Spring REST Service - Students

Create a New Service

Create a New Service

- Return a list of students

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GET `/api/students` *Returns a list of students*

Spring REST Service

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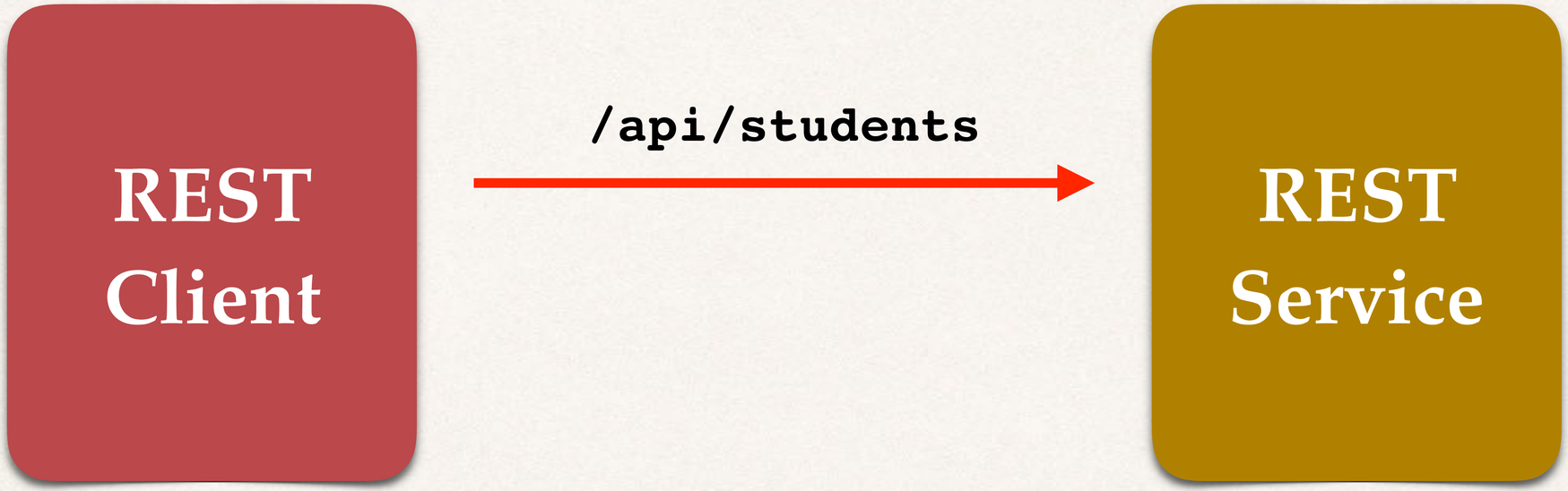

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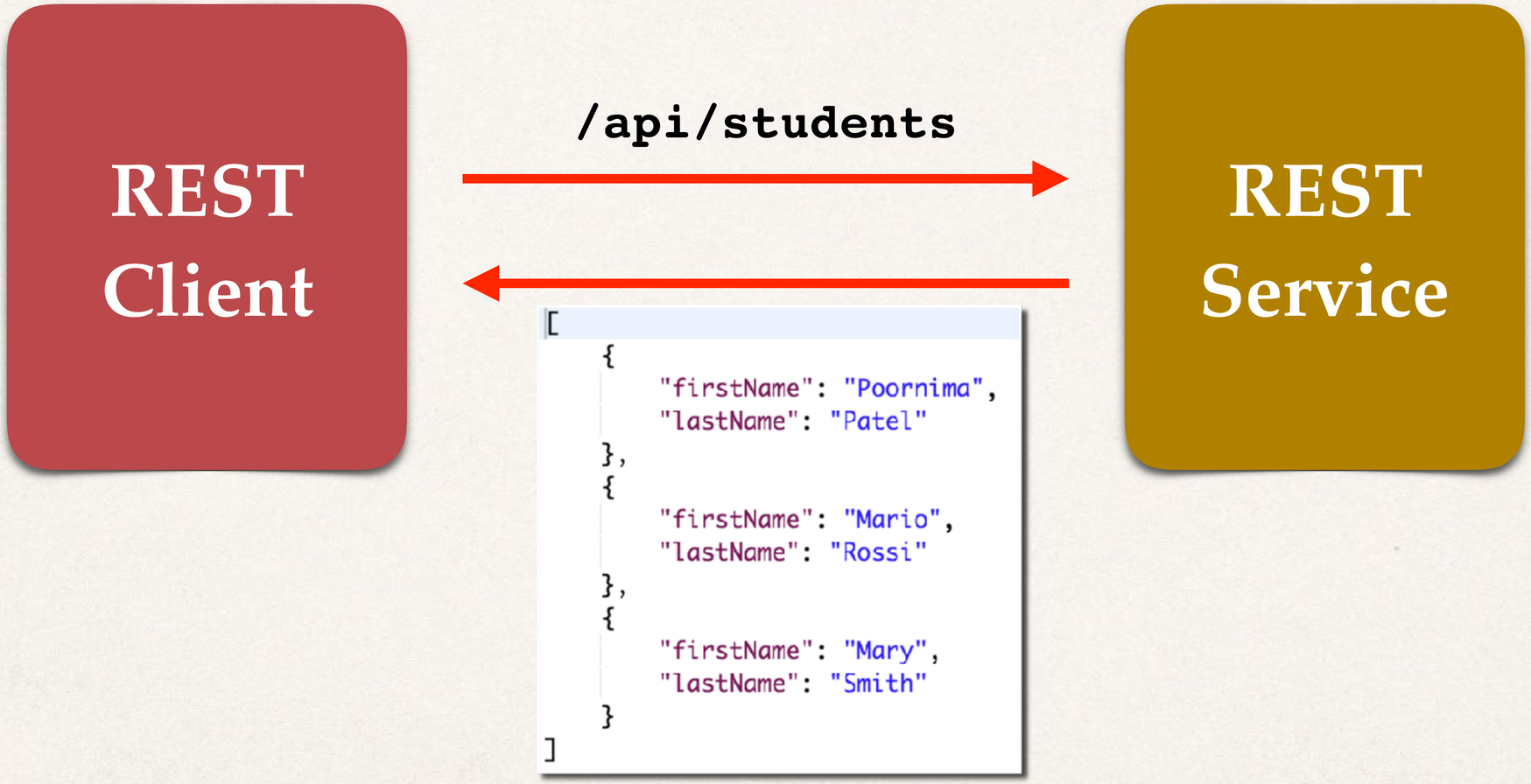

Spring REST Service

We will write this code

REST Client

/api/students

REST Service

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REST Client

/api/students

REST Service

Web Browser Or Postman

Convert Java POJO to JSON

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- Need to convert **`List<Student>`** to JSON

Convert Java POJO to JSON

- Our REST Service will return **`List<Student>`**
- Need to convert **`List<Student>`** to JSON
- **Jackson** can help us out with this …

Spring and Jackson Support

Remember

Spring and Jackson Support

- Spring will automatically handle **Jackson** integration

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Spring and Jackson Support

Happens automatically behind the scenes

- Spring will automatically handle **Jackson** integration
- As long as the **Jackson** project is on the classpath or pom.xml
- JSON data being passed to REST controller is converted to Java POJO
- Java POJO being returned from REST controller is converted to JSON

Student POJO (class)

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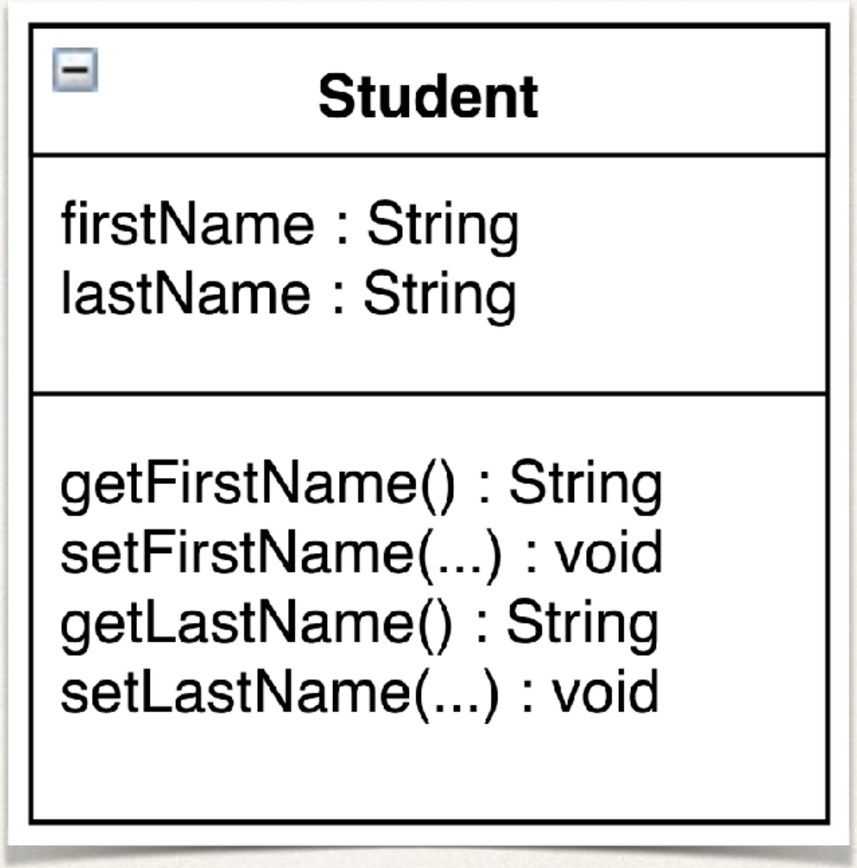
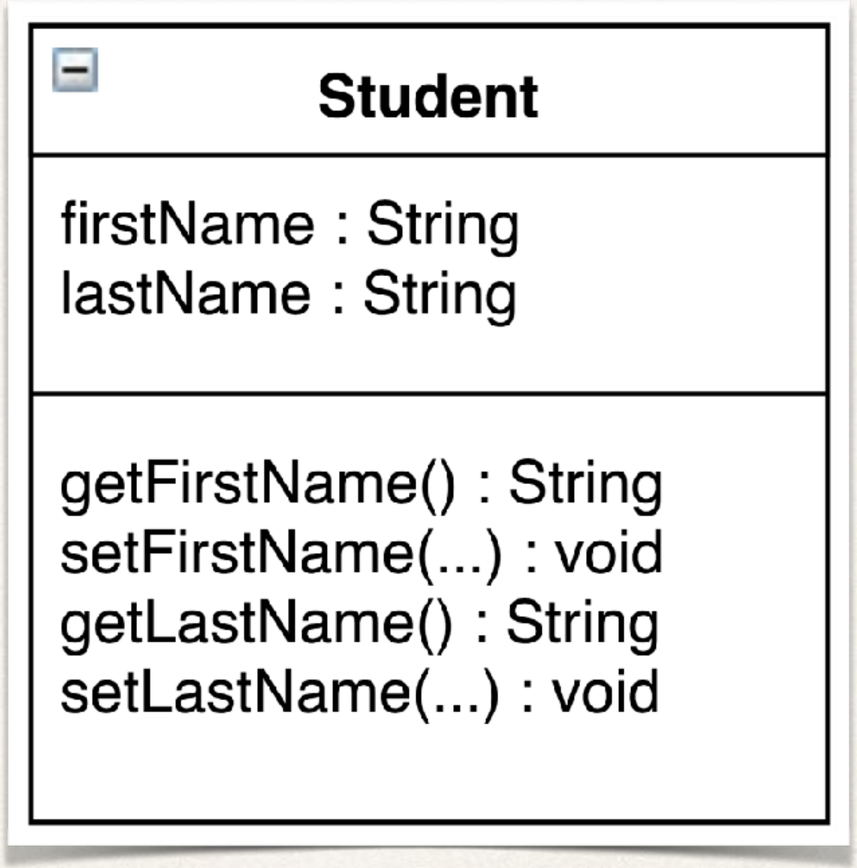


Student POJO (class)

Java
POJO

Student



Jackson Data Binding

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- Jackson will call appropriate getter/setter method

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```
{
  "id": 14,

  "firstName": "Mario",

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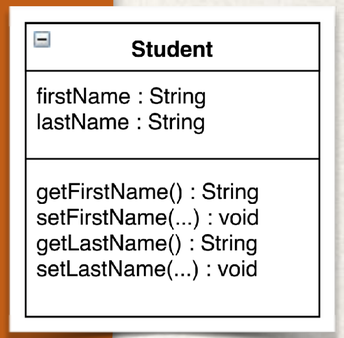
Java
POJO

Student



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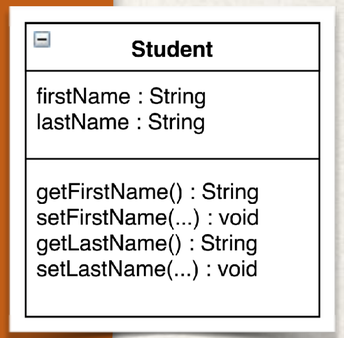

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firstName : String lastName : String
getFirstName() : String setFirstName(...) : void getLastName() : String setLastName(...) : void

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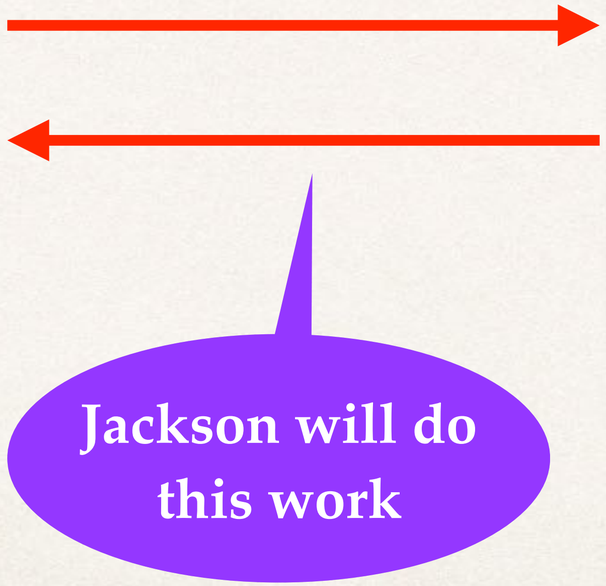

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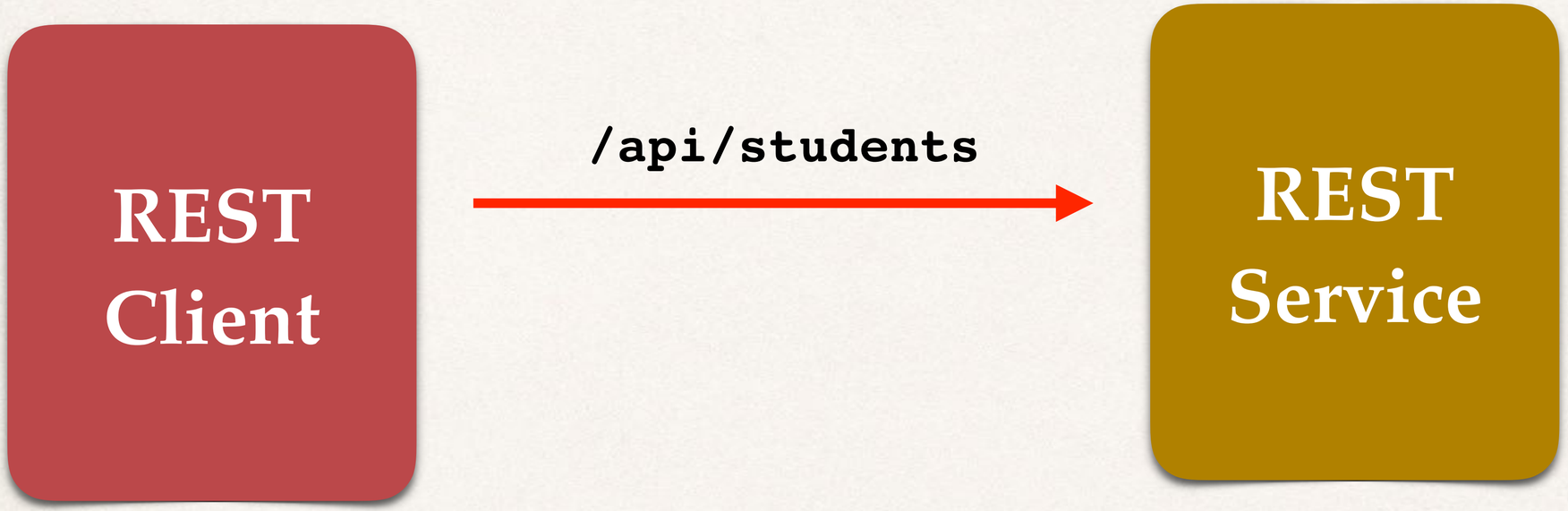

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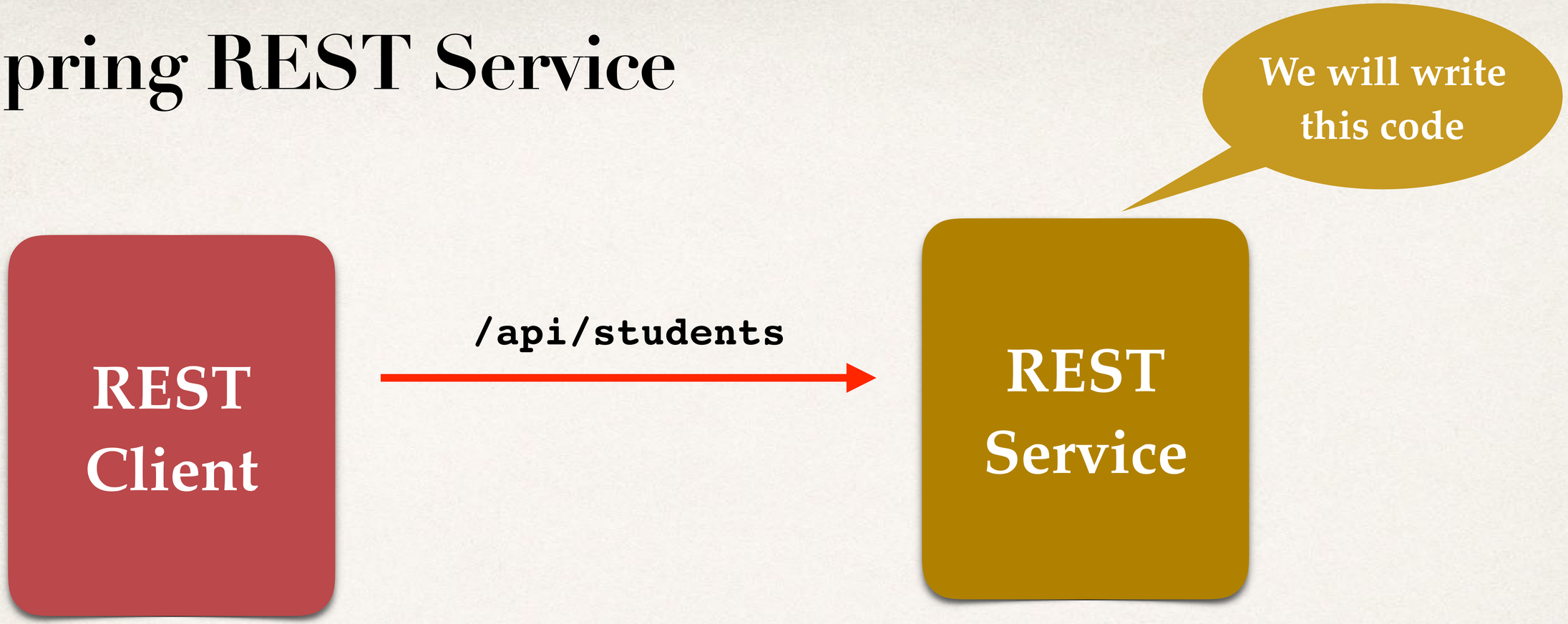

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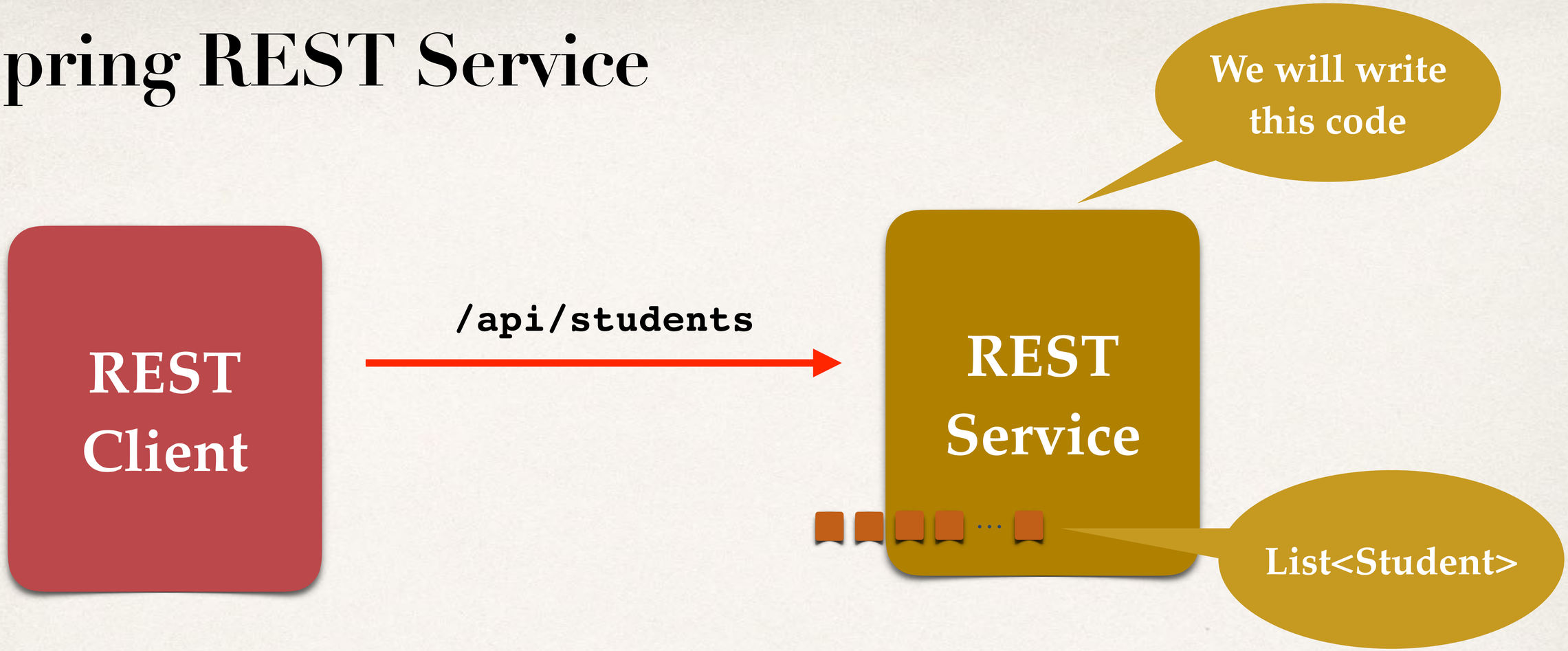

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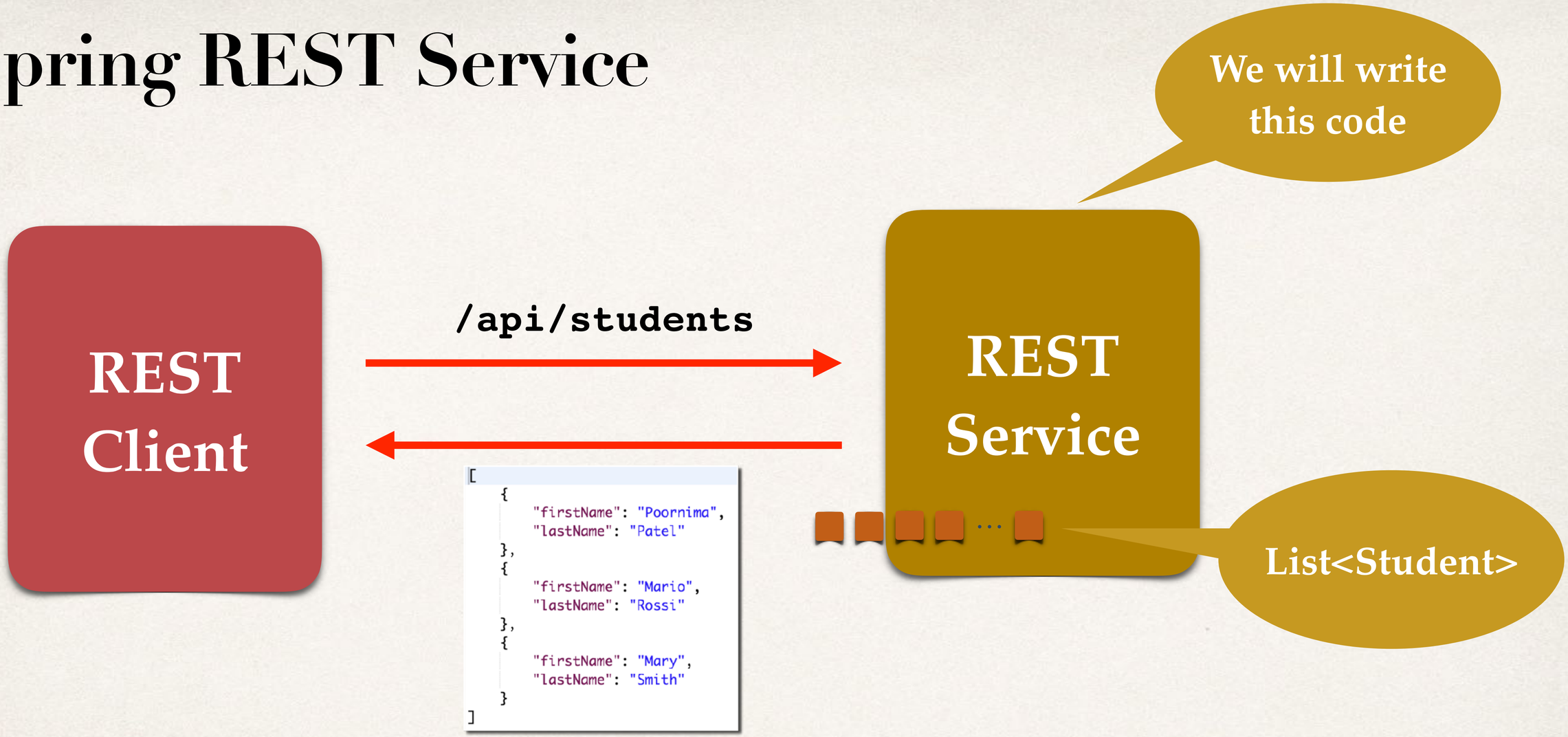

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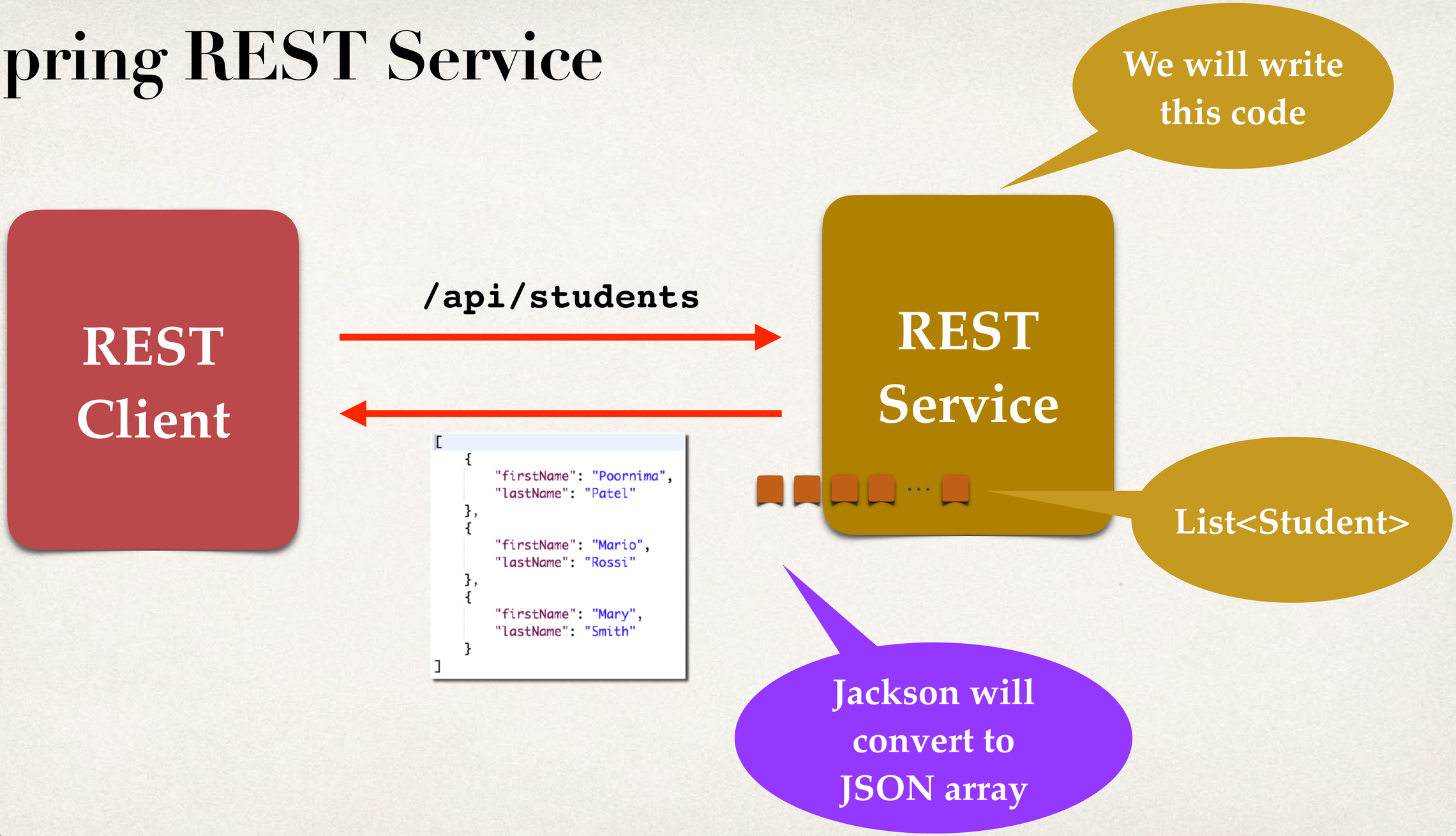

Behind the scenes

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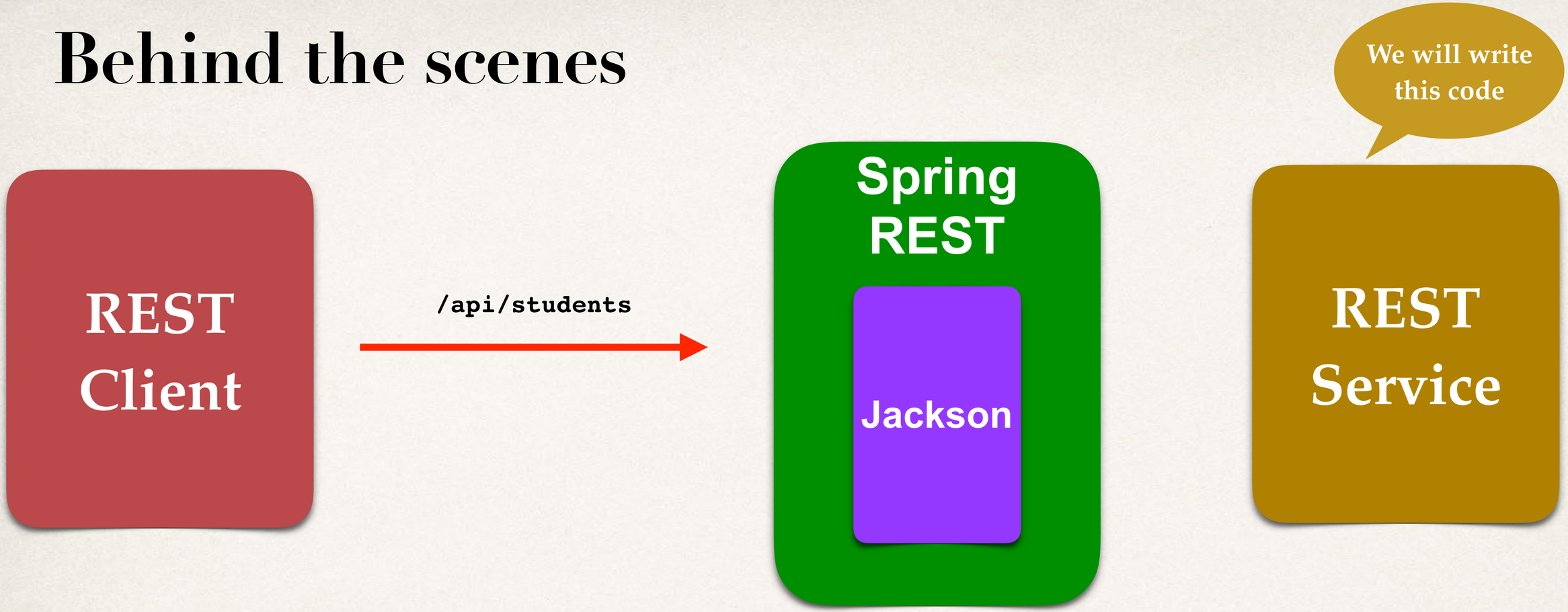

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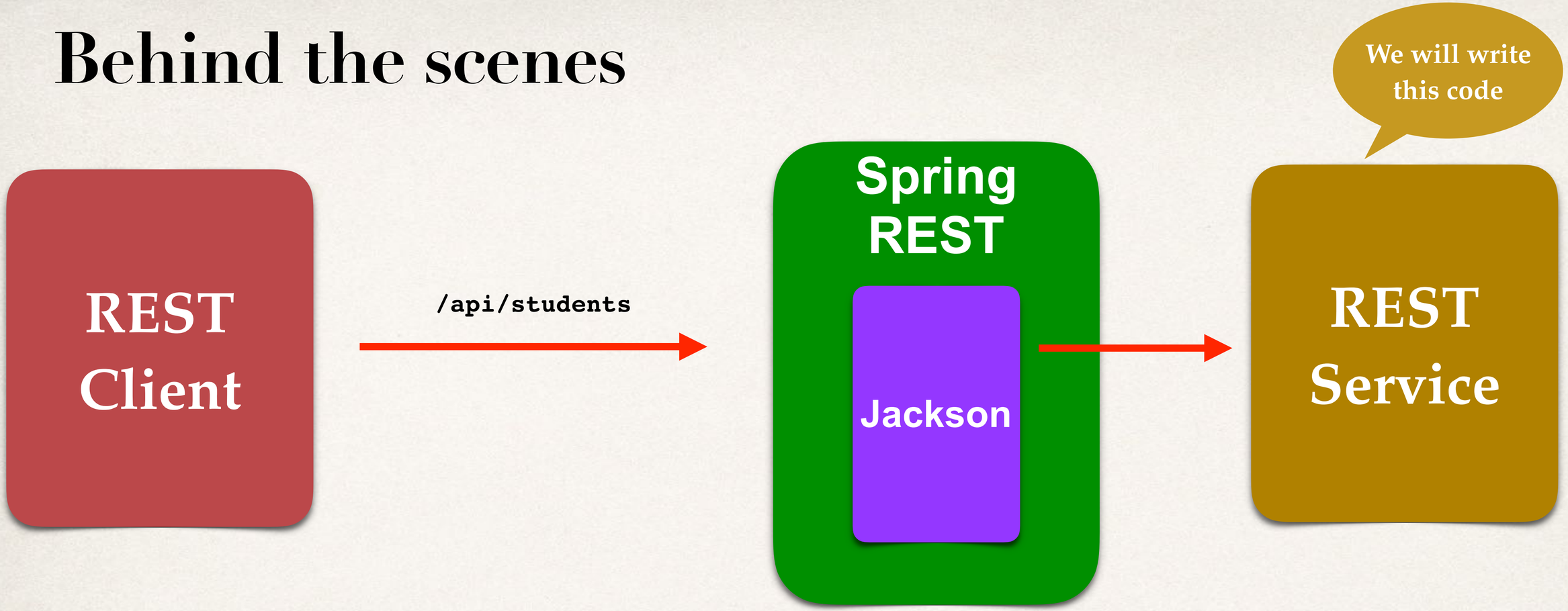

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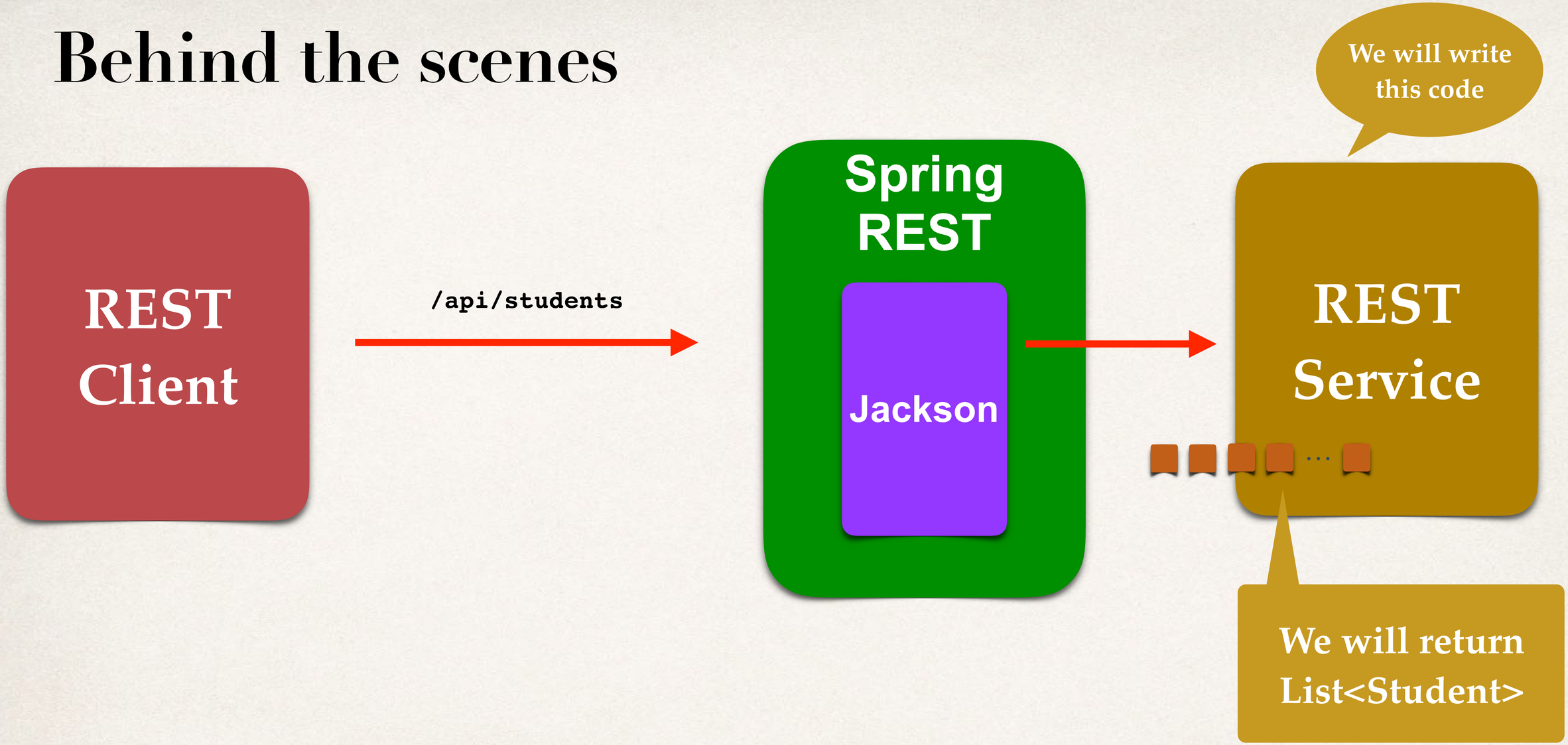

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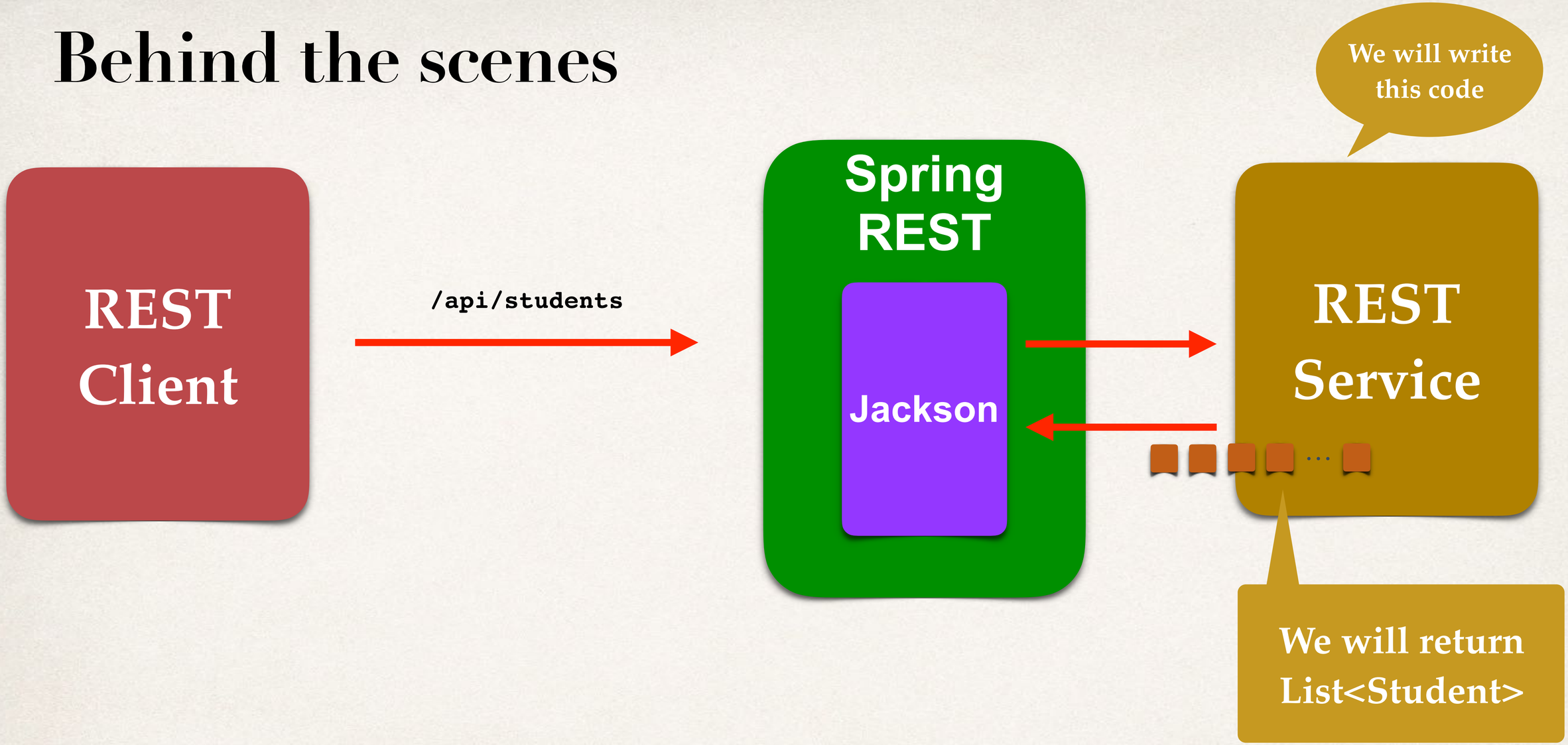

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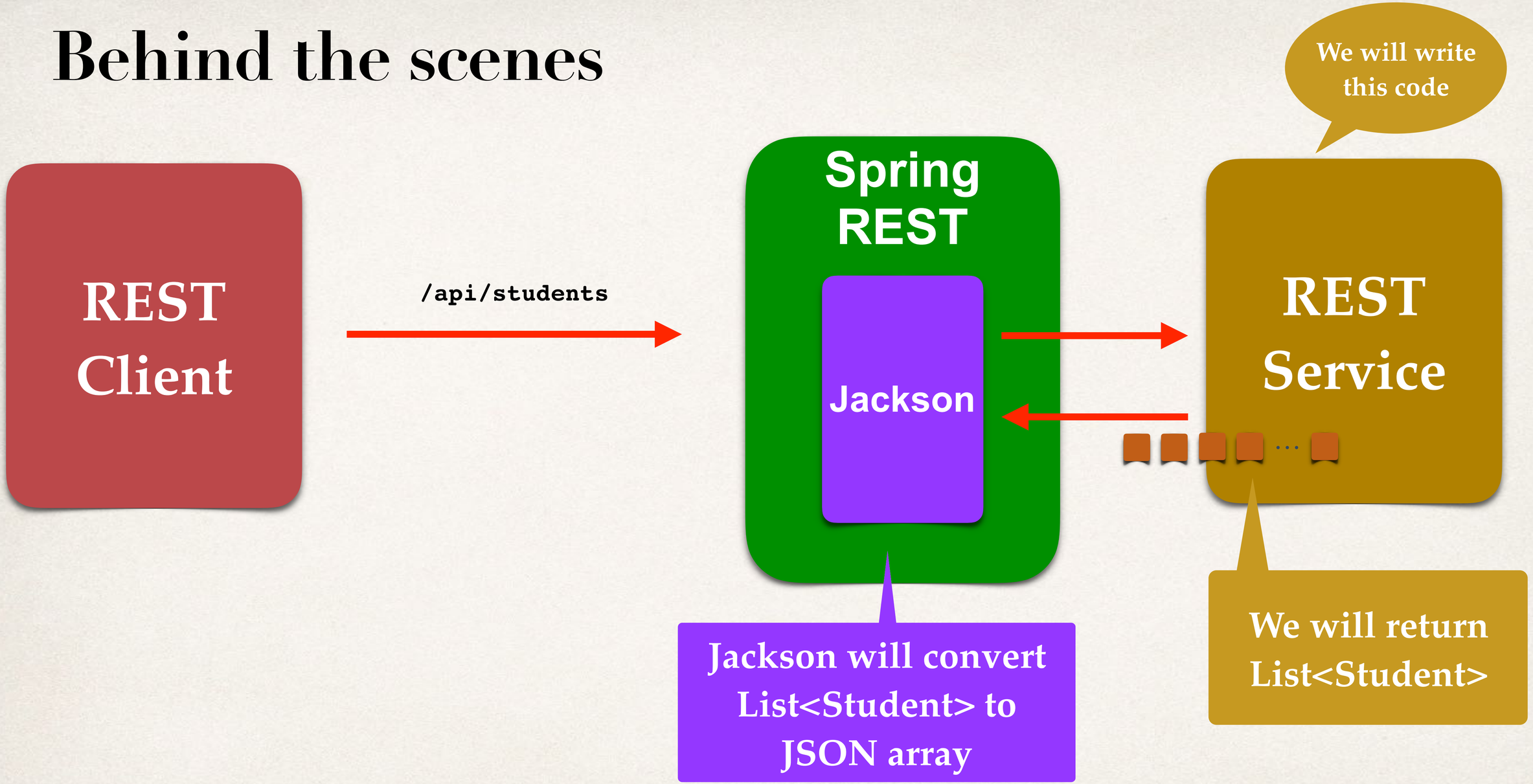

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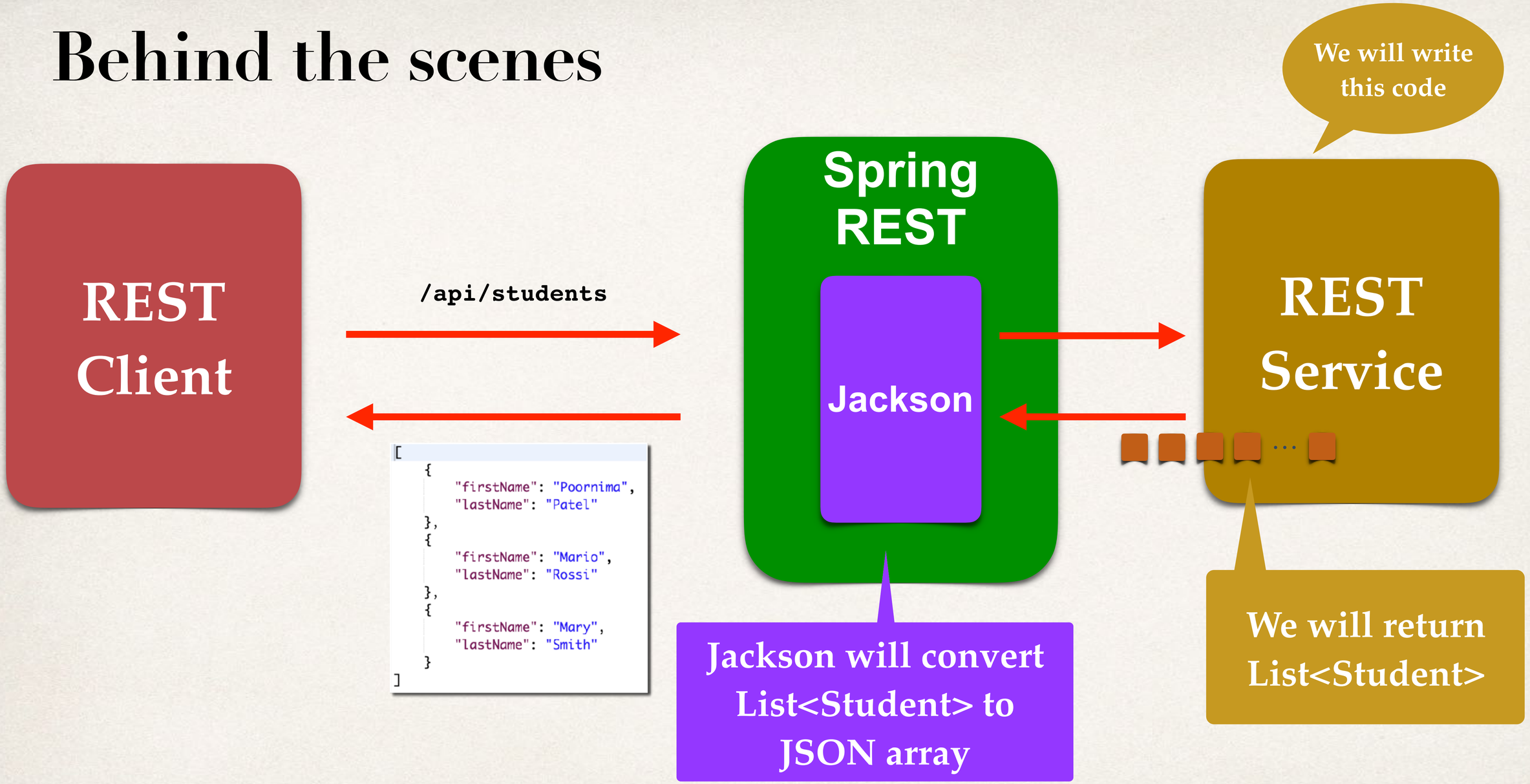

Development Process

Step-By-Step

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1. Create Java POJO class for **Student**

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Step-By-Step

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2. Create Spring REST Service using **@RestController**

Step 1: Create Java POJO class for Student

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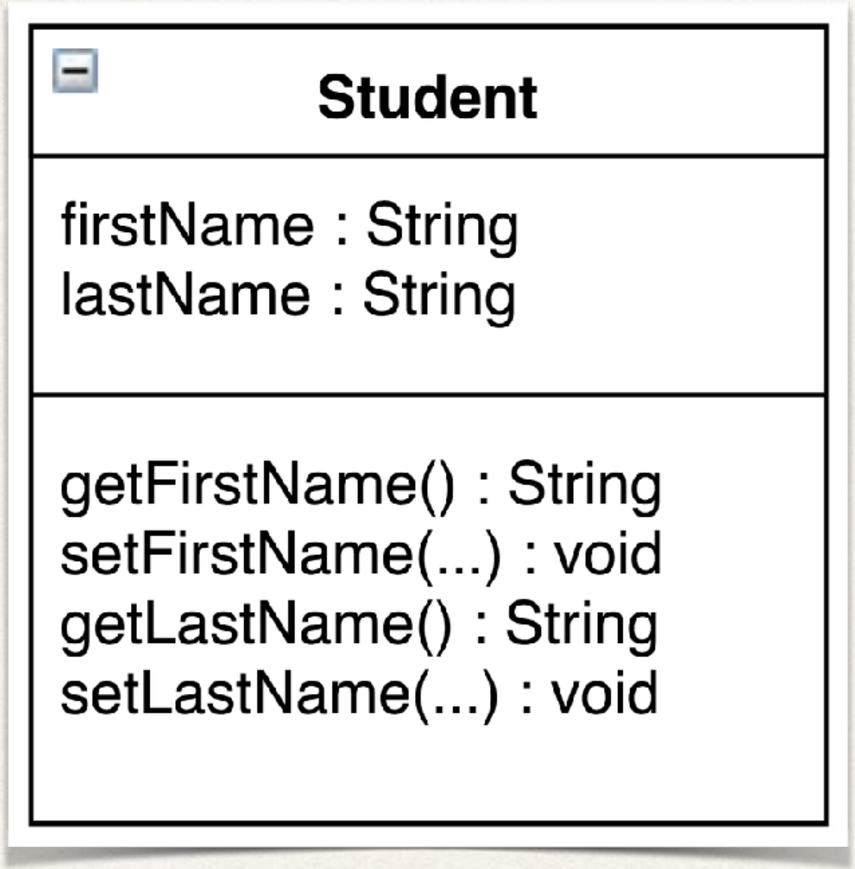

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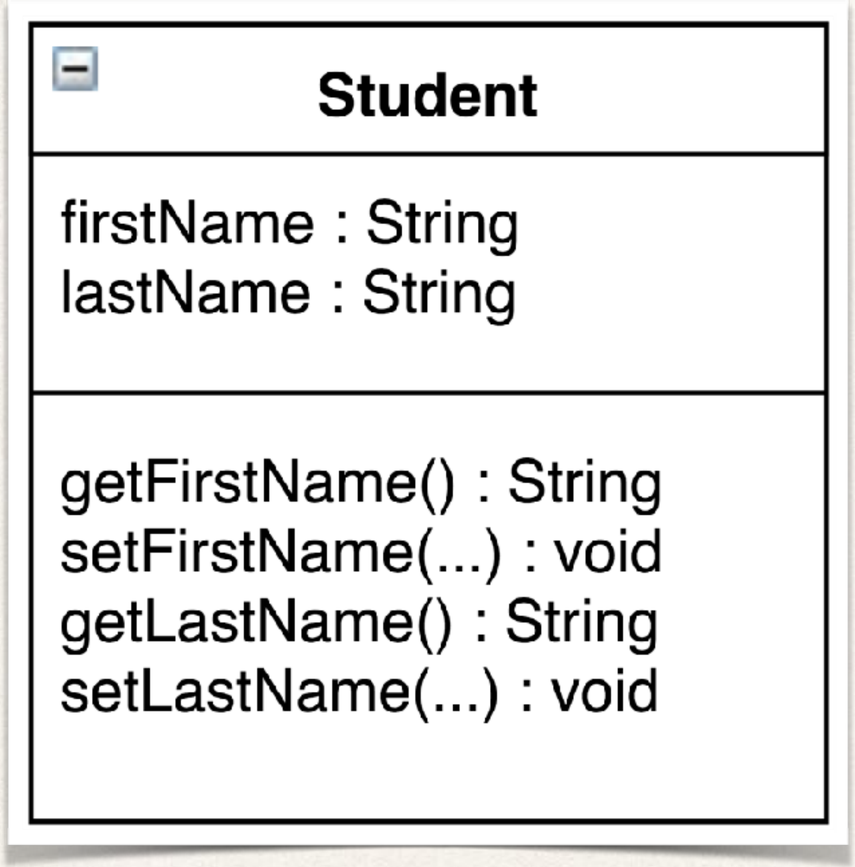

File: Student.java

```
public class Student {

    private String firstName;
    private String lastName;

    public Student() {

    }

    public Student(String firstName, String lastName) {
        this.firstName = firstName;
        this.lastName = lastName;
    }

    public String getFirstName() {
        return firstName;
    }

    public void setFirstName(String firstName) {
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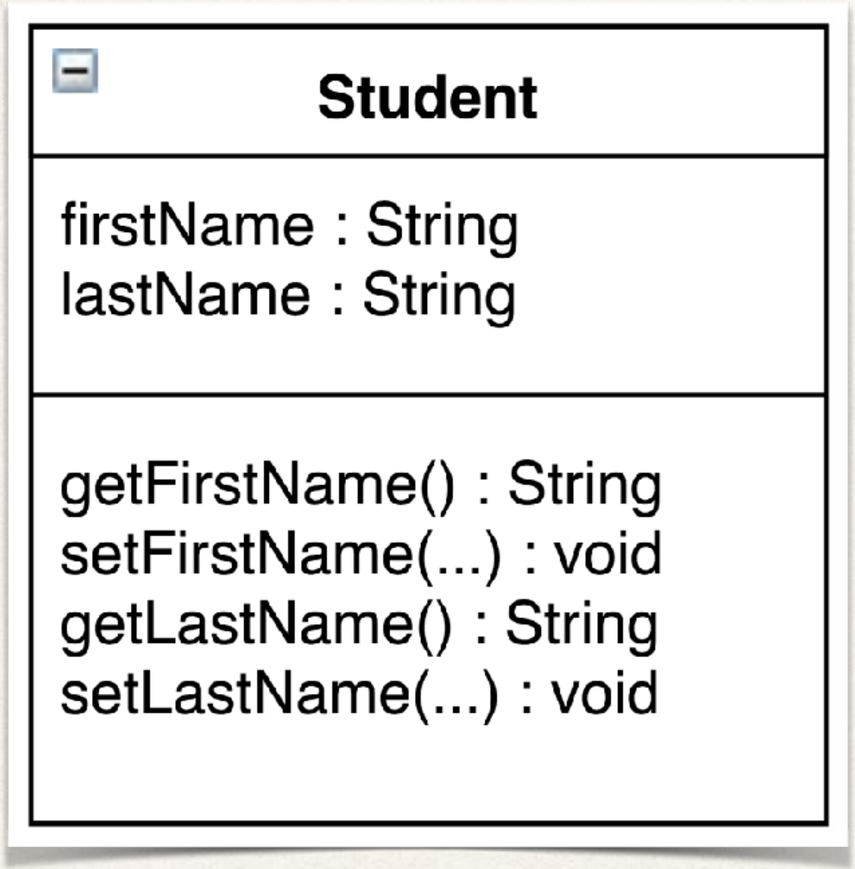

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```

Fields
Constructors
Getter/Setters

Step 2: Create @RestController

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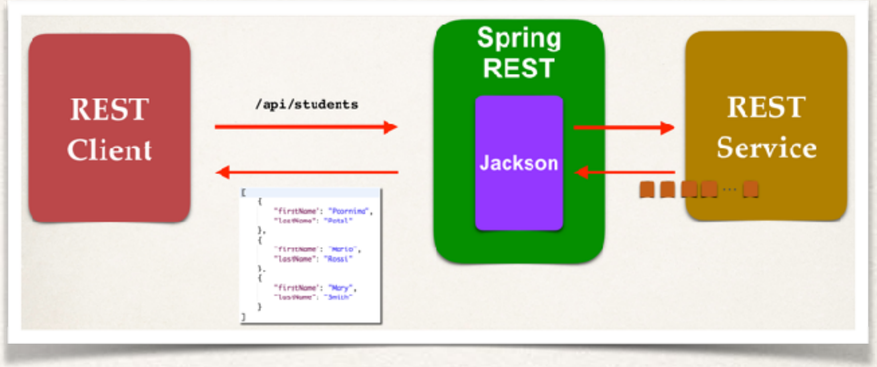

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File: StudentRestController.java

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@RestController
@RequestMapping("/api")
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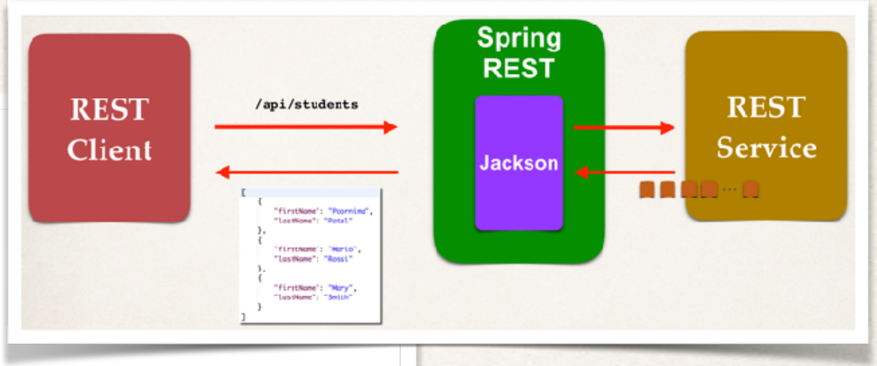

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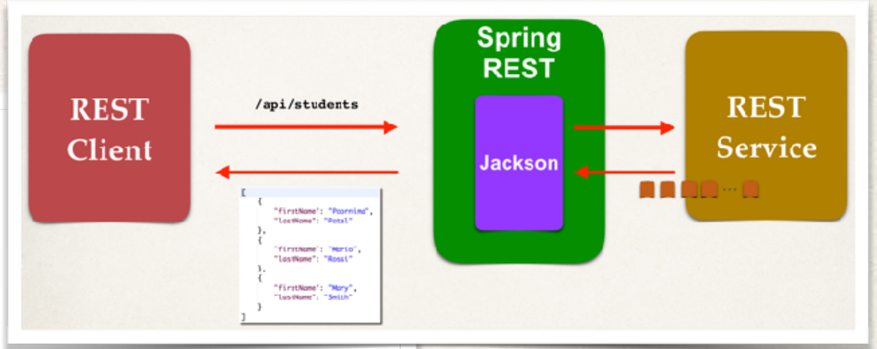

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   @GetMapping("/students")
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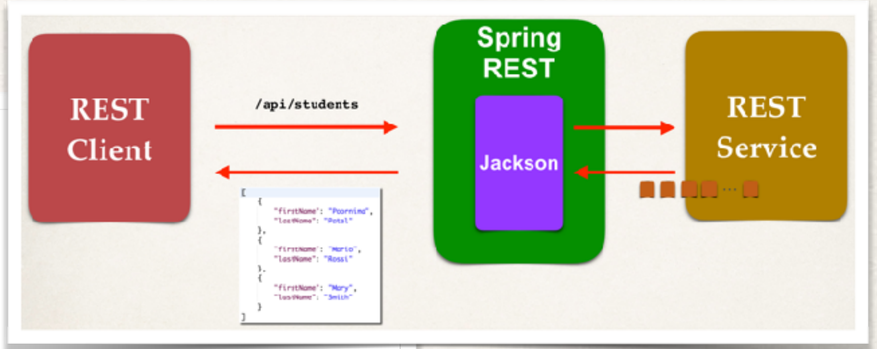

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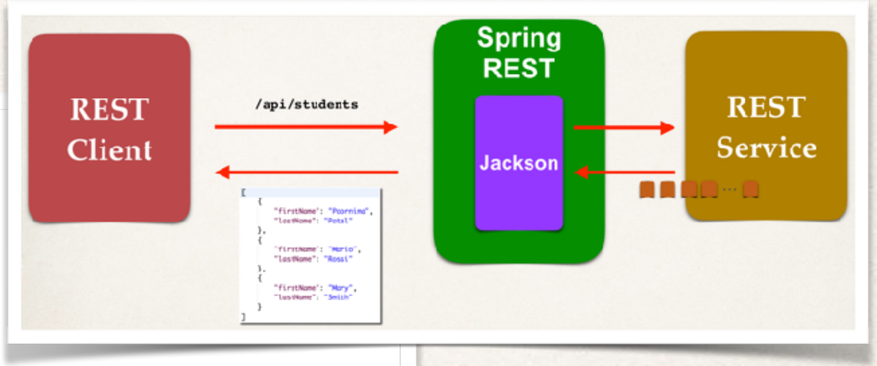

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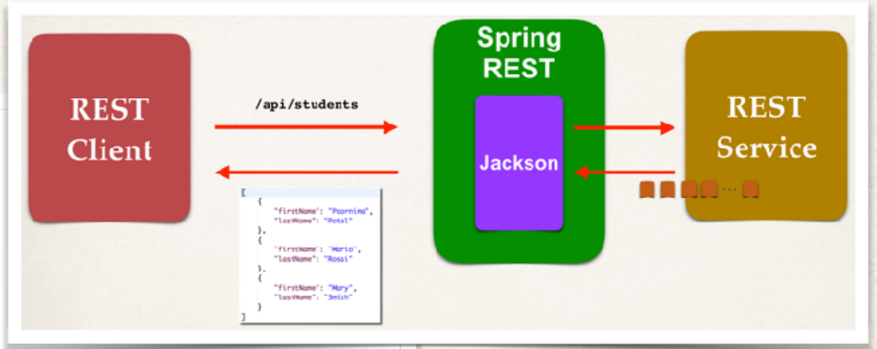

We'll hard code for now … can add DB later …

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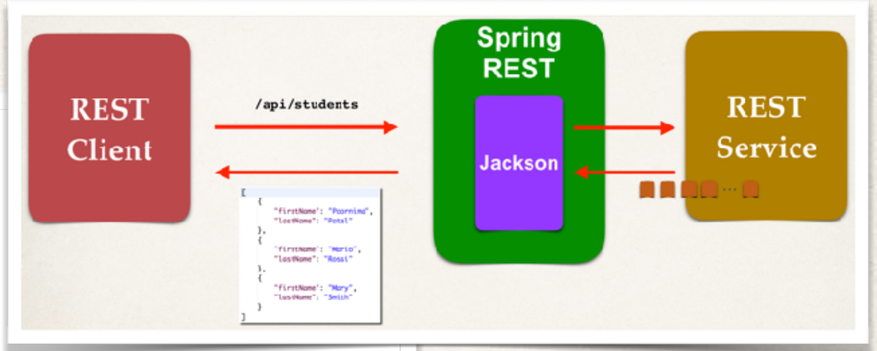

Jackson will convert List<Student> to JSON array