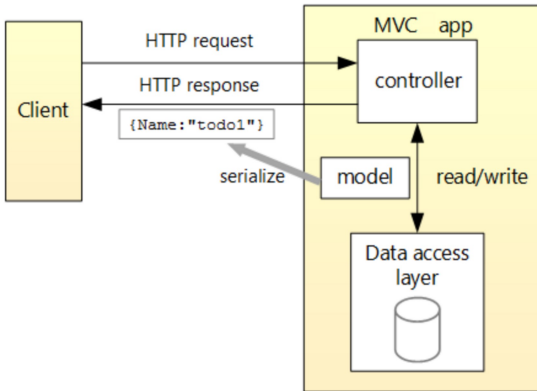


Temel Web API İşlemleri (CRUD) - TodoApi Uygulaması

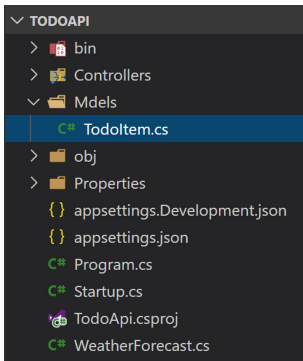
7 Mayıs 2020 Perşembe 06:54



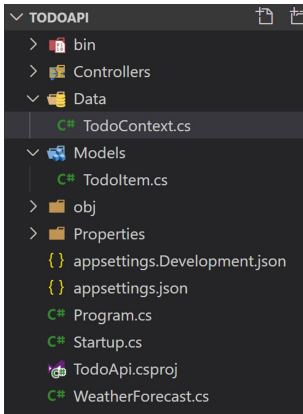
HTTP Verb	CRUD Operation
POST	Create
GET	Read
PUT	Update
DELETE	Delete

- 1xx Bilgi
- 2xx Başarılı
- 3xx Yönlendirme
- 4xx Client Hatası
- 5xx Server Hatası

- `dotnet new webapi`
- `dotnet add package Microsoft.EntityFrameworkCore.SqlServer`
- `dotnet add package Microsoft.EntityFrameworkCore.InMemory`



```
C# TodoItem.cs X
Mdels > C# TodoItem.cs
1 namespace TodoApi.Mdels
2 {
3     0 references
4     public class TodoItem
5     {
6         0 references
7         public long Id { get; set; }
8         0 references
9         public string Name { get; set; }
10        0 references
11        public bool IsComplete { get; set; }
12    }
13 }
```



```
C# TodoContext.cs X
Data > C# TodoContext.cs > {} TodoApi.Data
1 using Microsoft.EntityFrameworkCore;
2 using TodoApi.Mdels;
3
4 namespace TodoApi.Data
5 {
6     1 reference
7     public class TodoContext : DbContext
8     {
9         0 references
10        public TodoContext(DbContextOptions<TodoContext> options)
11        : base(options)
12        {
13        }
14    }
15    0 references
16    public DbSet<TodoItem> TodoItems { get; set; }
17 }
```

```

C# Startup.cs X
C# Startup.cs > {} TodoApi > TodoApi.Startup > Configure(IApplicationBuilder app, IWebHostEnvironment env)
27 // This method gets called by the runtime. Use this method to add services to the container.
28 0 references
29 public void ConfigureServices(IServiceCollection services)
30 {
31     services.AddDbContext<TodoContext>(options => options.UseInMemoryDatabase("TodoList"));
32     services.AddControllers();
33 }

```

[dotnet add package Microsoft.VisualStudio.Web.CodeGeneration.Design](#)
[dotnet add package Microsoft.EntityFrameworkCore.Design](#)
[dotnet tool install --global dotnet-aspnet-codegenerator](#)
[dotnet aspnet-codegenerator controller -name TodoItemsController -async -api -m TodoItem -dc TodoContext -outDir Controllers](#)

```

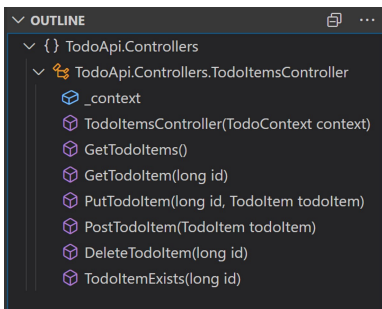
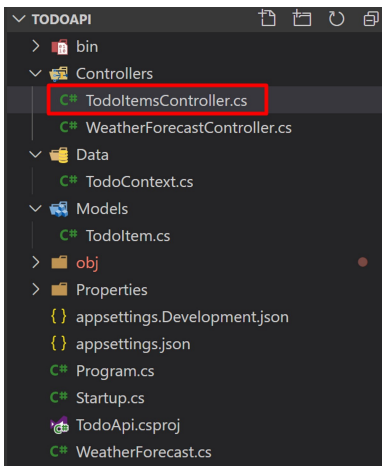
Building project ...
Finding the generator 'controller'...
Running the generator 'controller'...
Attempting to compile the application in memory.
Attempting to figure out the EntityFramework metadata for the model and DbContext: 'TodoItem'
Added Controller : '\Controllers\TodoItemsController.cs'.
RunTime 00:00:14.60

```

```

C# TodoContext.cs X
Data > C# TodoContext.cs > ...
1 using Microsoft.EntityFrameworkCore;
2 using TodoApi.Models;
3
4 namespace TodoApi.Data
5 {
6     2 references
7     public class TodoContext : DbContext
8     {
9         0 references
10        public TodoContext(DbContextOptions<TodoContext> options)
11            : base(options)
12        {
13        }
14    }
15    0 references
16    public DbSet<TodoItem> TodoItems { get; set; }
17 }

```



```

C# TodoItemsController.cs X
Controllers > C# TodoItemsController.cs > ...
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Threading.Tasks;
5 using Microsoft.AspNetCore.Http;
6 using Microsoft.AspNetCore.Mvc;
7 using Microsoft.EntityFrameworkCore;
8 using TodoApi.Data;
9 using TodoApi.Models;
10
11 namespace TodoApi.Controllers
12 {
13     [Route("api/[controller]")]
14     [ApiController]
15     0 references
16     public class TodoItemsController : ControllerBase
17     {
18         11 references
19         private readonly TodoContext _context;
20
21         0 references
22         public TodoItemsController(TodoContext context)
23         {
24             _context = context;
25         }
26
27         // GET: api/TodoItems
28         [HttpGet]
29         0 references
30         public async Task<ActionResult<IEnumerable<TodoItem>>> GetTodoItems()
31         {
32             return await _context.TodoItems.ToListAsync();
33         }
34     }

```

Handwritten red text: DI (Berwujud Eksekusi) with an arrow pointing to the constructor parameter `context`.

TodoItemExists(long id)

```
27 public async Task<ActionResult<IEnumerable<TodoItem>>> GetTodoItems()
28 {
29     return await _context.TODOItems.ToListAsync();
30 }
31 // GET: api/TodoItems/5
32 [HttpGet("{id}")]
33 0 references
34 public async Task<ActionResult<TodoItem>> GetTodoItem(long id)
35 {
36     var todoItem = await _context.TODOItems.FindAsync(id);
37
38     if (todoItem == null)
39     {
40         return NotFound();
41     }
42
43     return todoItem;
44 }
```

Get

```
45 // PUT: api/TodoItems/5
46 // To protect from overposting attacks, enable the specific properties you want to bind to, for
47 // more details, see https://go.microsoft.com/fwlink/?linkid=2123754.
48 [HttpPut("{id}")]
49 0 references
50 public async Task<ActionResult> PutTodoItem(long id, TodoItem todoItem)
51 {
52     if (id != todoItem.Id)
53     {
54         return BadRequest();
55     }
56
57     _context.Entry(todoItem).State = EntityState.Modified;
58
59     try
60     {
61         await _context.SaveChangesAsync();
62     }
63     catch (DbUpdateConcurrencyException)
64     {
65         if (!TodoItemExists(id))
66         {
67             return NotFound();
68         }
69         else
70         {
71             throw;
72         }
73     }
74
75     return NoContent();
76 }
```

```
77 // POST: api/TodoItems
78 // To protect from overposting attacks, enable the specific properties you want to bind to, for
79 // more details, see https://go.microsoft.com/fwlink/?linkid=2123754.
80 [HttpPost]
81 0 references
82 public async Task<ActionResult<TodoItem>> PostTodoItem(TodoItem todoItem)
83 {
84     _context.TODOItems.Add(todoItem);
85     await _context.SaveChangesAsync();
86
87     return CreatedAtAction("GetTodoItem", new { id = todoItem.Id }, todoItem);
88 }
```

```
89 // DELETE: api/TodoItems/5
90 [HttpDelete("{id}")]
91 0 references
92 public async Task<ActionResult<TodoItem>> DeleteTodoItem(long id)
93 {
94     var todoItem = await _context.TODOItems.FindAsync(id);
95     if (todoItem == null)
96     {
97         return NotFound();
98     }
99
100     _context.TODOItems.Remove(todoItem);
101     await _context.SaveChangesAsync();
102
103     return todoItem;
104 }
```

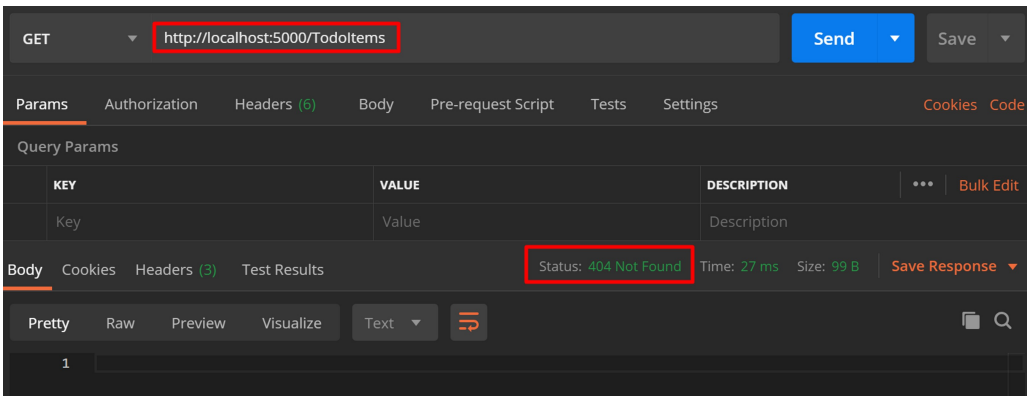
```
105 1 reference
106 private bool TodoItemExists(long id)
107 {
108     return _context.TODOItems.Any(e => e.Id == id);
109 }
```

```
89 // DELETE: api/ToDoItems/5
90 [HttpDelete("{id}")]
91 0 references
92 public async Task<ActionResult<ToDoItem>> DeleteToDoItem(long id)
93 {
94     var todoItem = await _context.ToDoItems.FindAsync(id);
95     if (todoItem == null)
96     {
97         return NotFound();
98     }
99     _context.ToDoItems.Remove(todoItem);
100     await _context.SaveChangesAsync();
101
102     return todoItem;
103 }
104
105 1 reference
106 private bool TodoItemExists(long id)
107 {
108     return _context.ToDoItems.Any(e => e.Id == id);
109 }
110 }
```

API	Açıklama	İstek gövdesi	Yanıt gövdesi
GET /api/ToDoItems	Tüm yapılacaklar öğelerini Al	Hiçbiri	Yapılacaklar öğeleri dizisi
GET /api/ToDoItems/{id}	KİMLİĞE göre öge al	Hiçbiri	Yapılacaklar ögesi
POST /api/ToDoItems	Yeni öge Ekle	Yapılacaklar ögesi	Yapılacaklar ögesi
PUT /api/ToDoItems/{id}	Mevcut bir ögeyi güncelleştir	Yapılacaklar ögesi	Hiçbiri
DELETE /api/ToDoItems/{id}	Öge silme	Hiçbiri	Hiçbiri

Yapılacak ögesi

```
PS C:\Users\erkan\source\repos\OrnekDenemeleri\2019Bahar\Programlama_III\ToDoApi> dotnet run
info: Microsoft.Hosting.Lifetime[0]
Now listening on: https://localhost:5001
info: Microsoft.Hosting.Lifetime[0]
Now listening on: http://localhost:5000
info: Microsoft.Hosting.Lifetime[0]
Application started. Press Ctrl+C to shut down.
info: Microsoft.Hosting.Lifetime[0]
Hosting environment: Development
info: Microsoft.Hosting.Lifetime[0]
```



```
namespace TodoApi.Controllers
{
    [Route("api/[controller]")]
    [ApiController]
    0 references
    public class TodoItemsController : ControllerBase
    {
```

GET http://localhost:5000/api/TodoItems Send Save

Params Authorization Headers (6) 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: 1407 ms Size: 150 B Save Response

Pretty Raw Preview Visualize JSON 1

POST http://localhost:5000/api/todoltems Send Save

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies Code

none form-data x-www-form-urlencoded raw binary GraphQL JSON Beautify

```
1 {
2   "name": "Erkan Hürnalı ile Web API Öğren",
3   "isComplete": true
4 }
```

Body Cookies Headers (5) Test Results Status: 201 Created Time: 1966 ms Size: 274 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "id": 1,
3   "name": "Erkan Hürnalı ile Web API Öğren",
4   "isComplete": true
5 }
```

https://localhost:5001/api/todoltems x +

localhost:5001/api/todoltems

bulut mail bankalar gazeteler düşünce

```
[
- {
  id: 1,
  name: "Erkan Hürnalı ile Web API Öğren",
  isComplete: true
}
]
```

Gerçek VTYS Üzerinde Deneme

```
C# Startup.cs x
C# Startup.cs > {} TodoApi > TodoApi.Startup > Configure(IApplicationBuilder app, IWebHostEnvironment env)
27 // This method gets called by the runtime. Use this method to add services to the container.
0 references
28 public void ConfigureServices(IServiceCollection services)
29 {
30     services.AddDbContext<TodoContext>(options => options.UseSqlite("Data Source=TodoList.db"));
31     services.AddControllers();
32 }
33
```

- dotnet add package Microsoft.EntityFrameworkCore.Sqlite
- dotnet ef migrations add SqliteYapilandir
- dotnet ef database update

SQLite Explorer

- TodoList.db
 - TodoItems
 - Id : integer
 - Name : text
 - IsComplete : integer
 - _EFMigrationsHistory

SQLite

```
SELECT * FROM `TodoItems`;
```

#	Id	Name	IsComplete
1	1	Erkan Hürnalı ile Web API Öğren	1

PUT http://localhost:5000/api/todoltems/1

Send Save

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies Code

none form-data x-www-form-urlencoded raw binary GraphQL JSON Beautify

```
1 {
2   "id" : 1,
3   "name" : "Erkan Hürnalı ile ASP.Net Core Öğren",
4   "isComplete" : true
5 }
```

Body Cookies Headers (2) Test Results Status: 204 No Content Time: 109 ms Size: 81 B Save Response

Pretty Raw Preview Visualize Text

1

SQLite

```
SELECT * FROM `TodoItems`;
```

#	Id	Name	IsComplete
1	1	Erkan Hürnalı ile ASP.Net Core Öğren	1

DELETE http://localhost:5000/api/todoItems/1 Send Save

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies Code

none form-data x-www-form-urlencoded raw binary GraphQL JSON Beautify

```
1 {
2   "id": 1,
3   "name": "Erkan Hürnalı ile ASP.Net Core Öğren",
4   "isComplete": true
5 }
```

Body Cookies Headers (4) Test Results Status: 200 OK Time: 281 ms Size: 224 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "id": 1,
3   "name": "Erkan Hürnalı ile ASP.Net Core Öğren",
4   "isComplete": true
5 }
```

SQLite

```
SELECT * FROM `TodoItems`;
```

No result found