














ResponseEntity

- ✓  SBDemo1 [boot] [devtools]
 - ✓  src/main/java
 - >  com.rit
 - >  com.rit.p1intro
 - >  com.rit.p2mapping
 - >  com.rit.p3aop
 - >  com.rit.p4crud
 - >  com.rit.p5crud
 - >  com.rit.p6request
 - >  com.rit.p7crud
 - >  com.rit.p8jpa
 - ✓  com.rit.p9resp
 - >  ResponseController.java

ResponseEntity

- ResponseEntity is a class that represents the entire HTTP response.
- It allows you to customize the response, when building RESTful web services with
 - HTTP response status,
 - headers, and
 - body

```
19
20 @RestController
21 @RequestMapping("response")
22 public class ResponseController {
23
24     @Autowired
25     private StudentRepository repo;
26
27     @PostMapping
28     public ResponseEntity<Student> addStud(@RequestBody Student stud) {
29         Student student = repo.save(stud);
30
31         HttpHeaders headers = new HttpHeaders();
32         headers.add("login", "success");
33         headers.add("name", "Vijay");
34
35         return new ResponseEntity<>(student, headers, HttpStatus.CREATED);
36     }
37
```







```
38 @GetMapping
39 public ResponseEntity<List<Student>> viewAll() {
40     HttpHeaders headers = new HttpHeaders();
41     headers.add("login", "success");
42     return ResponseEntity
43         .ok()
44         .headers(headers).body(repo.findAll());
45 }
46
47 @GetMapping("/id/{id}")
48 public ResponseEntity<Student> viewStud(@PathVariable Long id) {
49     HttpHeaders headers = new HttpHeaders();
50     headers.add("login", "success");
51     return ResponseEntity
52         .status(HttpStatus.OK)
53         .headers(headers).body(repo.findById(id).get());
54 }
```

*ResponseController.java X

```
55  
56 @PutMapping  
57 public ResponseEntity<?> updateStud(@RequestBody Student stud) {  
58  
59     if(repo.findById(stud.getRoll()).isEmpty())  
60         return ResponseEntity  
61             .status(HttpStatus.NOT_FOUND)  
62             .body("Given Record Doesnt exist to update");  
63     else  
64         return ResponseEntity  
65             .ok(repo.save(stud));  
66 }  
67  
68 }
```

Exception Handling

Custom Exception

- >  com.rit.p8jpa
- >  com.rit.p9resp
- ▼  com.rit.q1excep.p1custom
 - >  AlreadyExistException.java
 - >  CustExcepController.java
 - >  NoSuchElementException.java

```
1 package com.rit.q1excep.plcustom;
2
3 public class AlreadyExistException extends RuntimeException {
4
5     private static final long serialVersionUID = 1L;
6
7     public AlreadyExistException() {
8         super();
9     }
10
11     public AlreadyExistException(String message) {
12         super(message);
13     }
14
15 }
```

AlreadyExistException.java

NoSuchElementException.java X

```
1 package com.rit.q1excep.p1custom;
2
3 public class NoSuchElementException extends RuntimeException {
4
5     private static final long serialVersionUID = 1L;
6
7     public NoSuchElementException() {
8         super();
9     }
10
11     public NoSuchElementException(String message) {
12         super(message);
13     }
14
15 }
```



```
18 @RequestMapping("excep1")
19 public class CustExcepController {
20
21     @Autowired
22     private BookRepository repo;
23
24     @PostMapping
25     public Book addBook(@RequestBody Book book) {
26         if(repo.findByName(book.getName()).isPresent())
27             throw new AlreadyExistException("Book already added");
28
29         return repo.save(book);
30     }
31
32     @GetMapping("/{id}")
33     public Book viewBook(@PathVariable long id) {
34         return repo.findById(id)
35             .orElseThrow(() -> new NoSuchElementException("Book id doesn't exists"));
36     }
```

GET



http://localhost:8080/excep1/31

Send



Body



500 Internal Server Error

13 ms

5.43 KB

Save Response

Pretty

Raw

Preview

Visualize

JSON



1

2

3

4

5

"timestamp": "2024-01-30T09:04:37.292+00:00",

"status": 500,

"error": "Internal Server Error",

"trace": "com.rlt.q1excep.p1custom.NoSuchElementException: Book
id doesn't exists\r\n\tat com.rlt.q1excep.p1custom.
CustExcepController.lambda\$0(CustExcepController.java:39)
\r\n\tat java.base/java.util.Optional.orElseThrow(Optional.
java:403)\r\n\tat com.rlt.q1excep.p1custom.
CustExcepController.viewBook(CustExcepController.java:39)
\r\n\tat java.base/jdk.internal.reflect.

Request Editor

POST

http://localhost:8080/excep1

Send

Body

...

raw

JSON

Beautify

```
1 {  
2   "name": "Mastering PHP",  
3   "author": "Rajesh",  
4   "category": "Programming",  
5   "isbn": "IN0-4375",  
6   "price": 1380.0  
7 }
```

Body



500 Internal Server Er...

15 ms

5.26 KB

Save Response

Pretty









JSON



```
1 {  
2   "timestamp": "2024-01-30T09:06:07.998+00:00",  
3   "status": 500,  
4   "error": "Internal Server Error",  
5   "trace": "com.rit.q1excep.p1custom.  
    AlreadyExistException: Book already  
    added\r\n\tat com.rit.q1excep.p1custom.  
    CustExcepController.addBook  
    (CustExcepController.java:31)\r\n\tat java.  
    base/jdk.internal.reflect.  
    NativeMethodAccessorImpl.invoke0(Native
```

Exception Handling

Global Exception with custom response

-  com.rut.p1resp
- >  com.rut.q1excep.p1custom
- ▼  com.rut.q1excep.p2advice
 - >  AdviceExcepController.java
 - >  AlreadyExistException.java
 - >  CustomHandler.java
 - >  ErrorResponse.java
 - >  NoSuchElementException.java

*ErrorResponse.java X

```
4
5 public class ErrorResponse {
6     private int statusCode;
7     private String message;
8     private LocalDateTime time;
9
10    public ErrorResponse() {
11        super();
12    }
13
14    public ErrorResponse(String message, int status) {
15        this.statusCode = status;
16        this.message = message;
17        this.time = LocalDateTime.now();
18    }
19
```

```
9 @RestControllerAdvice
10 public class CustomHandler {
11
12     @ExceptionHandler(NoSuchElementException.class)
13     @ResponseStatus(HttpStatus.NOT_FOUND)
14     public ErrorResponse handler1(NoSuchElementException ex) {
15         return new ErrorResponse(ex.getMessage(),
16                                 HttpStatus.NOT_FOUND.value());
17     }
18
19     @ExceptionHandler(AlreadyExistsException.class)
20     @ResponseStatus(HttpStatus.CONFLICT)
21     public ErrorResponse handler2(AlreadyExistsException ex) {
22         return new ErrorResponse(ex.getMessage(),
23                                 HttpStatus.CONFLICT.value());
24     }
25
26 }
```

*ErrorResponse.java

*AdviceExceptionHandler.java X

```
16 @RestController
17 @RequestMapping("excep2")
18 public class AdviceExceptionHandler {
19
20     @Autowired
21     private BookRepository repo;
22
23     @PostMapping
24     public Book addBook(@RequestBody Book book) {
25         if(repo.findByName(book.getName()).isPresent())
26             throw new AlreadyExistException("Book already added");
27
28         return repo.save(book);
29     }
30
31     @GetMapping("/{id}")
32     public Book viewBook(@PathVariable long id) {
33         return repo.findById(id)
34             .orElseThrow(() -> new NoSuchElementException("Book id does
35     })
```

POST



http://localhost:8080/excep2

S

Body



raw



JSON



Beautify

```
1 {  
2   ... "name": "Mastering PHP",  
3   ... "author": "Rajesh",  
4   ... "category": "Programming",  
5   ... "isbn": "IN0-4375",  
6   ... "price": 1380.0  
7 }
```

Body



409 Conflict 19 ms 256 B

Save I

Pretty



JSON



```
1 {  
2   "statusCode": 409,  
3   "message": "Book already added",  
4   "time": "2024-01-30T14:42:35.7493962"  
5 }
```


GET



http://localhost:8080/excep2/31

Send



Body



404 Not Found

15 ms

261 B

Save Response



Pretty

Raw

Preview

Visualize

JSON



1

```
{
```

2

```
  "statusCode": 404,
```

3

```
  "message": "Book id doesn't exists",
```

4

```
  "time": "2024-01-30T14:43:27.9867563"
```

5

```
}
```

tor

Thank you