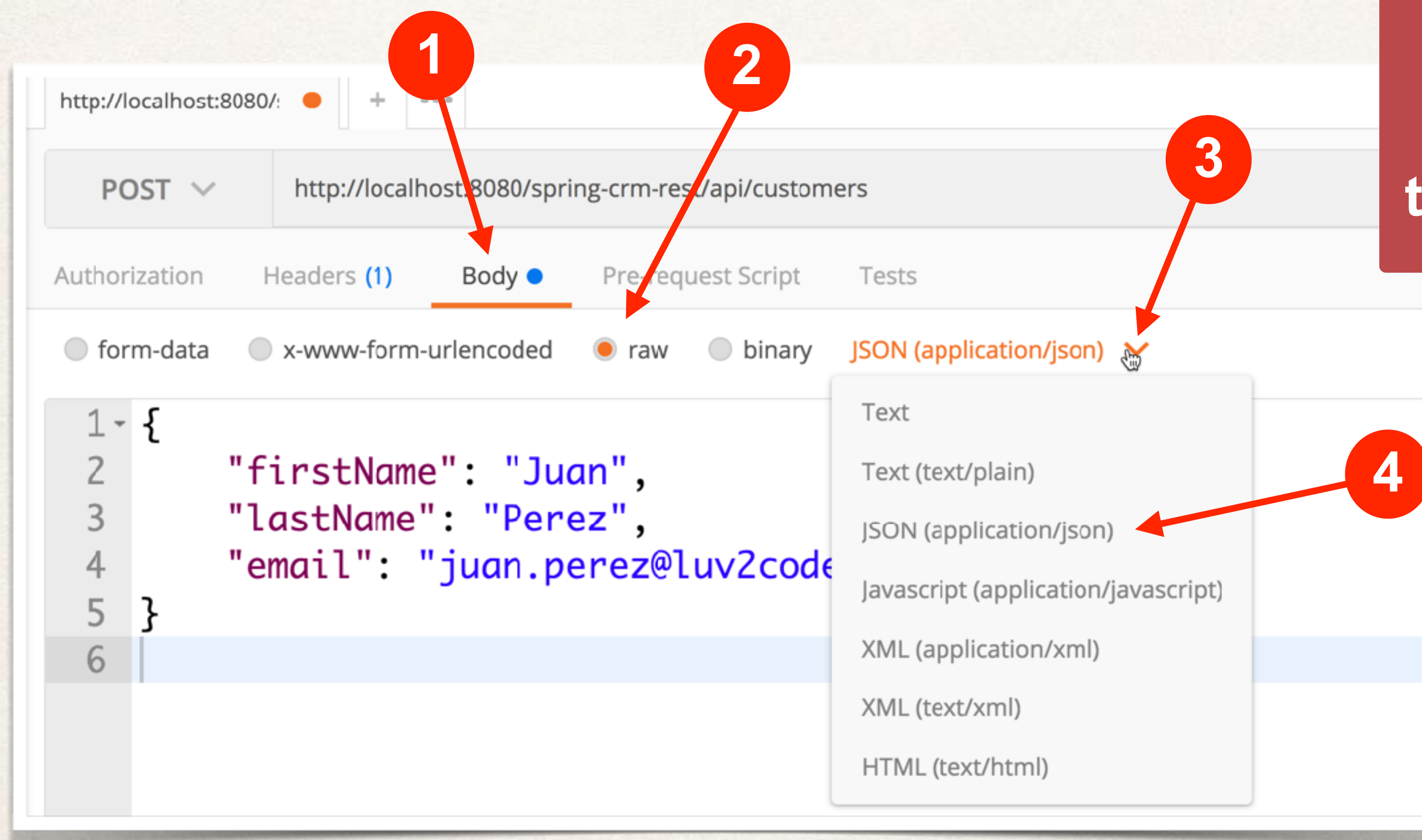
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Based on these configs,  
Postman will automatically set  
the correct HTTP request header