
















Section 2: Section 2 - Creating the first microservice



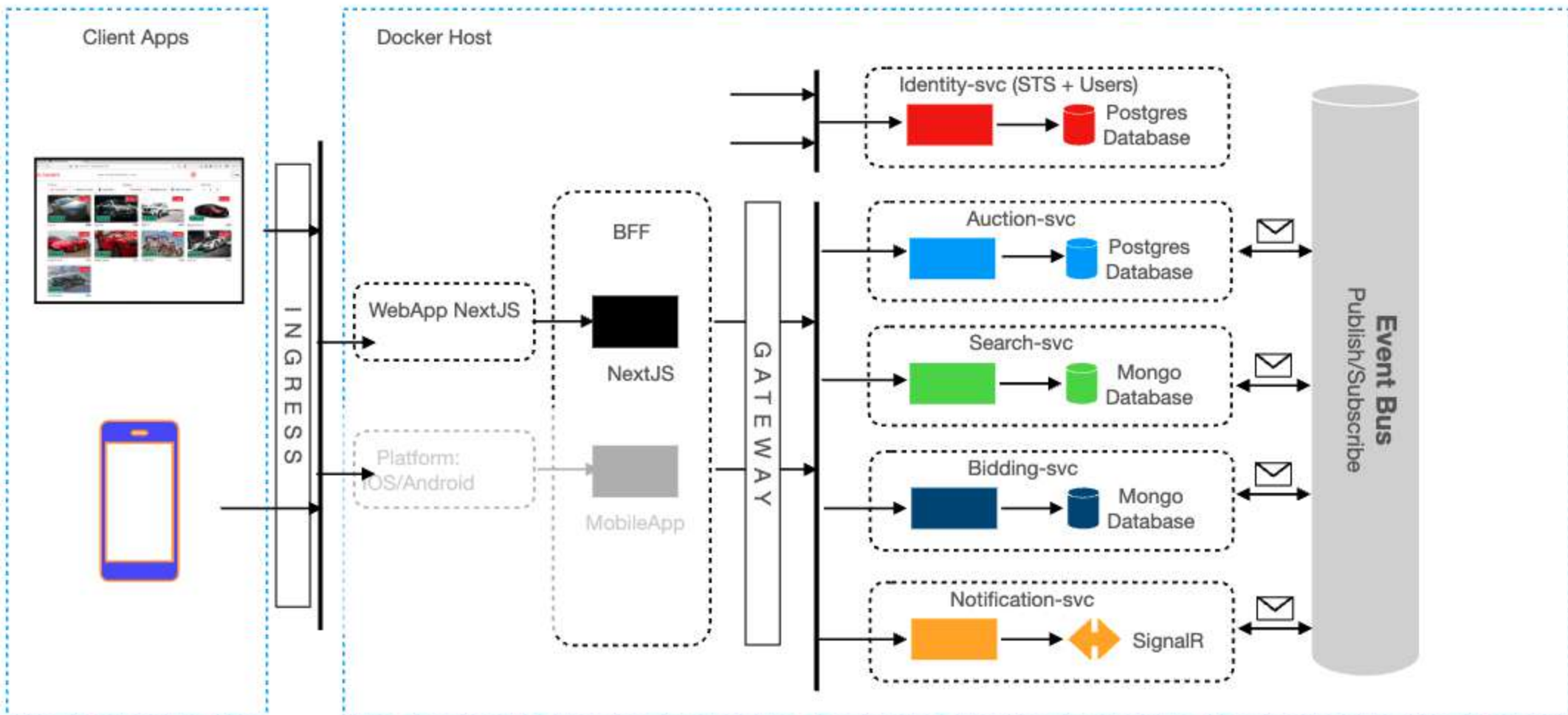
2 / 15 | 2hr 10min

- ☒ 7. Introduction to section 2
 5min
- ☒ 8. Creating the first micro service
 11min
- ☐ 9. Reviewing and simplifying the project
 12min
- ☐ 10. Adding the entity classes
 10min
- ☐ 11. Adding the Database context class
 14min
- ☐ 12. Adding a Postgres database server
 10min
- ☐ 13. Creating seed data
 8min
- ☐ 14. Shaping the data to return
 10min
- ☐ 15. Adding an API controller
 12min
- ☐ 16. Adding a postman collection
 8min
- ☐ 17. Adding the create auction endpoint
 9min
- ☐ 18. Adding the update auction endpoint
 7min
- ☐ 19. Adding the delete auction endpoint
 5min
- ☐ 20. Saving changes into source control
 7min
- ☐ 21. Summary
 2min

In this section

- Creating a simple API for the Auctions
- CRUD
- Seeding Data
- Using Docker compose
- Using Postman to test the API

AuctionApp architecture



	Id uuid	ReservePrice integer	Seller text	Winner text	SoldAmount integer	CurrentHighBid integer	CreatedAt timestamp with time zone	UpdatedAt timestamp with time zone	AuctionEnd timestamp with time zone	Status integer
1	155225c1-4448-4066-9886-6786536e05ea	50000	tom	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.27526+00	2024-07-05 09:22:53.27526+00	2024-06-25 09:22:53.27526+00	2
2	3659ac24-29dd-407a-81f5-ecfe6f924b9b	20000	bob	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.275262+00	2024-07-05 09:22:53.275262+00	2024-08-22 09:22:53.275262+00	0
3	40490065-dac7-46b6-acc4-df507e0d6570	20000	tom	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.275261+00	2024-07-05 09:22:53.275262+00	2024-07-25 09:22:53.275262+00	0
4	466e4744-4dc5-4987-aae0-b621acfc5e39	20000	alice	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.27526+00	2024-07-05 09:22:53.27526+00	2024-08-04 09:22:53.27526+00	0
5	47111973-d176-4feb-848d-0ea22641c31a	150000	alice	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.275261+00	2024-07-05 09:22:53.275261+00	2024-07-18 09:22:53.275261+00	0
6	6a5011a1-fe1f-47df-9a32-b5346b289391	0	bob	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.275261+00	2024-07-05 09:22:53.275261+00	2024-07-24 09:22:53.275261+00	0
7	afbee524-5972-4075-8800-7d1f9d7b0a0c	20000	bob	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.275059+00	2024-07-05 09:22:53.275059+00	2024-07-15 09:22:53.275125+00	0
8	bbab4d5a-8565-48b1-9450-5ac2a5c4a654	0	bob	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.27526+00	2024-07-05 09:22:53.27526+00	2024-07-09 09:22:53.27526+00	0
9	c8c3ec17-01bf-49db-82aa-1ef80b833a9f	90000	alice	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.275259+00	2024-07-05 09:22:53.275259+00	2024-09-03 09:22:53.275259+00	0
10	dc1e4071-d19d-459b-b848-b5c3cd3d151f	20000	bob	<i>null</i>	<i>null</i>	<i>null</i>	2024-07-05 09:22:53.275261+00	2024-07-05 09:22:53.275261+00	2024-08-19 09:22:53.275261+00	0

Auction Table

	Id uuid	Make text	Model text	Year integer	Color text	Mileage integer	ImageUrl text	AuctionId uuid
1	32ae28d8-f19a-48df-a35c-61e0ef7ff54b	Ferrari	Spider	2015	Red	50000	https://cdn.pixabay.com/photo/2017/11/09/01/49/ferrari-458-spider-2932191_960_720.jpg	dc1e4071-d19d-459b-b848-b5c3cd3d151f
2	355e9866-0607-4833-afdf-7bece1e06d2c	Bugatti	Veyron	2018	Black	15035	https://cdn.pixabay.com/photo/2012/05/29/00/43/car-49278_960_720.jpg	c8c3ec17-01bf-49db-82aa-1ef80b833a9f
3	3cb5f0c2-a763-468c-8a5d-0ead3c8df51c	Ford	Mustang	2023	Black	65125	https://cdn.pixabay.com/photo/2012/11/02/13/02/car-63930_960_720.jpg	bbab4d5a-8565-48b1-9450-5ac2a5c4a654
4	5349a8c7-4465-4c3e-8a5d-af6c635d4b84	Mercedes	SLK	2020	Silver	15001	https://cdn.pixabay.com/photo/2016/04/17/22/10/mercedes-benz-1335674_960_720.png	155225c1-4448-4066-9886-6786536e05ea
5	5c7d37e0-9551-4f09-849f-e368a4fa566f	Audi	TT	2020	Black	25400	https://cdn.pixabay.com/photo/2016/09/01/15/06/audi-1636320_960_720.jpg	40490065-dac7-46b6-acc4-df507e0d6570
6	5f20f293-cb60-49cc-a417-544fceaaf10c0	Ferrari	F-430	2022	Red	5000	https://cdn.pixabay.com/photo/2017/11/08/14/39/ferrari-f430-2930661_960_720.jpg	47111973-d176-4feb-848d-0ea22641c31a
7	62382ca3-c1ab-4bce-99b4-83f5f908f814	Audi	R8	2021	White	10050	https://cdn.pixabay.com/photo/2019/12/26/20/50/audi-r8-4721217_960_720.jpg	6a5011a1-fe1f-47df-9a32-b5346b289391
8	a7646dbc-ad50-408d-a6bf-4f11948dbb46	BMW	X1	2017	White	90000	https://cdn.pixabay.com/photo/2017/08/31/05/47/bmw-2699538_960_720.jpg	466e4744-4dc5-4987-aae0-b621acfc5e39
9	c38e4d75-8a2d-4795-af10-50741be33aa5	Ford	GT	2020	White	50000	https://cdn.pixabay.com/photo/2016/05/06/16/32/car-1376190_960_720.jpg	afbee524-5972-4075-8800-7d1f9d7b0a0c
10	d07ec123-82eb-40b3-8542-519d25988b00	Ford	Model T	1938	Rust	150150	https://cdn.pixabay.com/photo/2017/08/02/19/47/vintage-2573090_960_720.jpg	3659ac24-29dd-407a-81f5-ecfe6f924b9b

Item Table


```

Auction.cs x
Carsties > src > AuctionService > Entities > Auction.cs > Auction
10 references | You, 52 minutes ago | 1 author (You)
3 public class Auction
4 {
5     13 references
6     public Guid Id { get; set; }
7     8 references
8     public int ReservePrice { get; set; } = 0;
9     11 references
10    public string Seller { get; set; }
11    0 references
12    public string Winner { get; set; }
13    0 references
14    public int? SoldAmount { get; set; }
15    0 references
16    public int? CurrentHighBid { get; set; }
17    0 references
18    public DateTime CreatedAt { get; set; } = DateTime.UtcNow;
19    0 references
20    public DateTime UpdatedAt { get; set; } = DateTime.UtcNow;
21    10 references
22    public DateTime AuctionEnd { get; set; }
23    10 references
24    public Status Status { get; set; }
25    28 references
26    public Item Item { get; set; }
27 }

```

```

MappingProfiles.cs U x
Carsties > src > AuctionService > RequestHelpers > MappingProfiles.cs > MappingProfiles > .ctor
7 public class MappingProfiles : Profile
8 {
9     0 references
10    public MappingProfiles()
11    {
12        // include the item fields of the Auction inside the Auc
13        CreateMap<Auction, AuctionDto>().IncludeMembers(x => x.I
14        CreateMap<Item, AuctionDto>());
15        CreateMap<CreateAuctionDto, Auction>()
16        .ForMember(d => d.Item, o => o.MapFrom(s => s));
17        CreateMap<CreateAuctionDto, Item>();
18    }
19 }

```

```

Item.cs M x
Carsties > src > AuctionService > Entities > Item.cs > Item
You, 52 minutes ago | 1 author (You)
6 [Table("Items")]
7 13 references
8 {
9     0 references
10    public Guid Id { get; set; }
11    14 references
12    public string Make { get; set; }
13    12 references
14    public string Model { get; set; }
15    12 references
16    public int Year { get; set; }
17    12 references
18    public string Color { get; set; }
19    12 references
20    public int Mileage { get; set; }
21    10 references
22    public string ImageUrl { get; set; }
23    // nav properties
24    0 references
25    public Auction Auction { get; set; }
26    0 references
27    public Guid AuctionId { get; set; }
28 }

```

```

CreateAuctionDto.cs U x
Carsties > src > AuctionService > DTOs > CreateAuctionDto.cs > CreateAuctionDto > Make
3 references
5 public class CreateAuctionDto
6 {
7     [Required]
8     0 references
9     public string Make { get; set; }
10    [Required]
11    0 references
12    public string Model { get; set; }
13    [Required]
14    0 references
15    public int Year { get; set; }
16    [Required]
17    0 references
18    public string Color { get; set; }
19    [Required]
20 }

```

```

AuctionDto.cs U x
Carsties > src > AuctionService > DTOs > AuctionDto.cs > AuctionDto
1 namespace AuctionService.DTOs;
2
3 10 references
4 {
5     0 references
6     public Guid Id { get; set; }
7     0 references
8     public int ReservePrice { get; set; }
9     0 references
10    public string Seller { get; set; }
11    0 references
12    public string Winner { get; set; }
13    0 references
14    public int SoldAmount { get; set; }
15    0 references
16    public int CurrentHighBid { get; set; }
17    0 references
18    public DateTime CreatedAt { get; set; }
19    0 references
20    public DateTime UpdatedAt { get; set; }
21    0 references
22    public DateTime AuctionEnd { get; set; }
23    0 references
24    public string Status { get; set; }
25    0 references
26    public string Make { get; set; }
27    0 references
28    public string Model { get; set; }
29    0 references
30    public int Year { get; set; }
31    0 references
32    public string Color { get; set; }
33    0 references
34    public int Mileage { get; set; }
35    0 references
36    public string ImageUrl { get; set; }
37 }

```

```
public class AuctionsController : ControllerBase
```

```
[HttpGet("getall-options")]
```

```
0 references
```

```
public async Task<ActionResult<List<AuctionDto>>> GetAllAuctionsSlim()
```

```
{
```

```
    /* full
```

```
    SELECT a."Id", a."AuctionEnd", a."CreatedAt", a."CurrentHighBid", a."ReservePrice", a."Seller", a."SoldAmount",  
           i."Id", i."AuctionId", i."Color", i."ImageUrl", i."Make", i."Mileage", i."Model", i."Year"
```

```
    FROM "Auctions" AS a
```

```
    LEFT JOIN "Items" AS i ON a."Id" = i."AuctionId"
```

```
    ORDER BY i."Make"
```

```
    */
```

```
    var auctions = await _context.Auctions
```

```
        .Include(x => x.Item)
```

```
        .OrderBy(x => x.Item.Make)
```

```
        .ToListAsync();
```

```
    /* stupid
```

```
    SELECT a."Id", a."AuctionEnd", a."CreatedAt", a."CurrentHighBid", a."ReservePrice", a."Seller", a."SoldAmount",  
           i."Id", i."AuctionId", i."Color", i."ImageUrl", i."Make", i."Mileage", i."Model", i."Year"
```

```
    FROM "Auctions" AS a
```

```
    LEFT JOIN "Items" AS i ON a."Id" = i."AuctionId"
```

```
    ORDER BY i."Make"
```

```
    */
```

```
    /*var auctions = await _context.Auctions
```

```
        .OrderBy(x => x.Item.Make)
```

```
        .ToListAsync();*/
```

```
    /* slim
```

```
    SELECT a."Id", a."AuctionEnd", a."CreatedAt", a."CurrentHighBid", a."ReservePrice", a."Seller", a."SoldAmount",  
           i."Id", i."AuctionId", i."Color", i."ImageUrl", i."Make", i."Mileage", i."Model", i."Year"
```

```
    FROM "Auctions" AS a
```

```
    */
```

```
    /*var auctions = await _context.Auctions
```

```
        .ToListAsync();*/
```

```
    return _mapper.Map<List<AuctionDto>>(auctions);
```

```
}
```