Spring REST - Exception Handling

Remember our problem?

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- Bad student id of 9999 …

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Scary HTML error page

We really want this …

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- Handle the exception and return error as JSON

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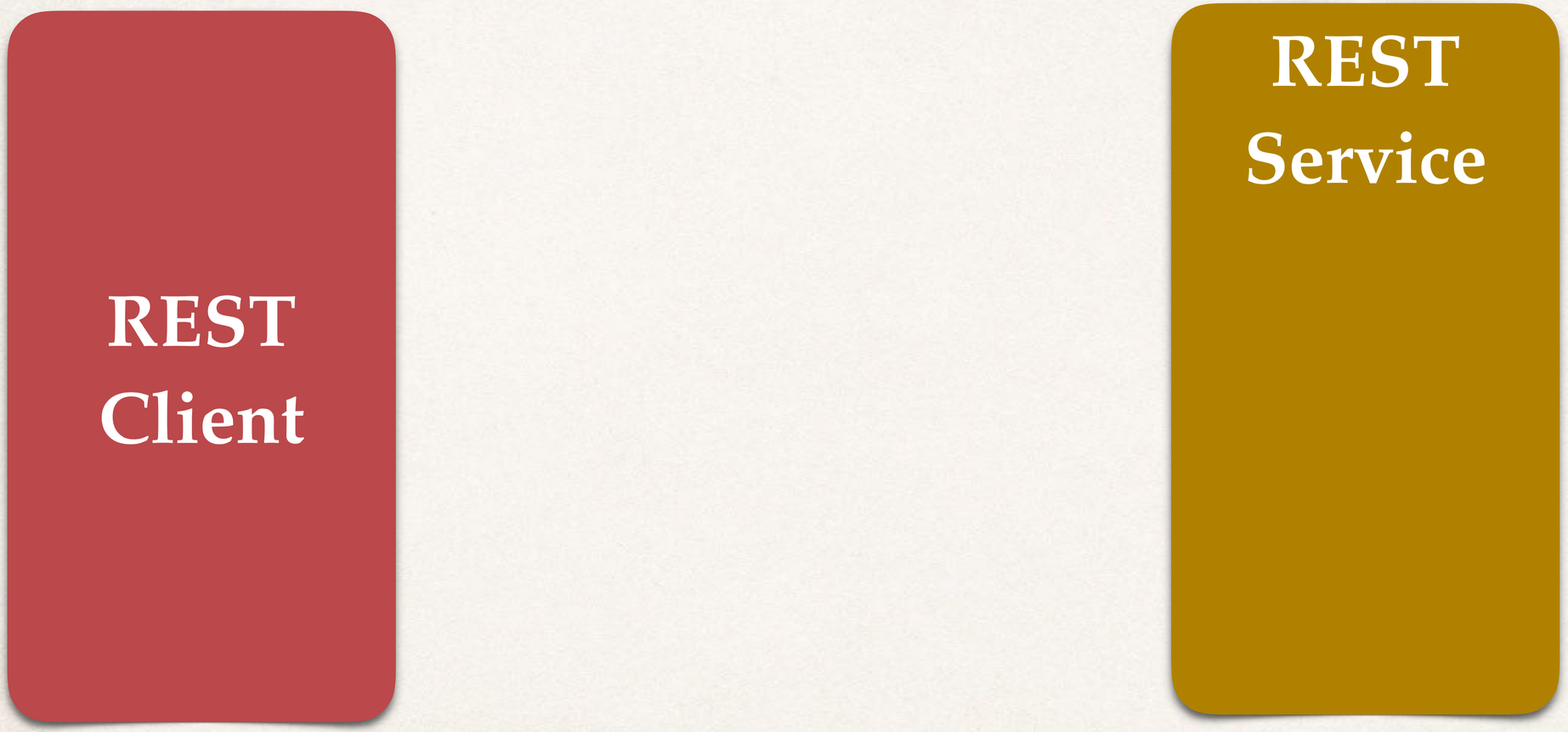
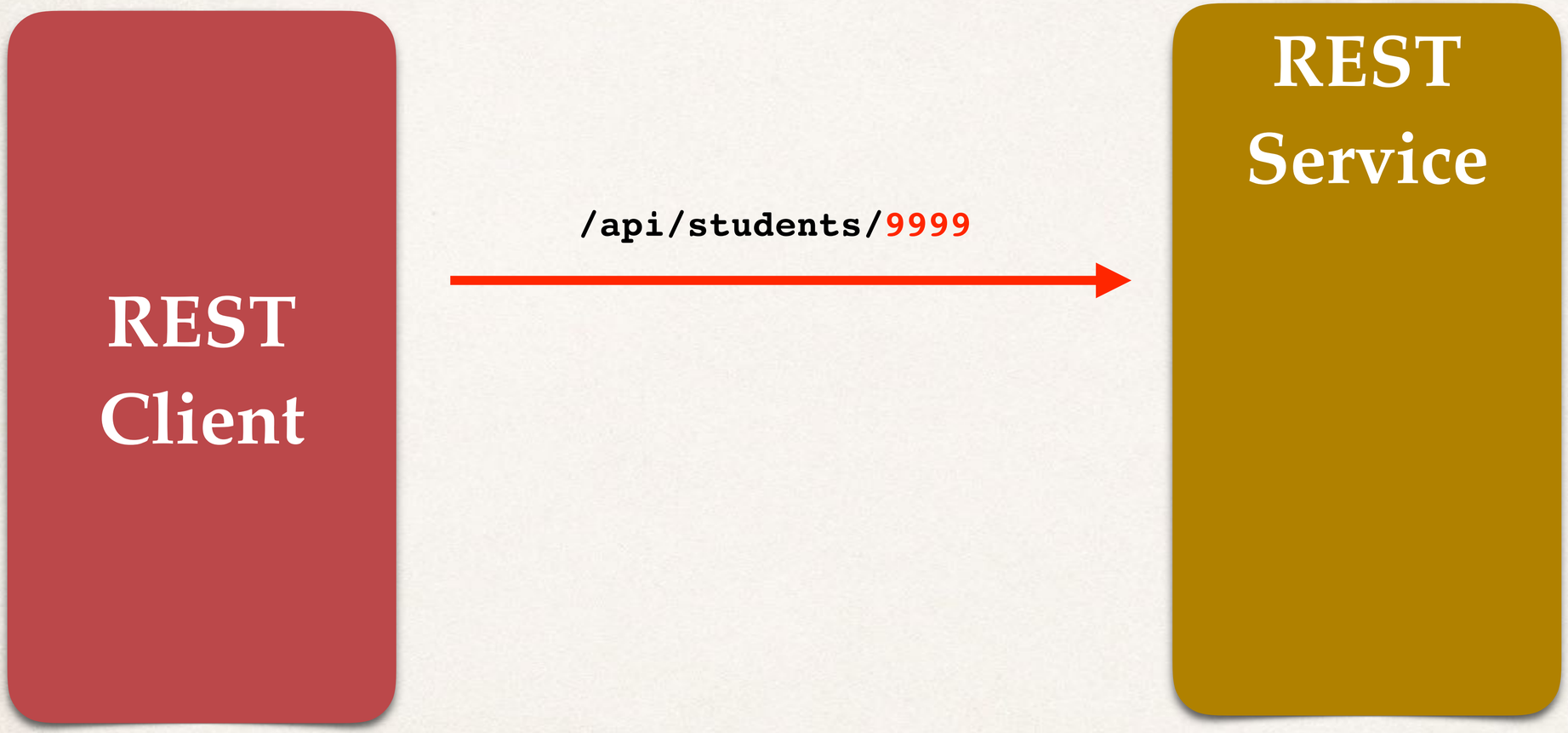
```
{
    "status": 404,
    "message": "Student id not found - 9999",
    "timeStamp": 1526149650271
}
```

Spring REST Exception Handling



Spring REST Exception Handling



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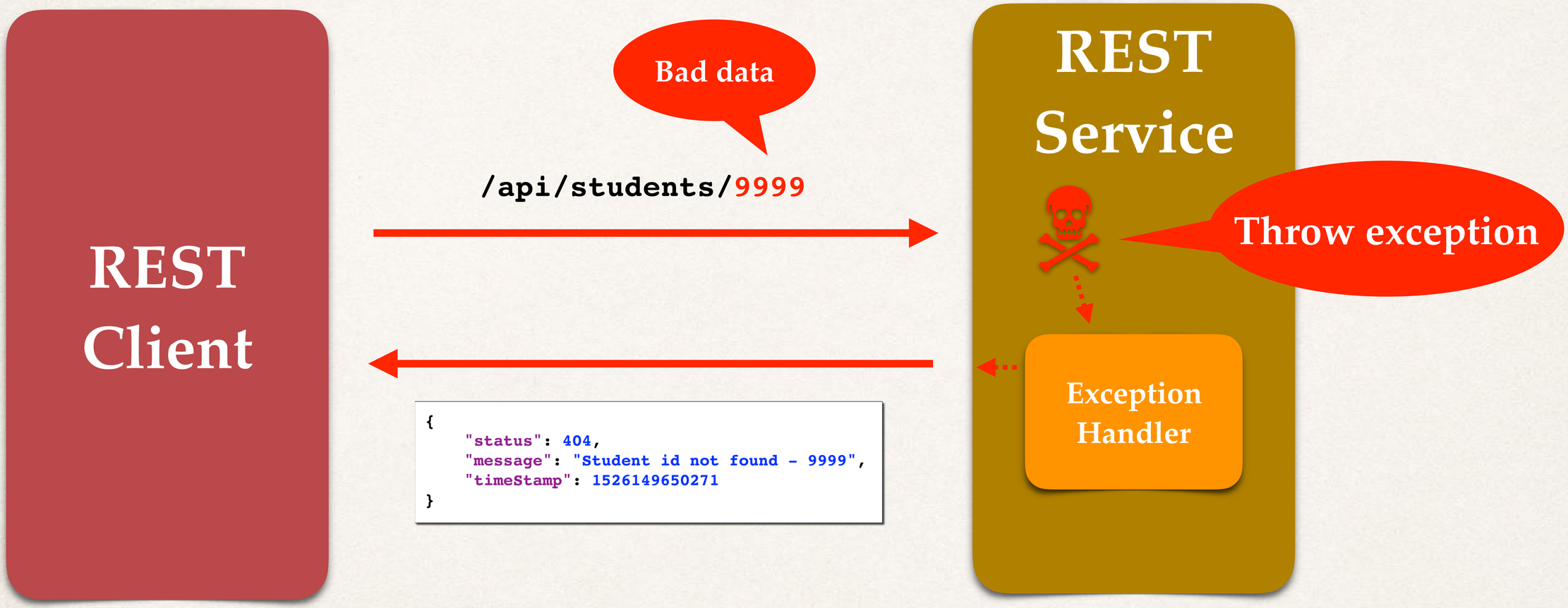

Development Process

Step-By-Step

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1. Create a custom error response class

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4. Add an exception handler method using `@ExceptionHandler`

Step 1: Create custom error response class

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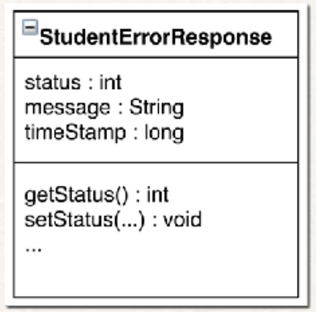
- We will define as Java class (POJO)



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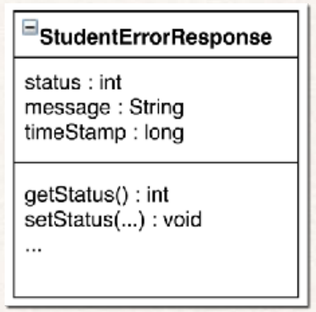

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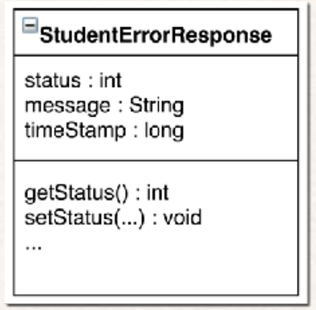

You can define any custom fields that you want to track

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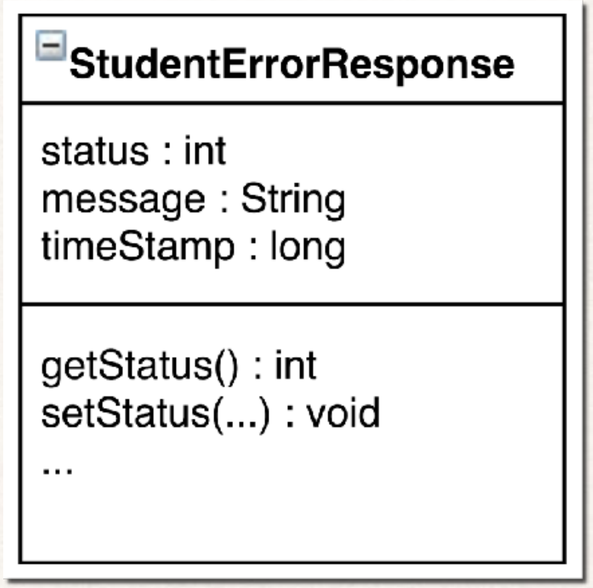

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File: StudentErrorResponse.java

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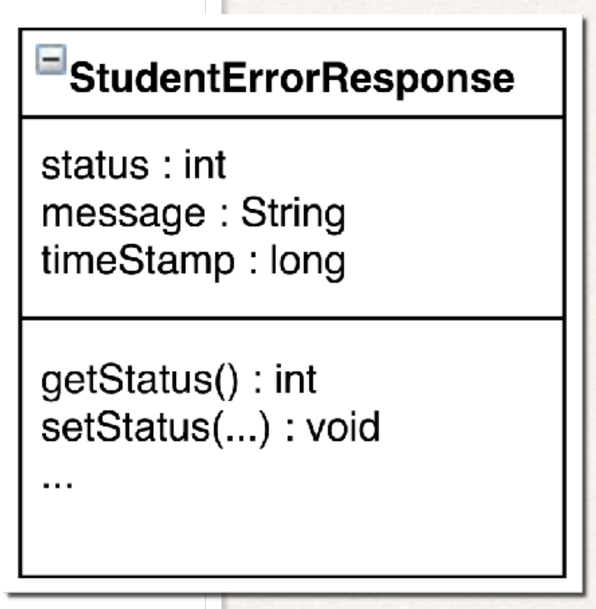
public class StudentErrorResponse {

  private int status;
  private String message;
  private long timeStamp;
```



Step 1: Create custom error response class

File: StudentErrorResponse.java

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public class StudentErrorResponse {

  private int status;
  private String message;
  private long timeStamp;

  // constructors

  // getters / setters

}
```

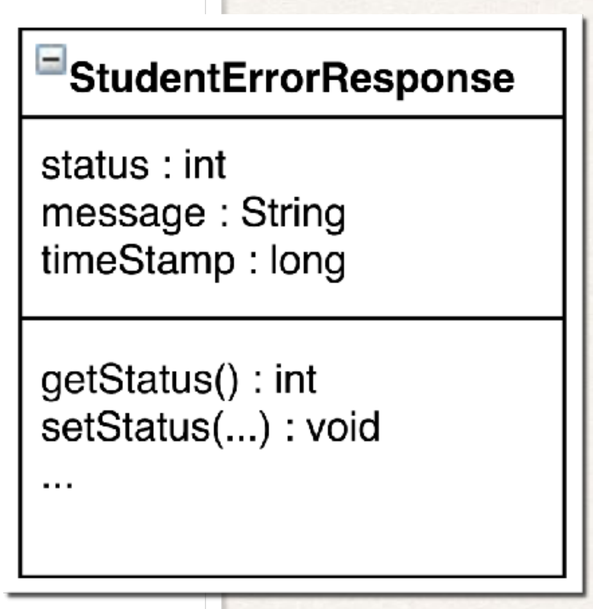


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- In our code, if we can't find student, then we'll throw an exception
- Need to define a custom student exception class
  - `StudentNotFoundException`

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public class StudentNotFoundException extends RuntimeException {

}
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File: StudentNotFoundException.java

```
public class StudentNotFoundException extends RuntimeException {

  public StudentNotFoundException(String message) {
    super(message);
  }

}
```

Call super class constructor

Step 3: Update REST service to throw exception

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@RestController
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  @GetMapping("/students/{studentId}")
  public Student getStudent(@PathVariable int studentId) {
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@RestController
@RequestMapping("/api")
public class StudentRestController {

  @GetMapping("/students/{studentId}")
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    // check the studentId against list size

    if ( (studentId >= theStudents.size()) || (studentId < 0) ) {
      throw new StudentNotFoundException("Student id not found - " + studentId);
    }
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Throw exception

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Could also check results from DB

Throw exception

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    if ( (studentId >= theStudents.size()) || (studentId < 0) ) {
      throw new StudentNotFoundException("Student id not found - " + studentId);
    }

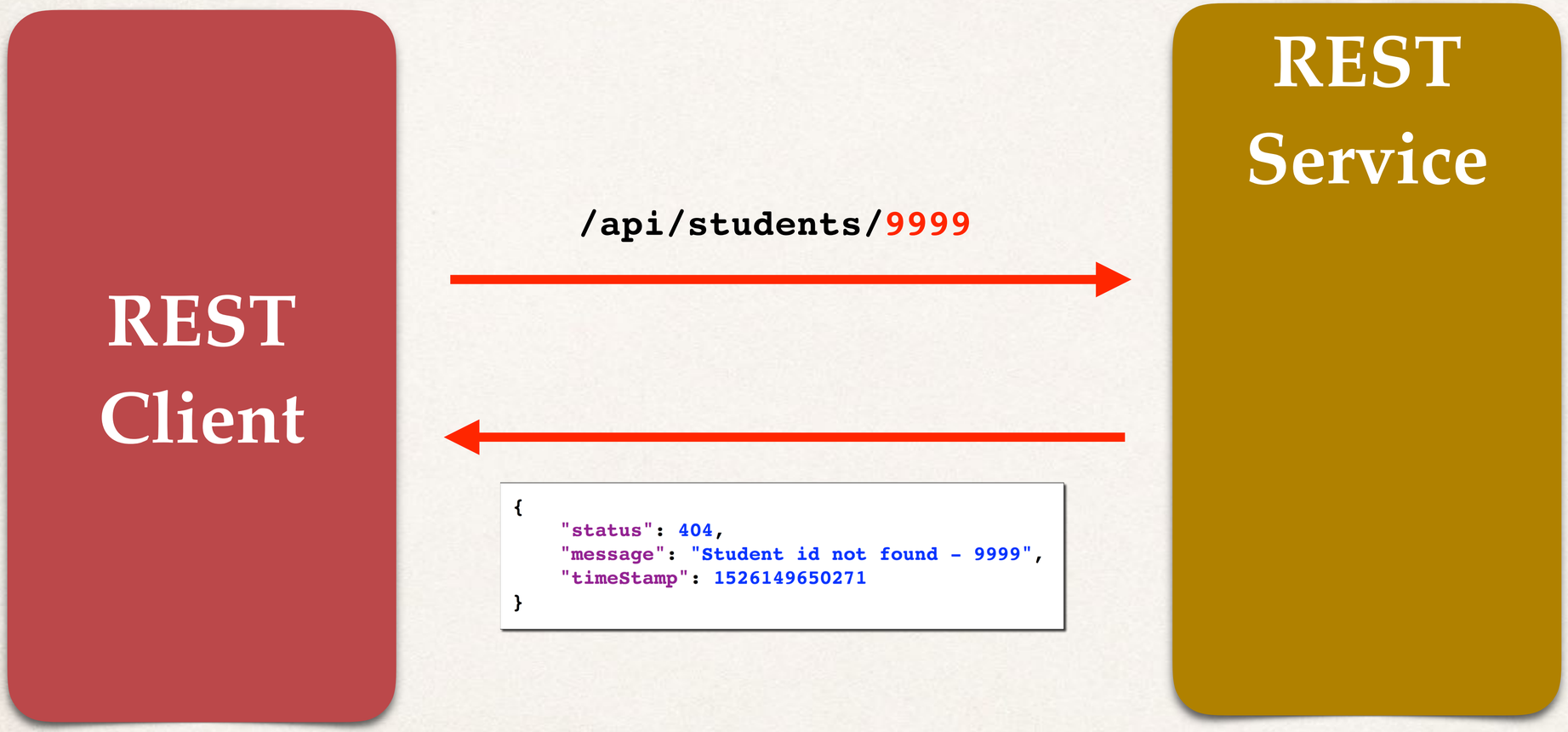
    return theStudents.get(studentId);

  }
  ...
}
```

Throw exception

Happy path

Spring REST Exception Handling



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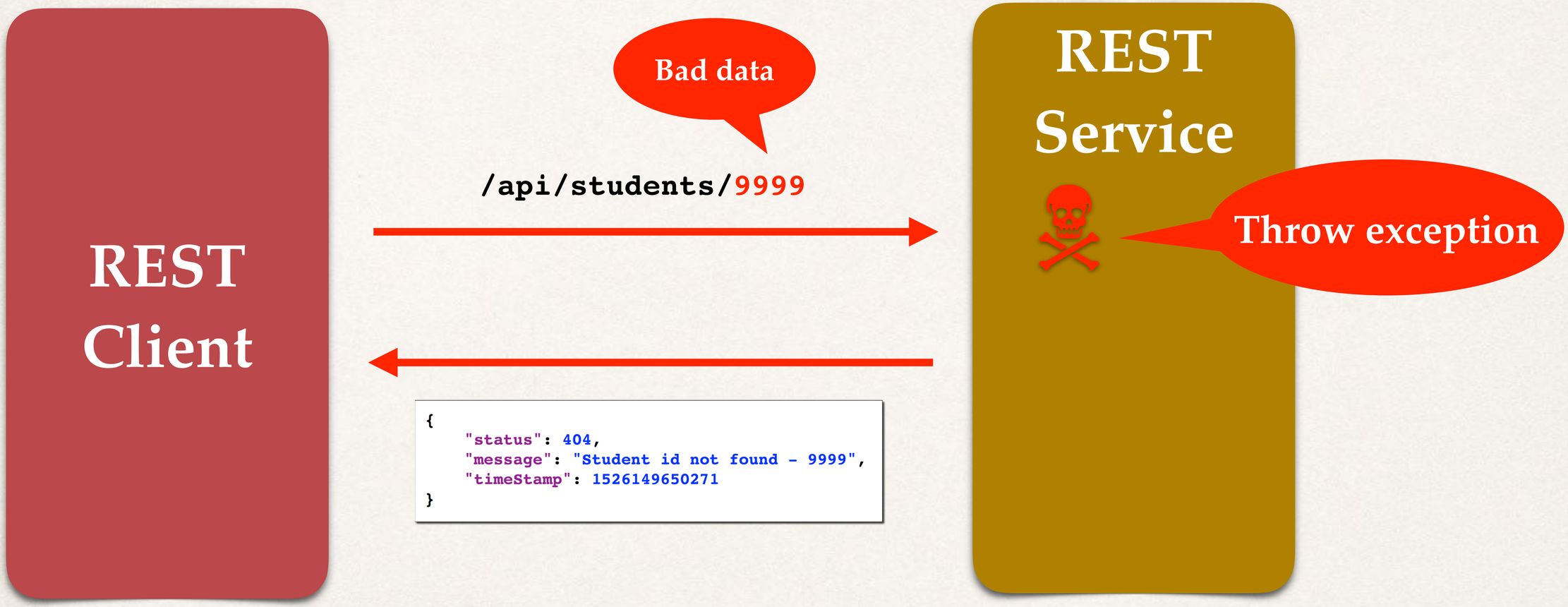

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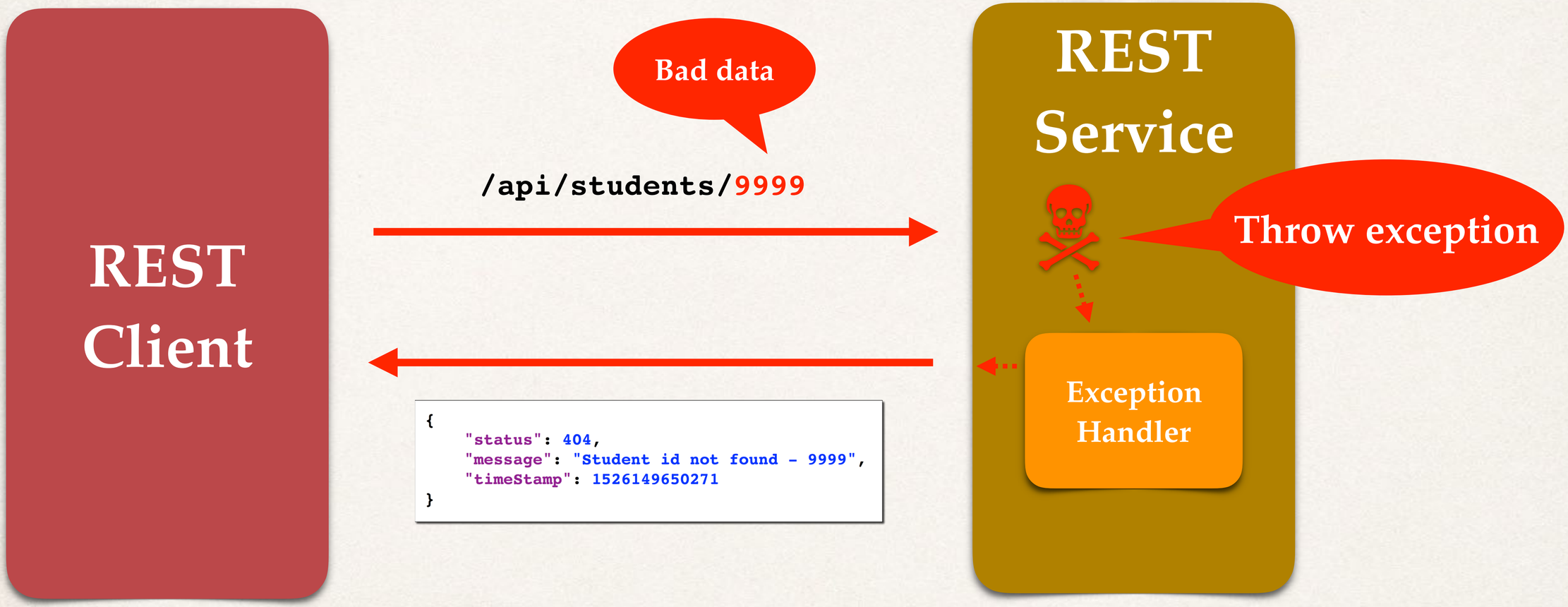

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  - HTTP status code, HTTP headers and Response body

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Type of the response body

Exception type to handle / catch

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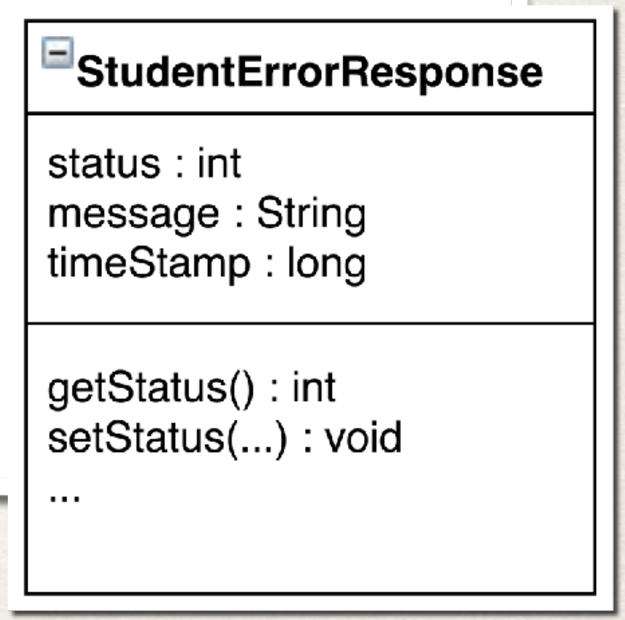

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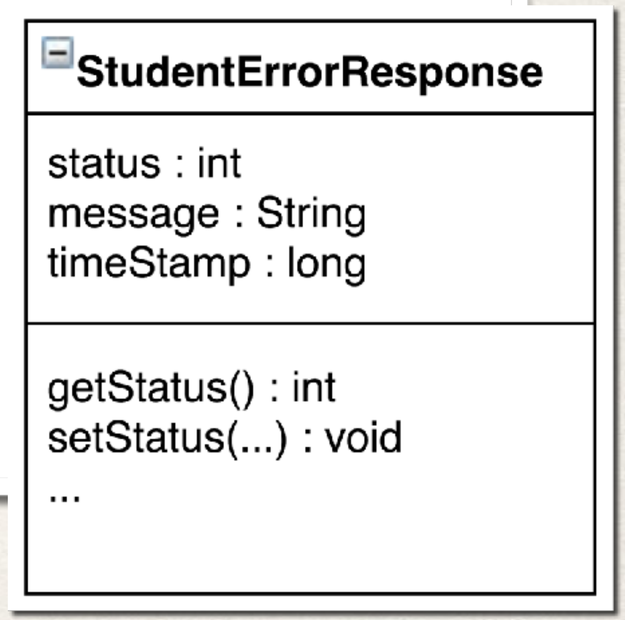

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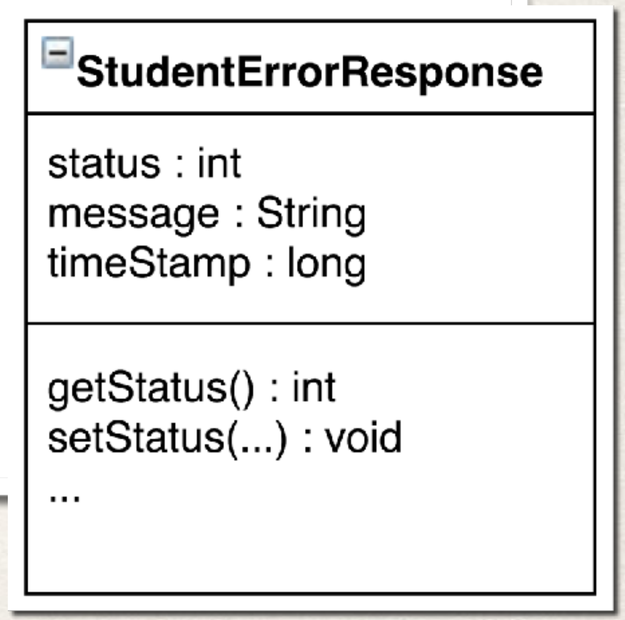

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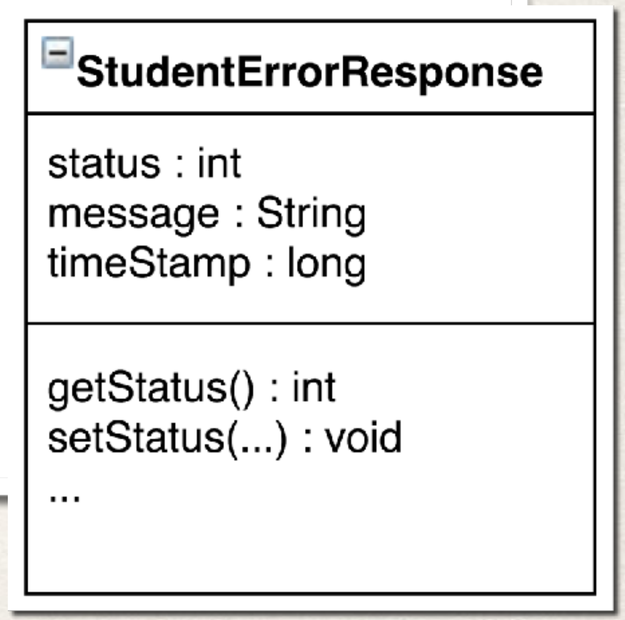

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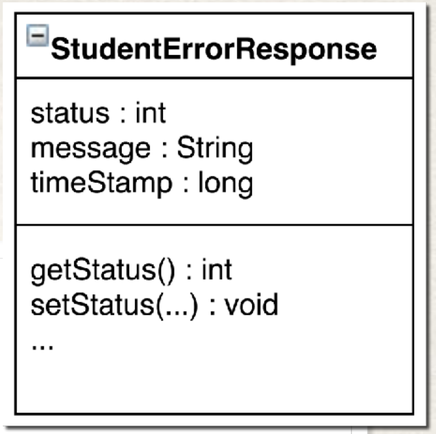

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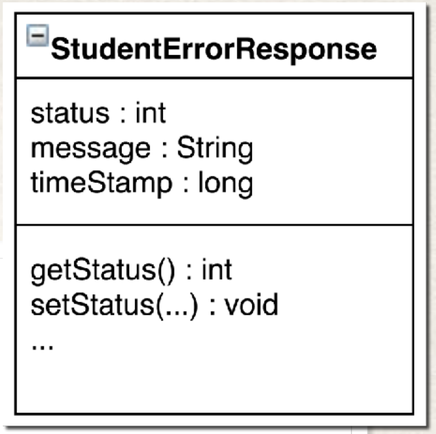

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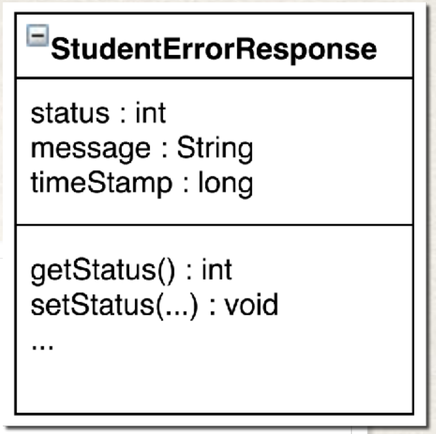

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}
```

Body

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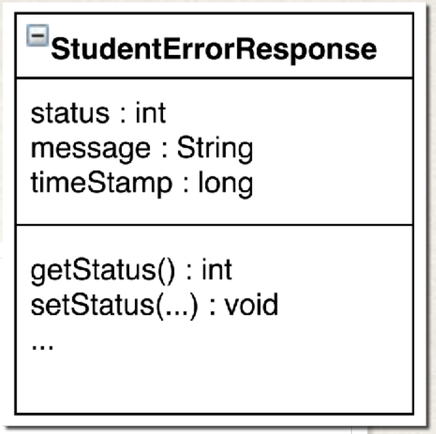

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Status code

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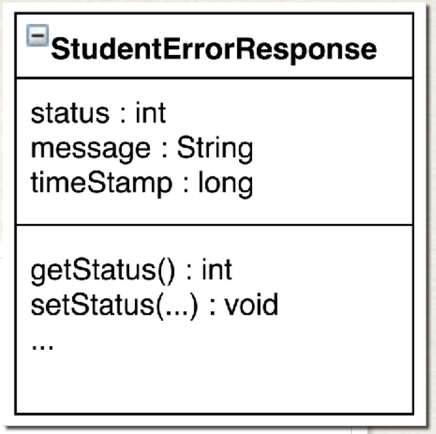


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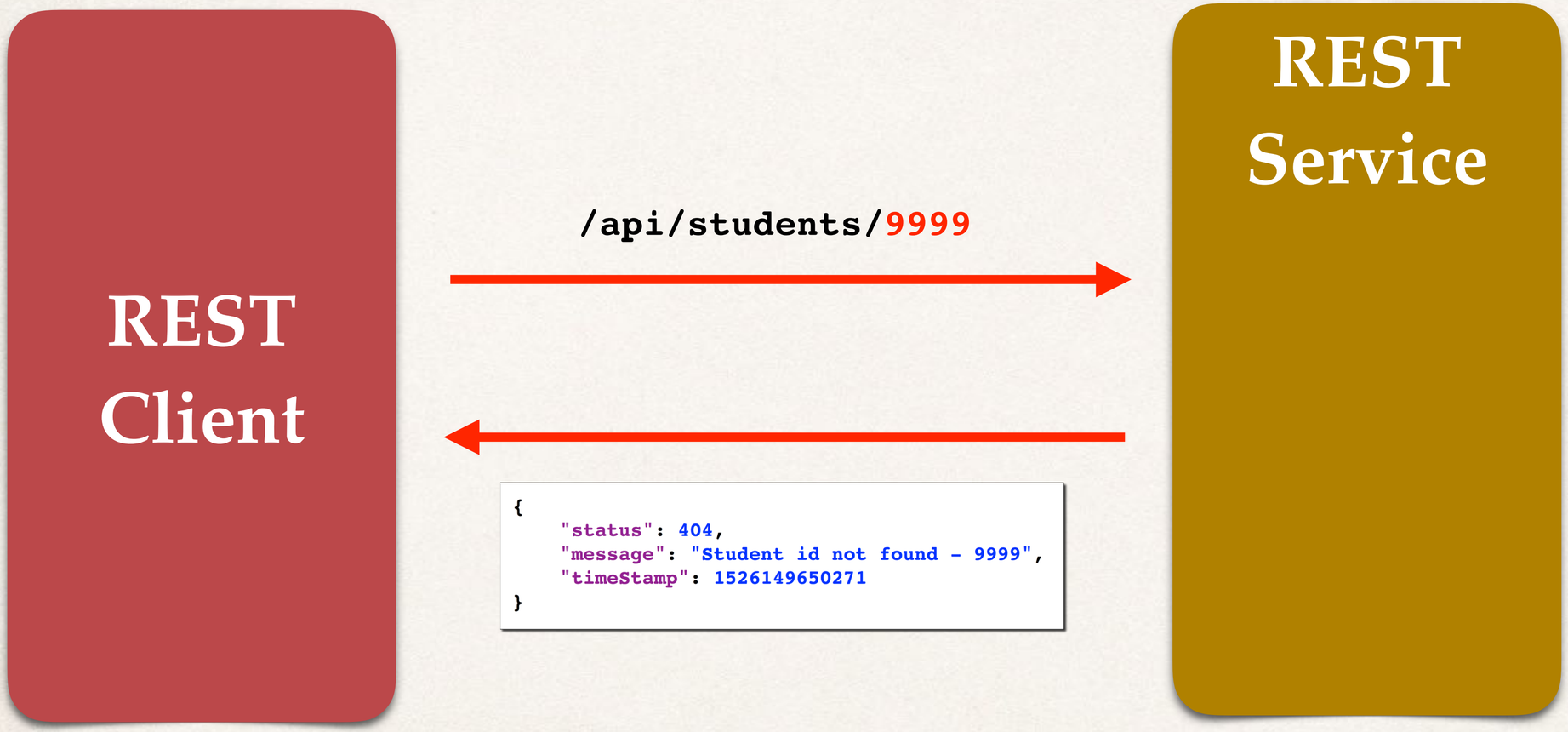

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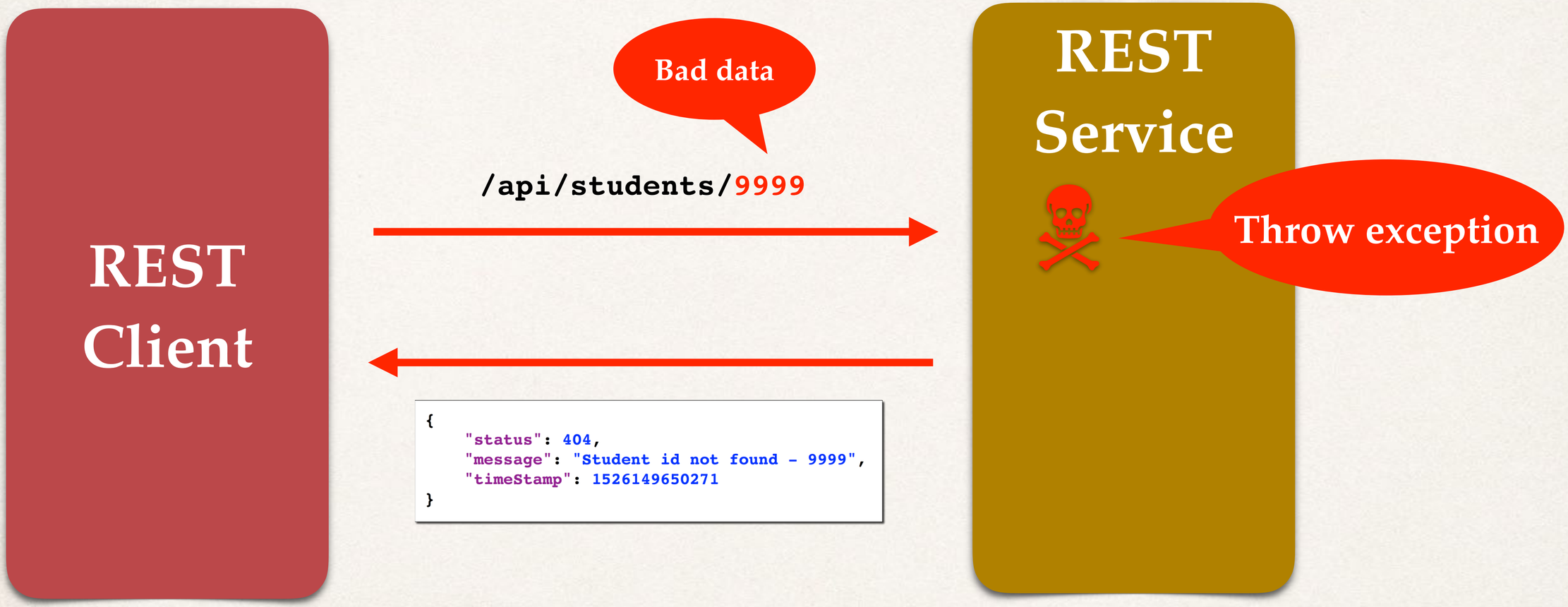

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