Dapper ve Mikroservisler

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Bilgisayar
Mühendisliği
4. Sınıf

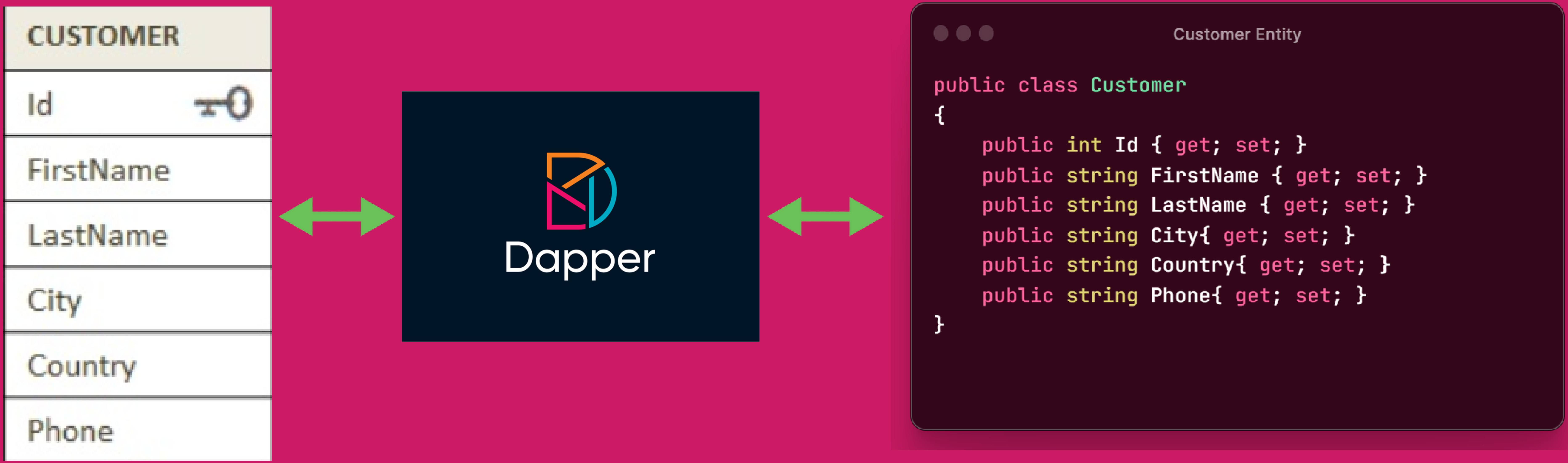
Stack Overflow

Açık Kaynak Kodlu

DAPPER

MICRO ORM FOR .NET

Object Relational Mapping



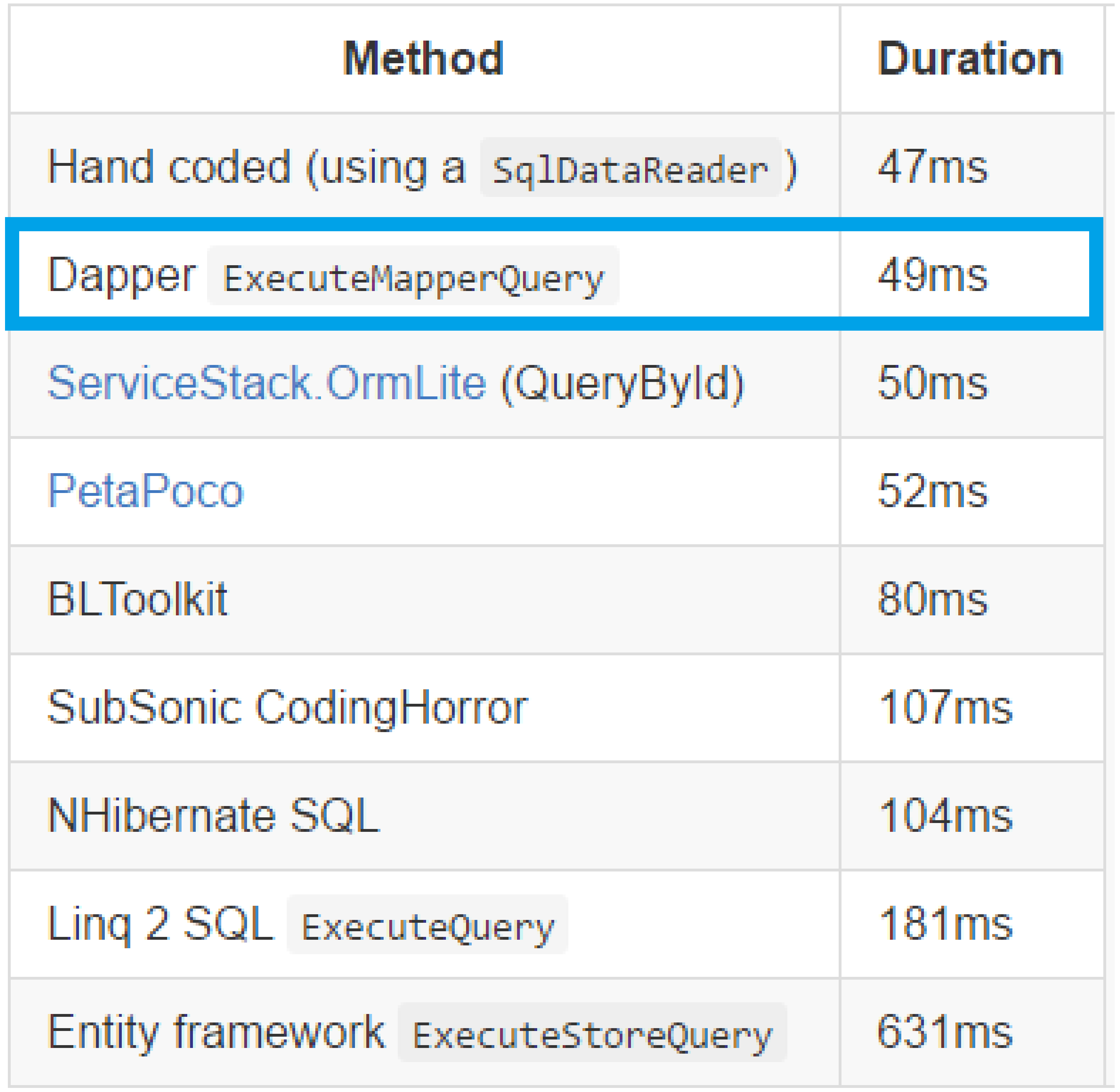
CUSTOMER
Id
FirstName
LastName
City
Country
Phone

Customer Entity

```
public class Customer
{
    public int Id { get; set; }
    public string FirstName { get; set; }
    public string LastName { get; set; }
    public string City{ get; set; }
    public string Country{ get; set; }
    public string Phone{ get; set; }
}
```

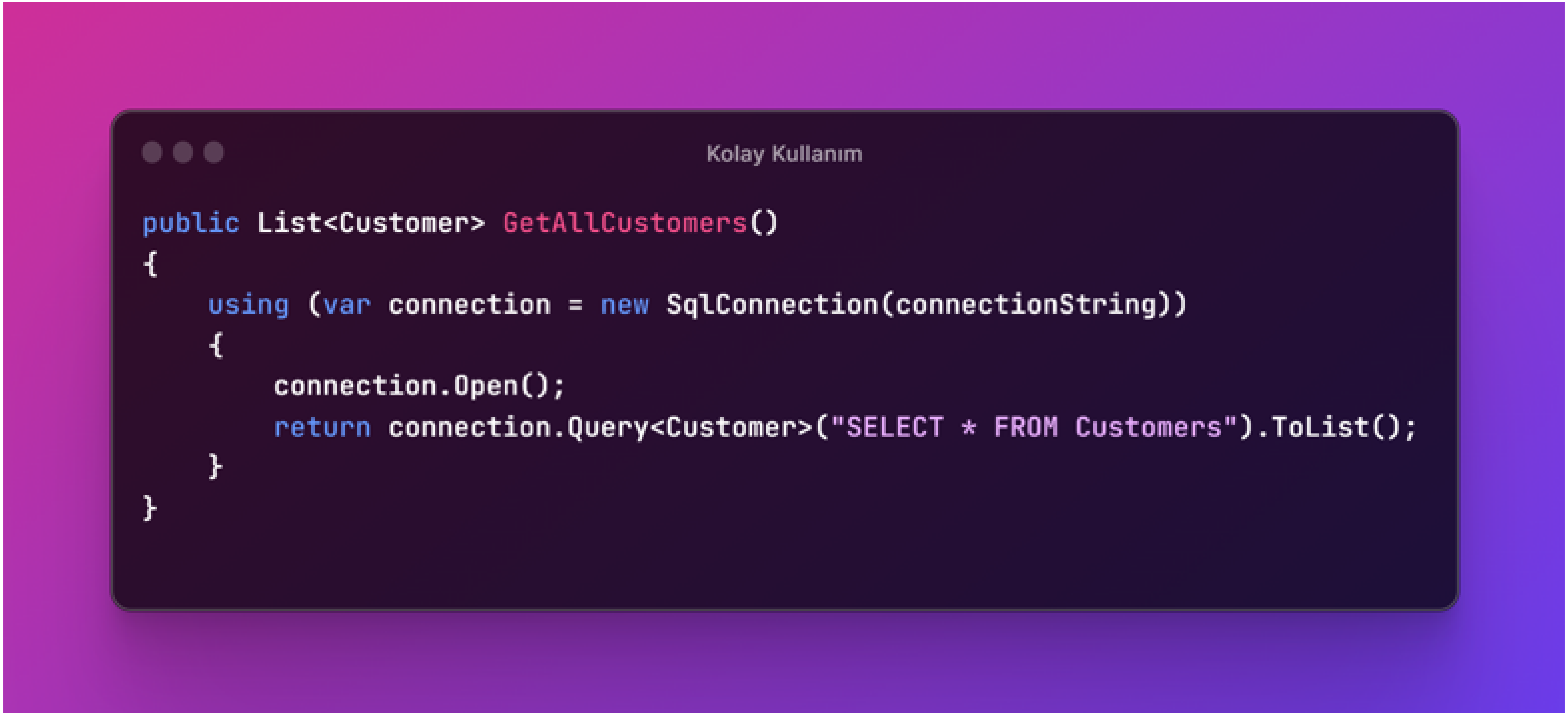
Neden Dapper?

Performans



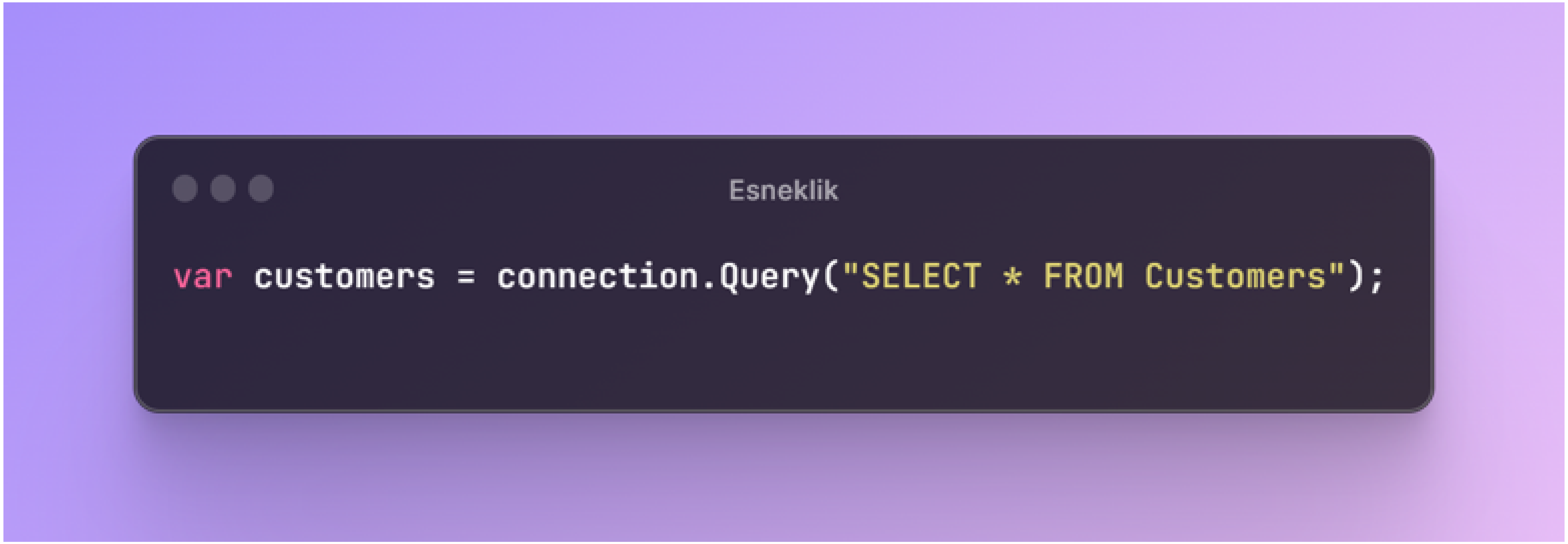
Method	Duration
Hand coded (using a `SqlDataReader`)	47ms
Dapper `ExecuteMapperQuery`	49ms
ServiceStack.OrmLite (QueryById)	50ms
PetaPoco	52ms
BLToolkit	80ms
SubSonic CodingHorror	107ms
NHibernate SQL	104ms
Linq 2 SQL `ExecuteQuery`	181ms
Entity framework `ExecuteStoreQuery`	631ms

Neden Dapper?

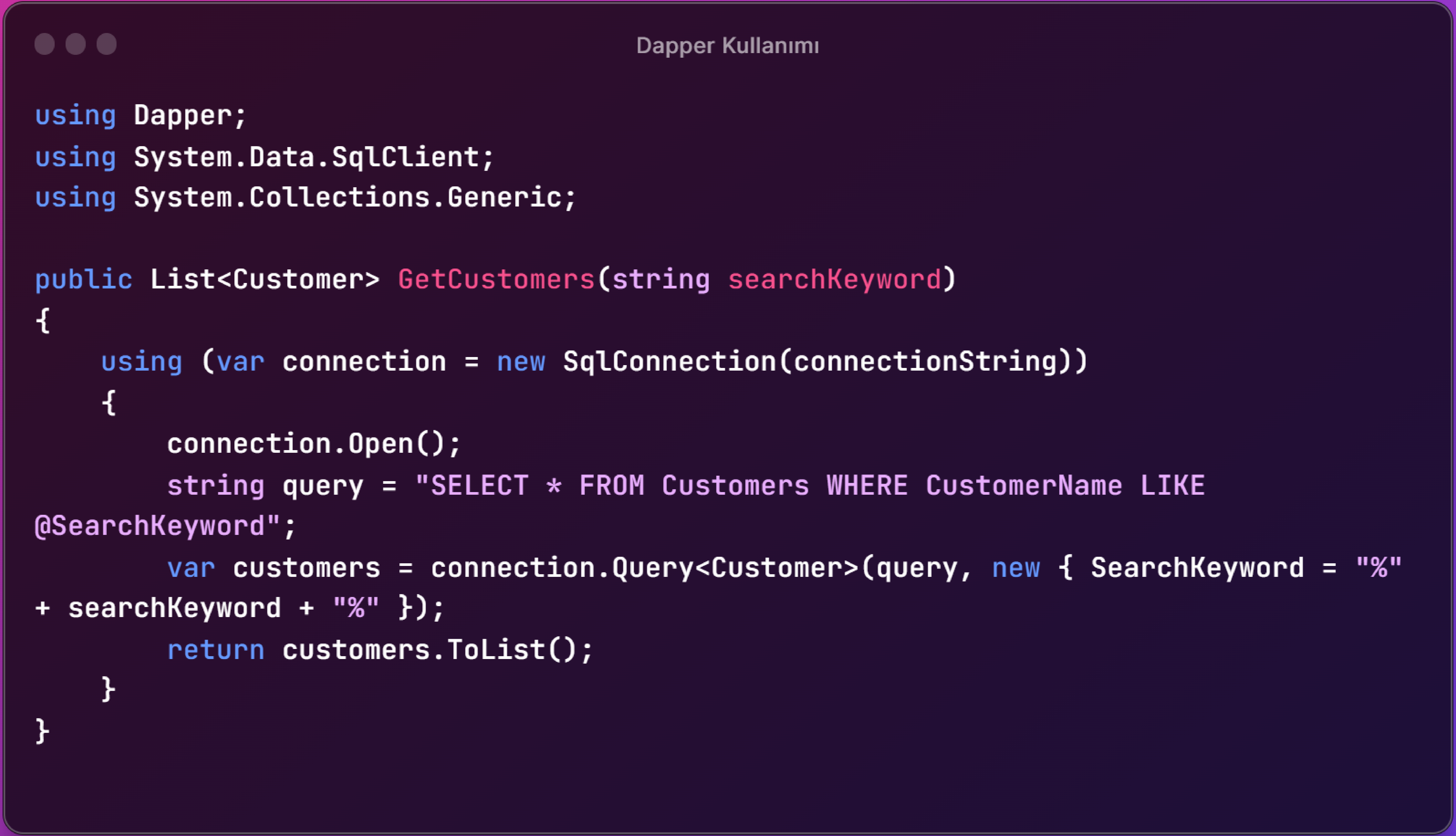


```
public List<Customer> GetAllCustomers()
{
    using (var connection = new SqlConnection(connectionString))
    {
        connection.Open();
        return connection.Query<Customer>("SELECT * FROM Customers").ToList();
    }
}
```

Neden Dapper?



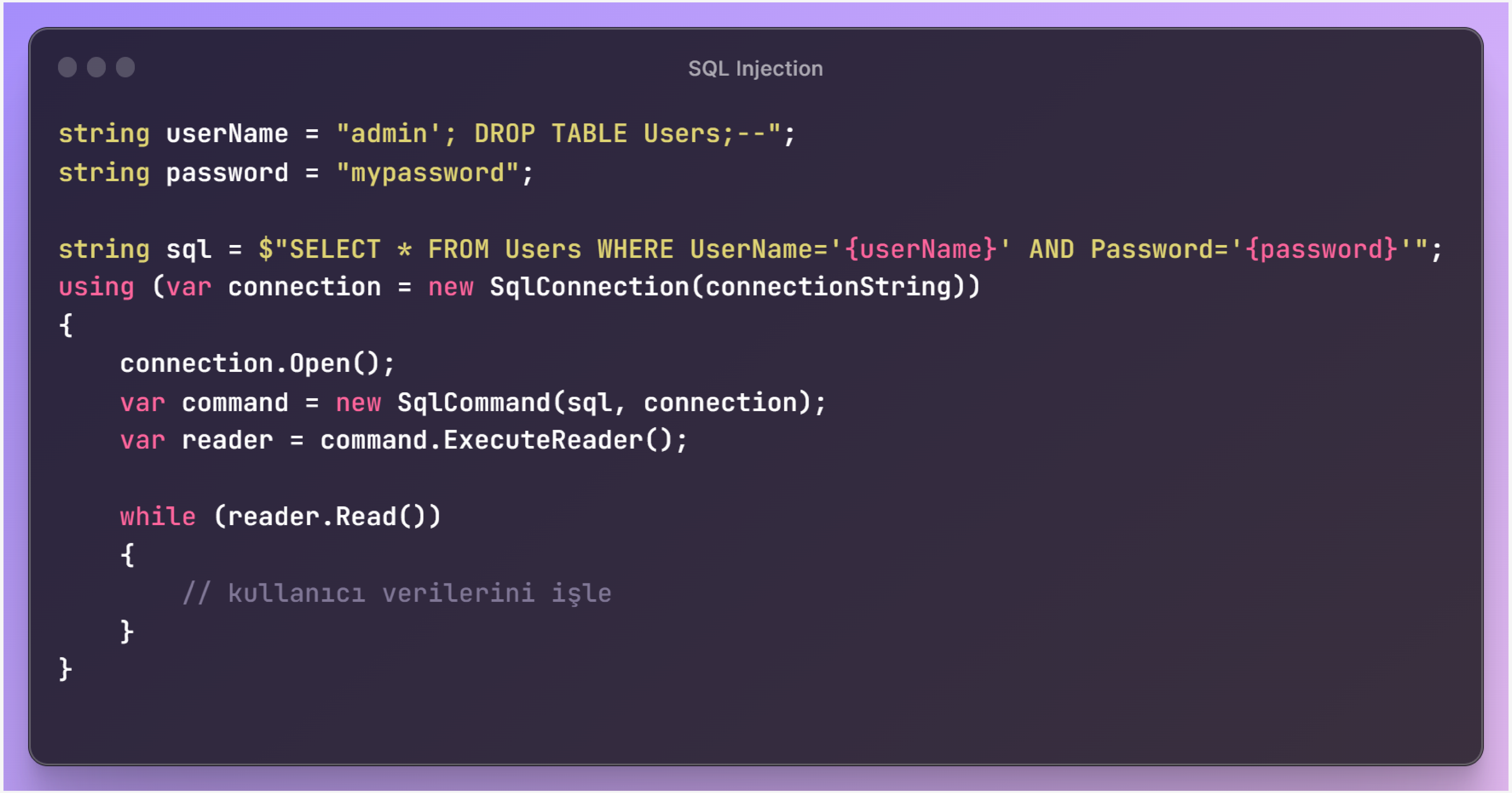
```
var customers = connection.Query("SELECT * FROM Customers");
```


Dapper Kullanımı

```
using Dapper;
using System.Data.SqlClient;
using System.Collections.Generic;

public List<Customer> GetCustomers(string searchKeyword)
{
    using (var connection = new SqlConnection(connectionString))
    {
        connection.Open();
        string query = "SELECT * FROM Customers WHERE CustomerName LIKE
@SearchKeyword";
        var customers = connection.Query<Customer>(query, new { SearchKeyword = "%"
+ searchKeyword + "%" });
        return customers.ToList();
    }
}
```

Dezavantajlar



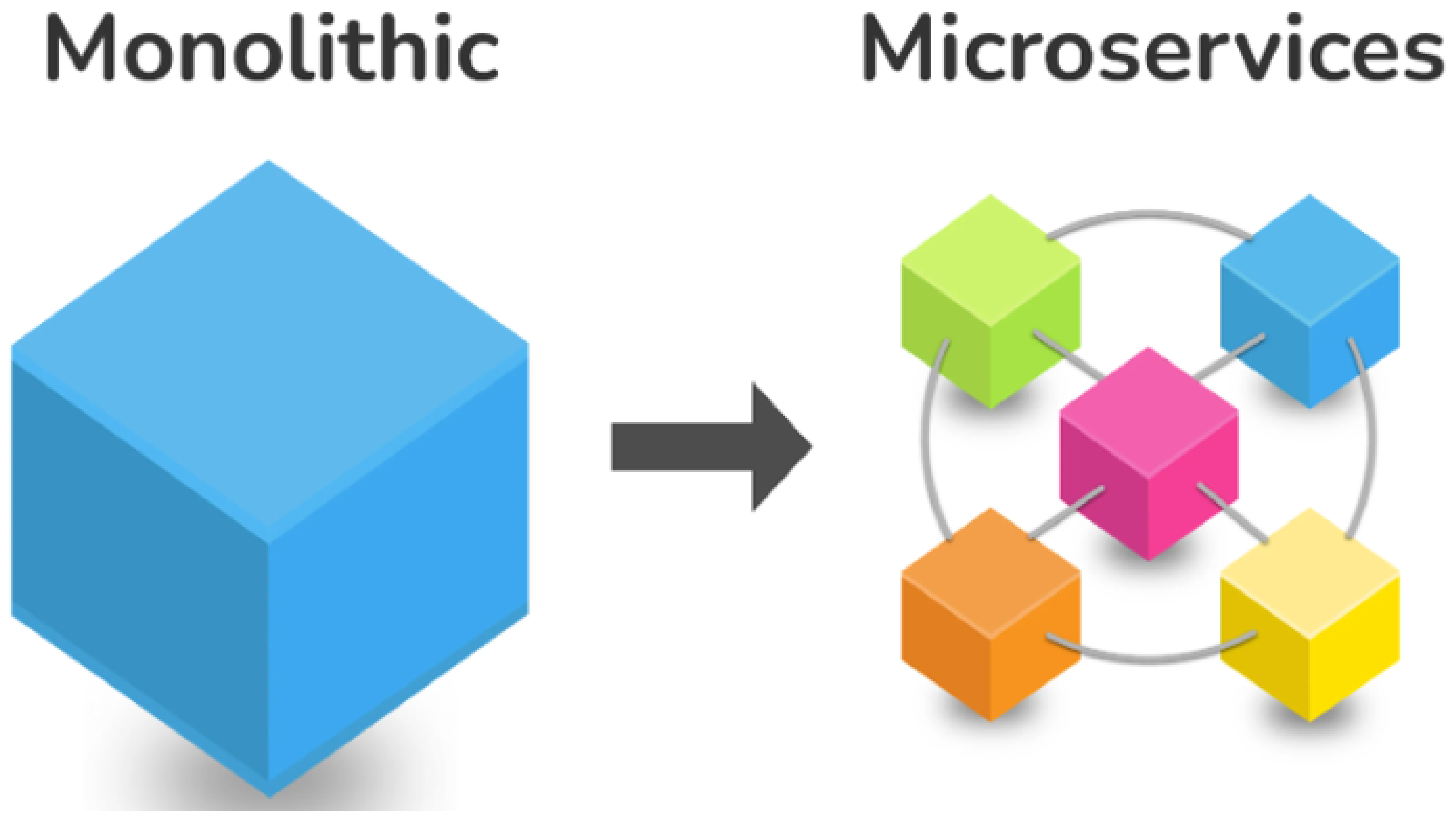
SQL Injection

```
string userName = "admin'; DROP TABLE Users;--";
string password = "mypassword";

string sql = $"SELECT * FROM Users WHERE UserName='{userName}' AND Password='{password}'";
using (var connection = new SqlConnection(connectionString))
{
    connection.Open();
    var command = new SqlCommand(sql, connection);
    var reader = command.ExecuteReader();

    while (reader.Read())
    {
        // kullanıcı verilerini işle
    }
}
```

Microservices



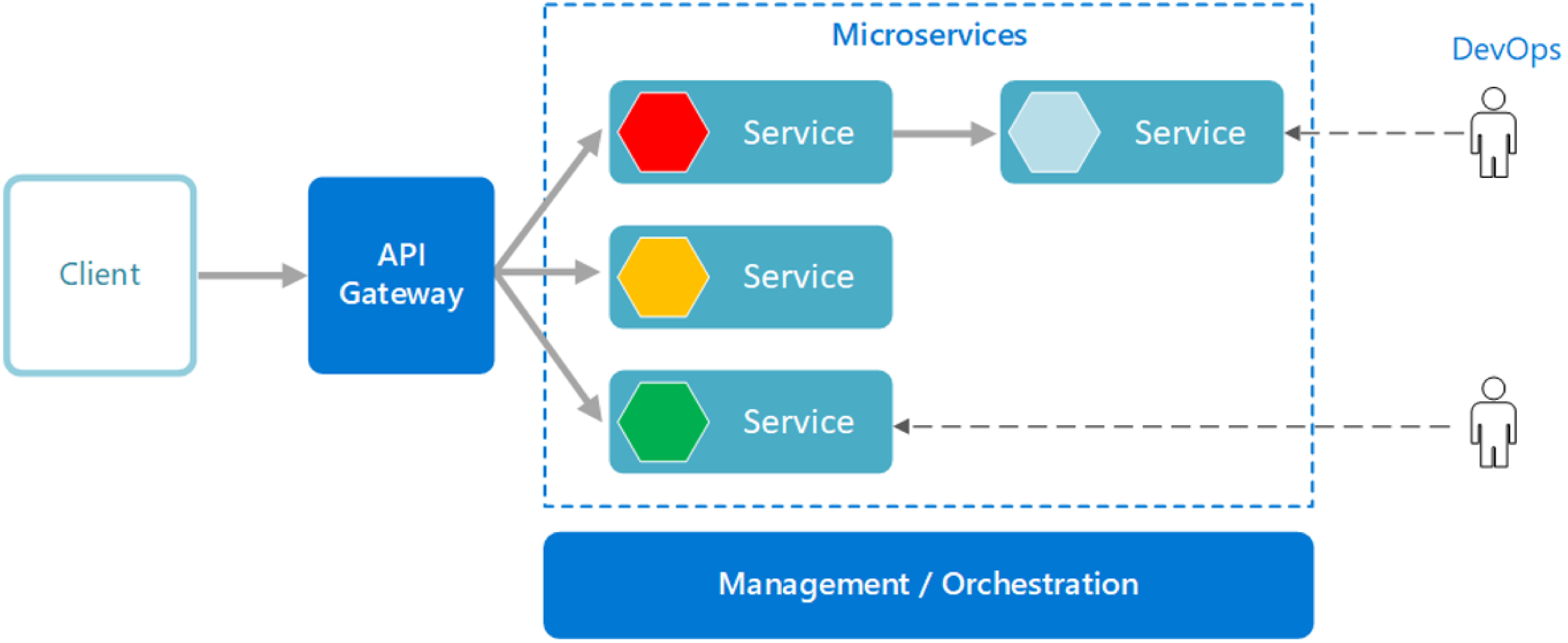
Microservice Mimarisinin Özellikleri

API'ler aracılığıyla iletişim

Karmaşıklığın azaltılması

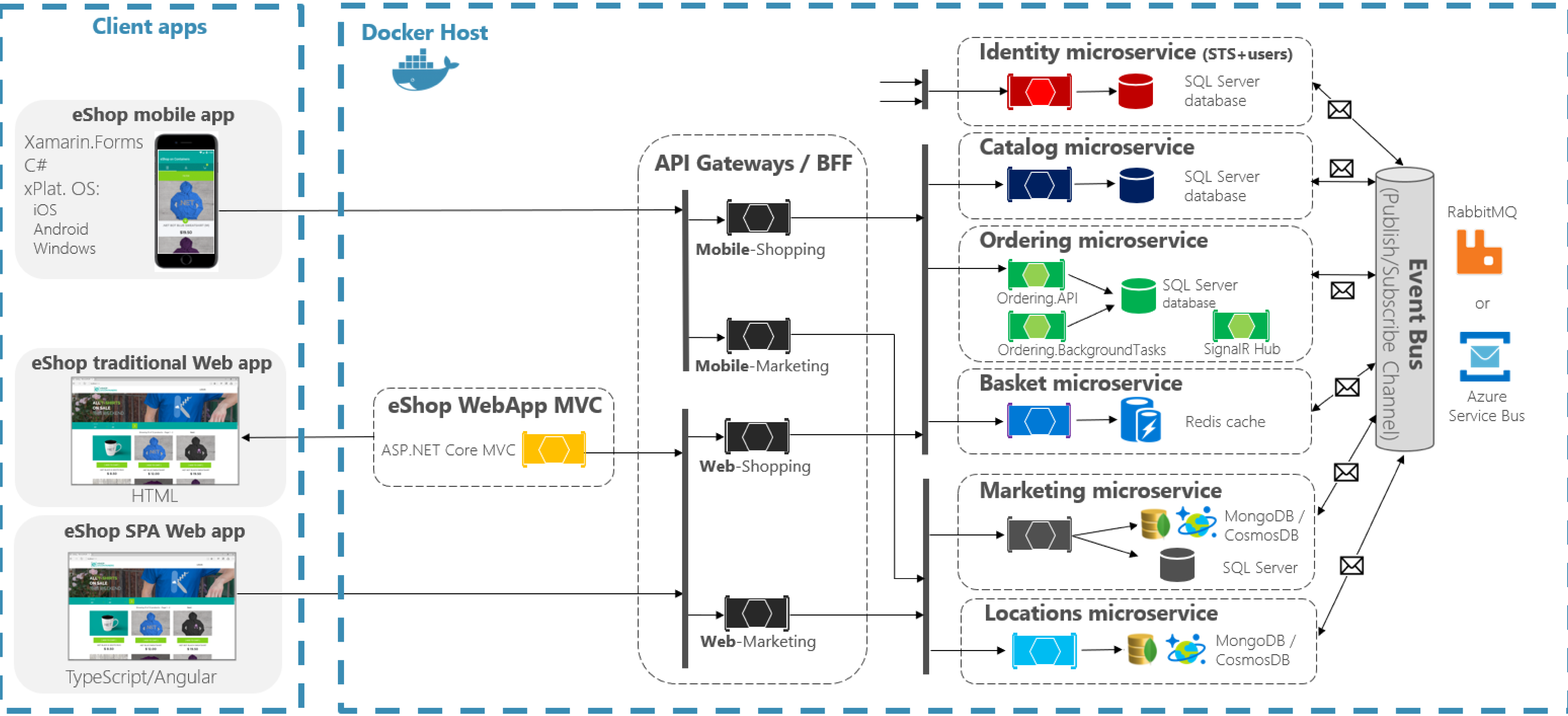
Uygulama geliştirme süreci daha hızlı ve verimli

Farklı platformlar ve teknolojiler


Client
API Gateway
Microservices
Service
Service
Service
Service
DevOps
Management / Orchestration

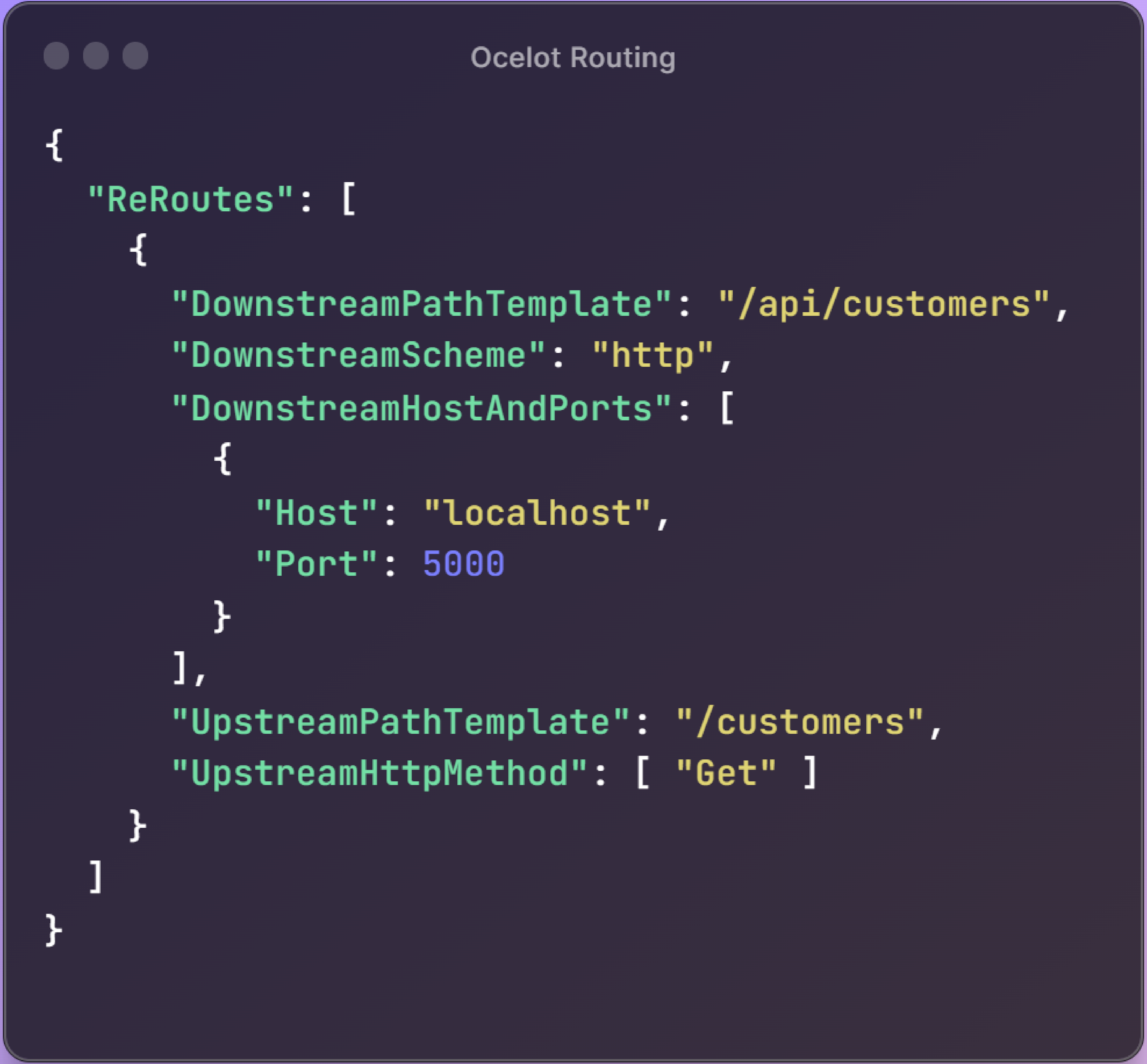
eShopOnContainers reference application

(Development environment architecture)



OCELOT

API Gateway patterni
için bir framework



Ocelot Routing

```
{
  "ReRoutes": [
    {
      "DownstreamPathTemplate": "/api/customers",
      "DownstreamScheme": "http",
      "DownstreamHostAndPorts": [
        {
          "Host": "localhost",
          "Port": 5000
        }
      ],
      "UpstreamPathTemplate": "/customers",
      "UpstreamHttpMethod": [ "Get" ]
    }
  ]
}
```

MICROSERVICES
MONOLITH