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- Web API Nedir?
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### Kaynaklar

- <https://docs.microsoft.com/tr-tr/aspnet/core/tutorials/first-web-api?view=aspnetcore-3.1&tabs=visual-studio-code>
- <https://docs.microsoft.com/tr-tr/aspnet/core/web-api/?view=aspnetcore-3.1>
- <https://docs.microsoft.com/tr-tr/aspnet/core/tutorials/web-api-javascript?view=aspnetcore-3.1>
- <https://www.json.org/json-en.html>
- [https://www.w3schools.com/whatis/whatis\\_json.asp](https://www.w3schools.com/whatis/whatis_json.asp)
- [https://www.w3schools.com/js/js\\_json\\_intro.asp](https://www.w3schools.com/js/js_json_intro.asp)
- <https://tr.wikipedia.org/wiki/JSON>

## Yeni Web API Projesi

```

PS C:\Users\erkan\source\repos\OrnekDenemeleri\2019Bahar\Programlama_III\WebApi> dotnet new --list
Templates                                     Short Name                                     Language                                     Tags
-----
Console Application                           console                                       [C#], F#, VB                               Common/Console
Class library                                  classlib                                    [C#], F#, VB                               Common/Library
WPF Application                                wpf                                          [C#], VB                                   Common/WPF
WPF Class library                              wpflib                                     [C#], VB                                   Common/WPF
WPF Custom Control Library                    wpfcustomcontrollib                       [C#], VB                                   Common/WPF
WPF User Control Library                      wpfusercontrollib                         [C#], VB                                   Common/WPF
Windows Forms (WinForms) Application          winforms                                   [C#], VB                                   Common/WinForms
Windows Forms (WinForms) Class library        winformslib                               [C#], VB                                   Common/WinForms
Worker Service                                worker                                      [C#]                                        Common/Worker/Web
Unit Test Project                             mstest                                     [C#], F#, VB                               Test/MSTest
NUnit 3 Test Project                          nunit                                      [C#], F#, VB                               Test/NUnit
NUnit 3 Test Item                             nunit-test                                 [C#], F#, VB                               Test/NUnit
xUnit Test Project                            xunit                                      [C#], F#, VB                               Test/xUnit
Razor Component                               razorcomponent                             [C#]                                        Web/ASP.NET
Razor Page                                    page                                        [C#]                                        Web/ASP.NET
MVC ViewImports                              viewimports                                [C#]                                        Web/ASP.NET
MVC ViewStart                                viewstart                                  [C#]                                        Web/ASP.NET
Blazor Server App                            blazorserver                               [C#]                                        Web/Blazor
ASP.NET Core Empty                            web                                          [C#], F#                                   Web/Empty
ASP.NET Core Web App (Model-View-Controller)  mvc                                         [C#], F#                                   Web/MVC
ASP.NET Core Web App                          webapp                                     [C#]                                        Web/MVC/Razor Pages
ASP.NET Core with Angular                    angular                                    [C#]                                        Web/MVC/SPA
ASP.NET Core with React.js                   react                                       [C#]                                        Web/MVC/SPA
ASP.NET Core with React.js and Redux         reactredux                                 [C#]                                        Web/MVC/SPA
Razor Class Library                          razorclasslib                              [C#]                                        Web/Razor/Library
ASP.NET Core Web API                          webapi                                     [C#], F#                                   Web/WebAPI
ASP.NET Core gRPC Service                     grpc                                        [C#]                                        Web/gRPC
dotnet gitignore file                        gitignore                                  Config
global.json file                             globaljson                                  Config
NuGet Config                                 nugetconfig                                Config
Dotnet local tool manifest file              tool-manifest                              Config
Web Config                                    webconfig                                  Config
Solution File                                sln                                         Solution
Protocol Buffer File                          proto                                       Web/gRPC

```

dotnet new webapi

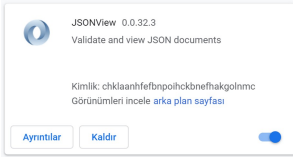
```

WebAPI
├── Controllers
├── obj
├── Properties
│   ├── appsettings.Development.json
│   └── appsettings.json
├── Program.cs
├── Startup.cs
├── WeatherForecast.cs
└── WebApi.csproj

```

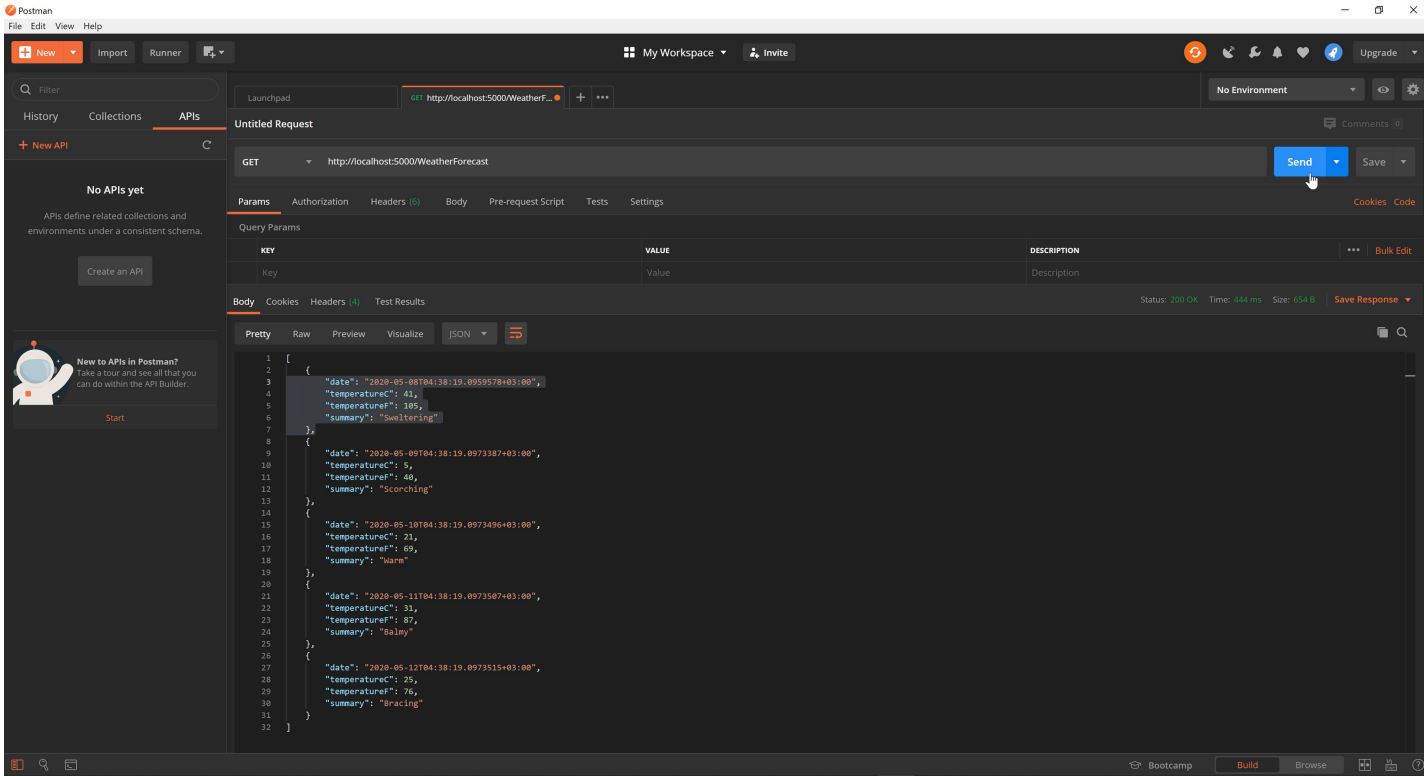
```
C# WeatherForecastController.cs X
Controllers > C# WeatherForecastController.cs > ...
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Threading.Tasks;
5 using Microsoft.AspNetCore.Mvc;
6 using Microsoft.Extensions.Logging;
7
8 namespace WebApi.Controllers
9 {
10     [ApiController]
11     [Route("[controller]")]
12     public class WeatherForecastController : ControllerBase
13     {
14         2 references
15         private static readonly string[] Summaries = new[]
16         {
17             "Freezing", "Bracing", "Chilly", "Cool", "Mild", "Warm", "Balmy", "Hot", "Sweltering", "Scorching"
18         };
19
20         1 reference
21         private readonly ILogger<WeatherForecastController> _logger;
22
23         0 references
24         public WeatherForecastController(ILogger<WeatherForecastController> logger)
25         {
26             _logger = logger;
27         }
28
29         [HttpGet]
30         0 references
31         public IEnumerable<WeatherForecast> Get()
32         {
33             var rng = new Random();
34             return Enumerable.Range(1, 5).Select(index => new WeatherForecast
35             {
36                 Date = DateTime.Now.AddDays(index),
37                 TemperatureC = rng.Next(-20, 55),
38                 Summary = Summaries[rng.Next(Summaries.Length)]
39             })
40             .ToArray();
41         }
42     }
43 }
```

```
https://localhost:5001/weatherfo x +
localhost:5001/weatherforecast
bulut mail bankalar gazeteler düşünce dersler Öğreticiler a.ü. » Diğ er yer işaretleri
[{"date":"2020-05-07T14:28:09.1056984+03:00","temperatureC":19,"temperatureF":66,"summary":"Chilly"},
{"date":"2020-05-08T14:28:09.1057048+03:00","temperatureC":28,"temperatureF":82,"summary":"Freezing"},
{"date":"2020-05-09T14:28:09.1057053+03:00","temperatureC":27,"temperatureF":80,"summary":"Scorching"},
{"date":"2020-05-10T14:28:09.1057061+03:00","temperatureC":-15,"temperatureF":6,"summary":"Sweltering"},
{"date":"2020-05-11T14:28:09.1057067+03:00","temperatureC":-15,"temperatureF":6,"summary":"Freezing"}]
```



```
https://localhost:5001/weatherforecast
localhost:5001/weatherforecast
bulut mail bankalar gazeteler düşünce c

[
  - {
    date: "2020-05-07T14:29:45.2865942+03:00",
    temperatureC: 40,
    temperatureF: 103,
    summary: "Hot"
  },
  - {
    date: "2020-05-08T14:29:45.2866009+03:00",
    temperatureC: 49,
    temperatureF: 120,
    summary: "Scorching"
  },
  - {
    date: "2020-05-09T14:29:45.2866014+03:00",
    temperatureC: 43,
    temperatureF: 109,
    summary: "Cool"
  },
  - {
    date: "2020-05-10T14:29:45.2866019+03:00",
    temperatureC: 38,
    temperatureF: 100,
    summary: "Hot"
  },
  - {
    date: "2020-05-11T14:29:45.2866034+03:00",
    temperatureC: 1,
    temperatureF: 33,
    summary: "Chilly"
  }
]
```



## Yönlendirme

```
C# WeatherForecastController.cs X C# Personel.cs
Controllers > C# WeatherForecastController.cs > {} WebApi.Controllers
26 [HttpGet]
27 0 references
28 public IEnumerable<WeatherForecast> Get()
29 {
30     var rng = new Random();
31     return Enumerable.Range(1, 5).Select(index => new WeatherForecast
32     {
33         Date = DateTime.Now.AddDays(index),
34         TemperatureC = rng.Next(-20, 55),
35         Summary = Summaries[rng.Next(Summaries.Length)]
36     })
37     .ToArray();
38 }
39
40 1 reference
41 List<Personel> Personeller = new List<Personel>
42 {
43     new Personel {SicilNo = 1531, Adi = "Ahmet", Soyadi = "Çokçalışır", Resim = "ahmet.jpg"}, // Personeller[0]
44     new Personel {SicilNo = 1532, Adi = "Mehmet", Soyadi = "Hiçdurmaz", Resim = "mehmet.jpg"}, // Personeller[1]
45     new Personel {SicilNo = 1533, Adi = "Hasan", Soyadi = "Yorulmaz", Resim = "hasan.jpg"},
46     new Personel {SicilNo = 1534, Adi = "Hüseyin", Soyadi = "Kulakasmaz", Resim = "huseyin.jpg"},
47     new Personel {SicilNo = 1535, Adi = "Ayşe", Soyadi = "İşyapar", Resim = "ayse.jpg"},
48     new Personel {SicilNo = 1536, Adi = "Fatma", Soyadi = "Durdurakbilmez", Resim = "fatma.jpg"},
49     new Personel {SicilNo = 1537, Adi = "Hatice", Soyadi = "İşbilir", Resim = "hatice.jpg"},
50     new Personel {SicilNo = 1538, Adi = "Zeynep", Soyadi = "Heççalışır", Resim = "zeynep.jpg"},
51 };
52
53 [HttpGet("Personeller")]
54 0 references
55 public IEnumerable<Personel> GetPersonel()
56 {
57     return Personeller;
58 }
```

Launchpad http://localhost:5000/WeatherF... No Environment

Untitled Request Comments 0

GET http://localhost:5000/WeatherForecast/personeller Send Save

Params Authorization Headers (0) Body Pre-request Script Tests Settings Cookies Code

Query Params

KEY	VALUE	DESCRIPTION	***	Bulk Edit
Key	Value	Description		

Body Cookies Headers (4) Test Results Status: 200 OK Time: 19 ms Size: 752 B Save Response

Pretty Raw Preview Visualize JSON ≡

```
1 {
2   {
3     "sicilNo": 1531,
4     "adi": "Ahmet",
5     "soyadi": "Çokçalışır",
6     "resim": "ahmet.jpg"
7   },
8   {
9     "sicilNo": 1532,
10    "adi": "Mehmet",
11    "soyadi": "Hiçdurmaz",
12    "resim": "mehmet.jpg"
13  },
14  {
15    "sicilNo": 1533,
16    "adi": "Hasan",
17    "soyadi": "Yorulmaz",
18    "resim": "hasan.jpg"
19  },
20  {
21    "sicilNo": 1534,
22    "adi": "Hüseyin",
23    "soyadi": "Kulakasmaz",
24    "resim": "huseyin.jpg"
25  },
26  {
27    "sicilNo": 1535,
28    "adi": "Ayşe",
29    "soyadi": "İşyapar",
30    "resim": "ayse.jpg"
31  }
}
```

```
[HttpGet("Personeller/{sicilNo}")]
0 references
public Personel GetPersonel(int sicilNo)
{
    return Personeller.SingleOrDefault(x=>x.SicilNo == sicilNo);
}
```

GET <http://localhost:5000/WeatherForecast/personeller/1531>

Params Authorization Headers (6) Body Pre-request Script Tests Settings

Query Params

KEY	VALUE
Key	Value

Body Cookies Headers (4) Test Results

Pretty Raw Preview Visualize JSON

```
1 {
2   "sicilNo": 1531,
3   "adi": "Ahmet",
4   "soyadi": "Cokcalısın",
5   "resim": "ahmet.jpg"
6 }
```

## Yönlendirme Örnekleri

- <https://docs.microsoft.com/tr-tr/aspnet/core/mvc/controllers/routing?view=aspnetcore-3.1#attribute-routing-with-httpverb-attributes>

```
[Route("api/{controller}")]
[ApiController]
public class Test2Controller : ControllerBase
{
    [HttpGet] // GET /api/test2
    public IActionResult ListProducts()
    {
        return ControllerContext.MyDisplayRouteInfo();
    }

    [HttpGet("{id}")] // GET /api/test2/xyz
    public IActionResult GetProduct(string id)
    {
        return ControllerContext.MyDisplayRouteInfo(id);
    }

    [HttpGet("int/{id:int}")] // GET /api/test2/int/3
    public IActionResult GetIntProduct(int id)
    {
        return ControllerContext.MyDisplayRouteInfo(id);
    }

    [HttpGet("int2/{id}")] // GET /api/test2/int2/3
    public IActionResult GetInt2Product(int id)
    {
        return ControllerContext.MyDisplayRouteInfo(id);
    }
}
```