Validating Data and Reporting Validation Errors

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ARCHITECT

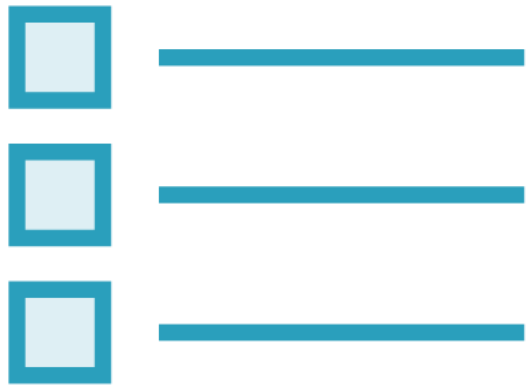@KevinDockx https://www.kevindockx.com

Coming Up

Working with validation in a RESTful world

Reporting validation problems

Working with Validation in a RESTful World

Define validation rules

Check validation rules

Report validation errors

Defining Validation Rules

In ASP.NET Core rules are defined through

- Data annotations
- IValidatableObject

Validate input, not output

Checking Validation Rules

ModelState

- A dictionary containing both the state of the model, and model binding validation

- Contains a collection of error messages for each property value submitted

ModelState.IsValid()

Reporting Validation Errors

Response status should be 422 - Unprocessable entity

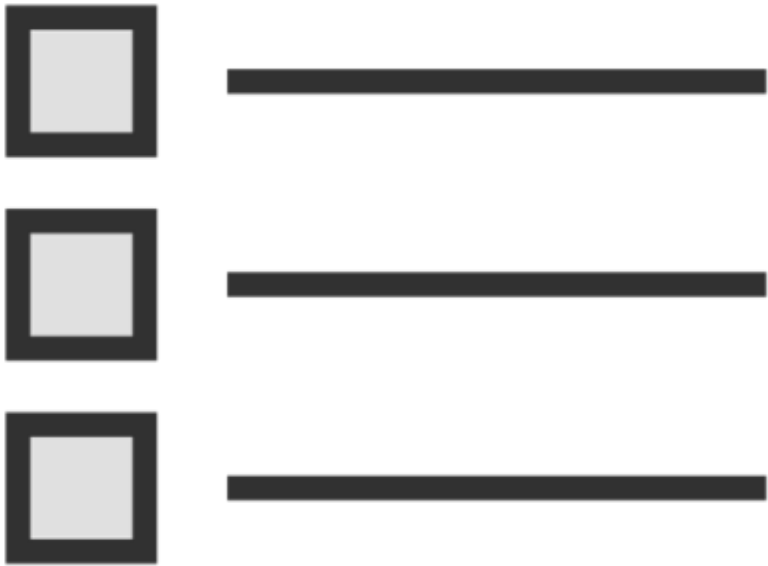**Response body should contain validation errors**

Demo

Validating input with data annotations

Validation and the ApiController Attribute

When a controller is annotated with the ApiController attribute it will automatically return a 400 BadRequest on validation errors

Demo

Class-level input validation with IValidatableObject

Demo

Class-level input validation with a custom attribute

Demo

Customizing error messages

Reporting Validation Errors

Problem details for HTTP APIs RFC (https://tools.ietf.org/html/rfc7807)

- Defines common error formats for those applications that need one
- Allows identifying distinct problem types specific to API needs

Reporting Validation Errors

```
Content-Type: application/problem+json

"errors": {
    "CourseForCreationDto": [
        "The provided description should be different from the
title."]},
"type": null,
"title": "One or more validation errors occurred.",
"status": 400,
"detail": null,
"instance": null,
"extensions": {
    "traceId": "|227e7c4f-4a15eed35702d566."}}
```

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"status": 422,
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"instance": "/api/authors/2902b665-1190-4c70-9915-
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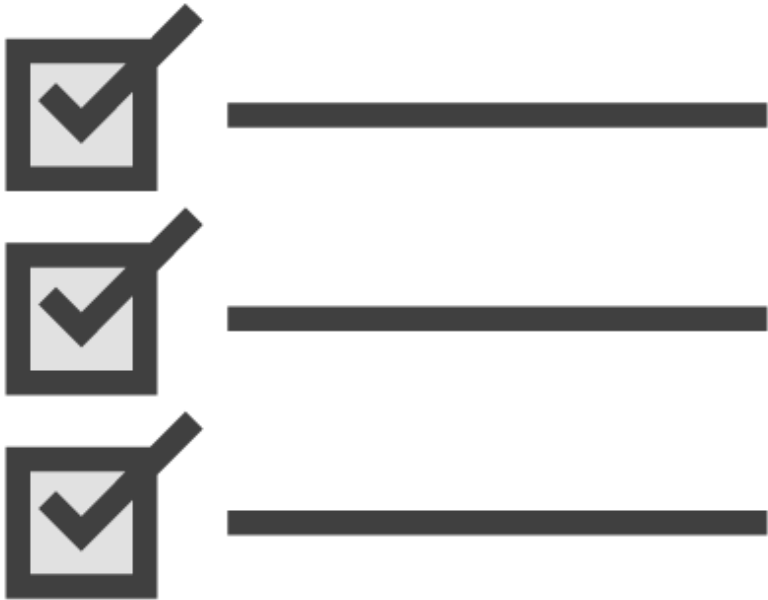
Demo

Customizing validation error responses

Other Approaches: FluentValidation

FluentValidation (Jeremy Skinner)

- Easier to create complex validation rules
- Separates rules from models
- Easier to unit test
- https://github.com/JeremySkinner/FluentValidation

Summary

Define the rules

- Data annotations

- IValidatableObject

Check the rules

- ModelState.IsValid()

- Automated thanks to ApiController

Report errors

- 422 Unprocessable entity

- Problem details RFC