



C# Corner Annual Conference 2020 Tickets on Sale Now

X



C# Corner

Top 10 Cloud Service Providers



# Routing in MVC

[Join a member](#)[Login](#)

Sandeep Singh Shekhawat

Updated date Feb 26 2019

Post

Ask Question

177.3k

3

7

[Download Free .NET & JAVA Files API](#)[Try Free File Format APIs for Word/Excel/PDF](#)

This article explains routing in MVC. How a route is executed by the routing engine and how to define a route for a URL.

## Table of Content

1. Overview
2. Properties of Route
3. Understand the Default Route

3. Consideration

## Overview of ASP.NET MVC Routing

ASP.NET MVC routing is a pattern matching system that is responsible for mapping incoming browser requests to specified MVC controller actions. When the ASP.NET MVC application launches then the application registers one or more patterns with the framework's route table to tell the routing engine what to do with any requests that matches those patterns. When the

routing engine receives a request at runtime, it matches that request's URL against the URL patterns registered with it and gives the response according to a pattern match. Let's see Figure 1.1.



C# Corner

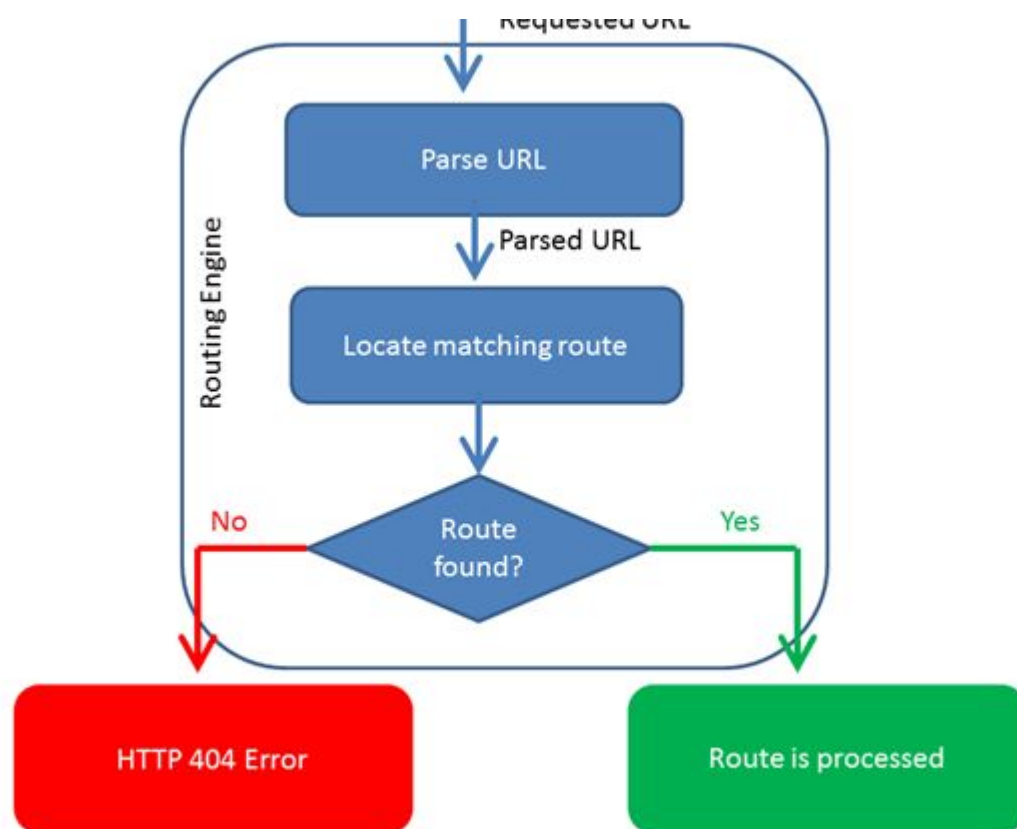
Top 10 Cloud Service Providers

C# Corner member

Login

Post

Ask Question



In Figure 1.1 we can see how the routing engine processes a request and what response it sends. It gives a response according to URL match or not in the route table.

1. When the request's URL matches any of the registered route patterns in the route table then the routing engine forwards the request to the appropriate handler for that request. Thereafter the route is processed and gets a view on the UI.

2. When the request's URL does not match any of the registered route patterns then the routing engine indicates that it could not determine how to handle the request by returning a 404 HTTP status code.



C# Corner

Top 10 Cloud Service Providers

[Join a member](#)[Login](#)

ASP.NET MVC routes are responsible for determining which controller method to execute for the following properties:

[Post](#)['IP'](#)[Ask Question](#)[ts of the](#)

- **Route Name:** A route is a URL pattern that is mapped to a handler. A handler can be a controller in the MVC application that processes the request. A route name may be used as a specific reference to a given route.
- **URL Pattern:** A URL pattern can contain literal values and variable placeholders (referred to as URL parameters). The literals and placeholders are located in segments of the URL that are delimited by the slash (/) character.

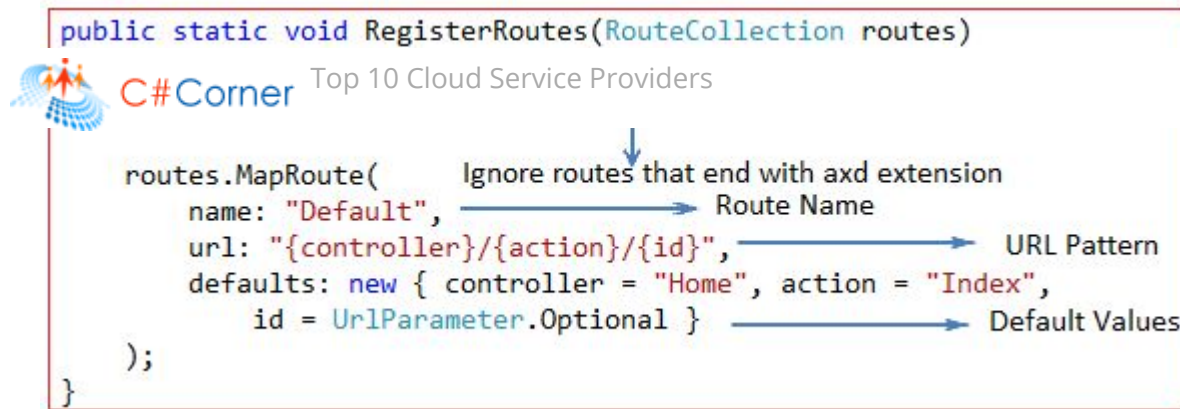
When a request is made, the URL is parsed into segments and placeholders, and the variable values are provided to the request handler. This process is similar to the way the data in query strings is parsed and passed to the request handler. In both cases variable information is included in the URL and passed to the handler in the form of key-value pairs. For query strings both the keys and the values are in the URL. For routes, the keys are the placeholder names defined in the URL pattern, and only the values are in the URL.

- **Defaults:** When you define a route, you can assign a default value for a parameter. The defaults is an object that contains default route values.
- **Constraints:** A set of constraints to apply against the URL pattern to more narrowly define the URL that it matches.

The default ASP.NET MVC project templates add a generic route that uses the following URL convention to break the URL for a given request into three named segments.

url: "{controller}/{action}/{id}"

This route pattern is registered via call to the MapRoute() extension method of RouteCollection.



[Create a member](#)
[Login](#)
  
[Post](#)
[Ask Question](#)

Figure 1.2 Default Routes for MVC Application

When the MVC application launches the `Application_Start()` event handler of the `global.asax` execute that call the `RegisterRoutes()` method from `RouteConfig` class under `App_Start` directory (`App_Start/RouteConfig.cs`). The `RegisterRoutes()` route has a parameter that is a collection of routes called the `RouteCollection` that contains all the registered routes in the application. Figure 1.2 represents the default method that adds routes to the route table.

## ASP.NET MVC Routing with an Example

When the application starts up, ASP.NET MVC discovers all of the application's controllers by searching through the available assemblies for a class that implements the `System.Web.Mvc.IController` interface or derived from a class that implements this interface and whose class names end with the suffix `Controller`. When the routing framework uses this list to determine which controller it has access to, it chops off the `Controller` suffix from the entire controller class names.

on a book entity. So we will use this example to understand URL routing. Our default route is the same as in Figure 1.2 for CRUD applications also.

URL	Controller	Action	Id
<a href="http://localhost:4736/">http://localhost:4736/</a>	HomeController	Index	
<a href="http://localhost:4736/Book/">http://localhost:4736/Book/</a>	BookController	Index	

http://localhost:4736/Book/Create	BookController	Create	
http://localhost:4736/Book/Edit/2	BookController	Edit	2



Top 10 Cloud Service Providers

[Join a member](#)
[Login](#)

The last request's URL (http://localhost:4736/Book/Edit/2) in table 1.1 is a perfect match to the route pattern because it satisfies every segment of the route pattern, but when we don't provide a complete request's URL then the routing engine automatically calls the controller and action method as per the default route pattern.

## Conclusion

The controller and action values in the route are not case-sensitive. URL route patterns are relative to the application root, so they don't need to start with a forward slash (/) or virtual path designator (~/).

Next Recommended Article

[MVC Routing: Errors Troubleshooting of MVC Routing](#)

This article describes error troubleshooting of MVC Routing.

[ASP.NET MVC routing](#)
[Default Route](#)
[MVC](#)
[Properties of Route](#)
[Routing](#)


Sandeep Singh Shekhawat *TOP 100*



91

17.5m

5

7

3



Type your comment here and press Enter Key (Minimum 10 characters)



Top 10 Cloud Service Providers

Thank you sir it is quite useful.



Avinash Joshi

1823 61 217

Join a member

Login

Jul 30, 2019

Post

Ask Question

Reply



Thank You @Sachin. Its my typing mistake and no other mean. Thanks for notice it. I will update it.

Sandeep Singh Shekhawat

91 20.1k 17.5m

Aug 12, 2013

1

0

Reply



Dear Gud one..kindly replace Acrion exist in table with Action

Sachin Kalia

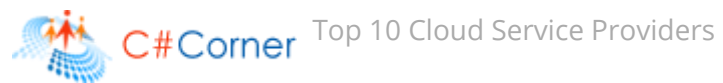
65 24k 6.6m

Aug 12, 2013

1

0

Reply

[Join a member](#)[Login](#)[Post](#)[Ask Question](#)

#### FEATURED ARTICLES

[Why Is My SQL Server Query Slow](#)

[Null Value And Null Reference Handling - C#6 To C# 9 New Features - Day One](#)

## Learn To Draw Simple ASP.NET Core Blazor Bar Chart Using Canvas Extensions



Top 10 Cloud Service Providers

Working With gRPC In .NET Core

Join a member

Login

Post

Ask Question

All

### TRENDING UP

01 Sealed Class Explained In C#

02 Learn Angular 8 Step By Step In 10 Days - HttpClient Or Ajax Call - Day Nine

03 How To Create A Simple Web API Using ASP.NET Core 3.1

04 How To Upload A File To Amazon S3 Using AWS SDK In MVC

05 How To Manage Our Blob Storage Account Using Logic Apps

06 Top 10 Social Media Influencers

07 Getting Started With .NET Core 3.1 - Part One



## 08 Future Ready Blazor Application Architecture



C# Corner Top 10 Cloud Service Providers

10 How To Create SSIS Catalog

Join a member Login

Post Ask Question View All



Top 10 Cloud Service Providers

[C# Tutorials](#)

[Common Interview Questions](#)

[Stories](#)

[Consultants](#)

[Ideas](#)

[Ce](#)

[Join a member](#)

[Login](#)

©2020 C# Corner. All contents are copyright of their authors.

[Post](#)

[Ask Question](#)