ASP.NET MVC Pipeline
the lifecycle of a request in ASP.NET MVC
by Simone Chiaretta

Incoming request
Evaluate requested URL against route definitions (including RouteConstraint)

Routing

Is the route valid?

Select next route

The response is returned to the browser

Result Execution

Result Filters (OnResultExecuting) are executed

View Rendering

ActionResult custom execution

Model Validation Provider retrieves validation rules

HtmlHelper, AjaxHelper, UrlHelper generate needed HTML code

JavaScript validation logic is added

Validation rules

IView

DependencyResolver finds and creates IView

TemplateHelper generates HTML of forms

Other Kind of ActionResult?

What Kind of ActionResult?

ActionResult custom execution

Controller Creation

What type of MvcHandler?

You are not going to enter the MVC pipeline, you are on your own now

Controller Factory

DependencyResolver finds and creates instance of controller

DependencyResolver

Action to execute is chosen based on name via ActionNameSelectorAttribute

Action to execute is chosen based on other logic via ActionMethodSelectorAttribute

MvcHandler

Controller

Factory

ControllerActionInvoker

Action is executed

Action Filters (OnActionExecuted) are executed

FilterProvider

Filters applied to Action

IFilterProvider

Filters are executed

IViewEngine

All registered view engines are probed to find the view to render

All IViewEngines registered are probed to find the view to render

IView

TemplateHelper

Templates

Execution stopped?

ActionResult

Diagnostics

Action Filters (OnResultExecuted) are executed

Model Binder de-serializes parameters

Validation logic added

TemplateHelper renders HTML of forms

What Kind of ActionResult?

ActionResult custom execution

DependencyResolver finds and creates instance of Filters

Filters are executed

DependentObject

Is authorized?

Model Binder validates parameters

Model Validation Provider retrieves model visualization info

Validation rules

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