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FSDO003ONL011

Link github = [ocbc-c--batch3/sesi14/PaymentApi at main · farhan-eka-fajri/ocbc-c--batch3 \(github.com\)](https://github.com/farhan-eka-fajri/ocbc-c--batch3/tree/main/sesi14/PaymentApi)

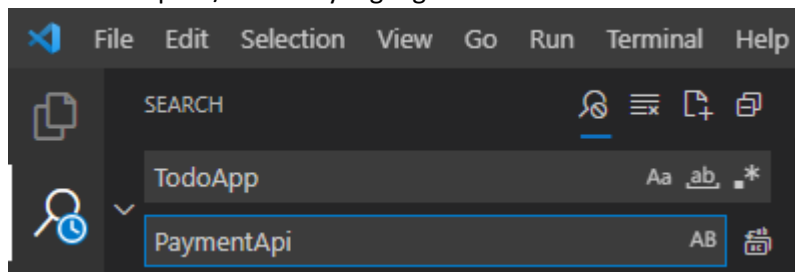
Link Heroku = [Swagger UI \(han-payment-api.herokuapp.com\)](https://han-payment-api.herokuapp.com)

PEMBUATAN

1. Pada proses pembuatan aplikasi yang diduplikasi dari sesi 11 dengan menambahkan beberapa environment terutama install MySQL.Data dan MySQL.EntityFrameworkCore yang akan membantu koneksi ke database yang digunakan sebagai berikut :

```
sesi14 > PaymentApi > TodoApp.csproj
1  <Project Sdk="Microsoft.NET.Sdk.Web">
2
3  <PropertyGroup>
4    <TargetFramework>net5.0</TargetFramework>
5  </PropertyGroup>
6
7  <ItemGroup>
8    <PackageReference Include="Microsoft.AspNetCore.Authentication.JwtBearer" Version="5.0.15" />
9    <PackageReference Include="Microsoft.AspNetCore.Identity.EntityFrameworkCore" Version="5.0.15" />
10   <PackageReference Include="Microsoft.AspNetCore.Identity.UI" Version="5.0.15" />
11   <PackageReference Include="Microsoft.EntityFrameworkCore.Design" Version="5.0.15">
12     <IncludeAssets>runtime; build; native; contentfiles; analyzers; buildtransitive</IncludeAssets>
13     <PrivateAssets>all</PrivateAssets>
14   </PackageReference>
15   <PackageReference Include="Microsoft.EntityFrameworkCore.Sqlite" Version="5.0.15" />
16   <PackageReference Include="Microsoft.EntityFrameworkCore.Tools" Version="5.0.15">
17     <IncludeAssets>runtime; build; native; contentfiles; analyzers; buildtransitive</IncludeAssets>
18     <PrivateAssets>all</PrivateAssets>
19   </PackageReference>
20   <PackageReference Include="MySQL.Data" Version="8.0.28" />
21   <PackageReference Include="MySQL.EntityFrameworkCore" Version="5.0.8" />
22   <PackageReference Include="NuGet.CommandLine.XPlat" Version="5.11.0" />
23   <PackageReference Include="Swashbuckle.AspNetCore" Version="5.6.3" />
24 </ItemGroup>
25
26 </Project>
27
```

2. Ubah namespace/variable yang digunakan



3. Lakukan Changes pada Model database

```

sesi14 > PaymentApi > Models > C# ItemData.cs
1  using MySql.Data;
2  using MySql.EntityFrameworkCore;
3  namespace PaymentApiApp.Models{
4
5      public class ItemData{
6
7          public int Id {get; set;}
8          public string cardOwnerName {get; set;}
9          public string cardNumber {get; set;}
10         public string expirationDate {get; set;}
11         public string securityCode {get; set;}
12     }
13 }
14 }

```

4. Lakukan perubahan pada controller dan sesuaikan

```

[HttpPut("{id}")]
0 references
public async Task<IActionResult> UpdateItem(int id, ItemData item){

    if(id != item.Id)
        return BadRequest();

    var existItem = await _context.Items.FirstOrDefaultAsync(x => x.Id == id);

    if(existItem == null)
        return NotFound();

    existItem.cardOwnerName = item.cardOwnerName;
    existItem.cardNumber = item.cardNumber;
    existItem.expirationDate = item.expirationDate;
    existItem.securityCode = item.securityCode;

    await _context.SaveChangesAsync();
}

```

5. Login dan sign up untuk mendapatkan hosting mysql gratis

<https://www.freemysqlhosting.net/>

6. Masukkan konfigurasi database pada appsettings.json

```

appsettings.json - C# - Visual Studio Code
PaymentApiController.cs Startup.cs appsettings.json Dockerfile ItemData.cs
sesi14 > PaymentApi > appsettings.json > {} ConnectionStrings > DefaultConnection
1  {
2      "ConnectionStrings": {
3          "DefaultConnection": "Server=sql6.freemysqlhosting.net;Port=3306;Database=sql6482495;Uid=sql6482495;Pwd=afbdg17I9n;SSL Mode=None"
4      },
5  }

```

7. Gunakan fungsi untuk koneksi ke mysql pada startup

```

services.AddDbContext<ApiDbContext>(options =>
{
    options.UseMySQL(
        Configuration.GetConnectionString("DefaultConnection")
    );
});

```

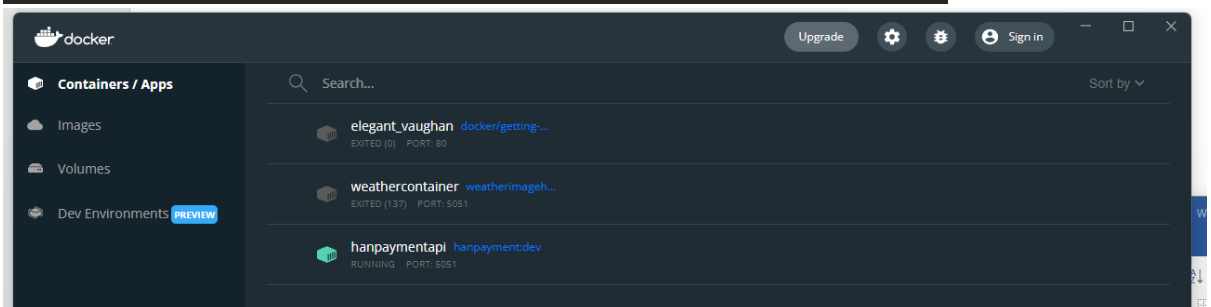
8. Lakukan migrasi database dengan ketik dotnet ef migrations add "initial"
9. Lakukan update database dengan ketik dotnet ef database update
10. Lakukan testing percobaan pada API

11. Buatlah dockerfile

```
sesi14 > PaymentApi > Dockerfile > ...
1 #See https://aka.ms/containerfastmode to understand how Visual Studio uses this Dockerfile to build your images for faster debugging.
2
3 FROM mcr.microsoft.com/dotnet/aspnet:5.0 AS base
4 WORKDIR /app
5 EXPOSE 80
6 EXPOSE 443
7 EXPOSE 48719
8 EXPOSE 27017
9 EXPOSE 5000
10 EXPOSE 5001
11
12
13 FROM mcr.microsoft.com/dotnet/sdk:5.0 AS build
14 WORKDIR /src
15 COPY . .
16
17 #COPY ["TodoAppTest/ToDoAppTest.csproj", "ToDoAppTest/"]
18 #RUN dotnet restore "ToDoAppTest/ToDoAppTest.csproj"
19 #COPY . .
20 #WORKDIR "/src/ToDoAppTest"
21 #RUN dotnet build "ToDoAppTest.csproj" -c Release -o /app/build
22
23 RUN dotnet restore
24 RUN dotnet build --no-restore -c Release -o /app
25
26 FROM build AS publish
27 RUN dotnet publish "ToDoAppTest.csproj" -c Release -o /app/publish
28
29 FROM base AS final
30 WORKDIR /app
31 #COPY --from=publish /app/publish .
32 COPY --from=publish /app/ .
33 #ENTRYPOINT ["dotnet", "ToDoAppTest.dll"]
34 CMD ASPNETCORE_URLS=http://*:5001 dotnet ToDoApp.dll
```

12. Setelah itu buat image pada docker dan run docker local, pastikan port yang digunakan tidak bentrok

```
dotnet build
dotnet publish -c Release
docker build -t weatherimage:dev .
docker run -d -p 5051:80 --name weathercontainer weatherimage:dev
```



13. Hosting pada Heroku dengan cara

- Sign up, login
- Create new app
- Masukan nama app

- d. Tambahkan buildpack dari github jincod <https://github.com/jincod/dotnetcore-buildpack>

The screenshot shows the Heroku app settings page for an application named 'notpayment'. The 'App Information' section displays the following details: App Name (notpayment), Region (United States), Stack (heroku-20), Framework (No framework detected), Slug size (No slug detected), and Heroku git URL (https://git.heroku.com/notpayment.git). Below this, the 'Config Vars' section is visible with a 'Reveal Config Vars' button. At the bottom, the 'Buildpacks' section shows an 'Add buildpack' button.

- e. Masuk pada deploy dan koneksikan github serta search repository yang akan digunakan
- f. Lakukan push pada git
- g. Deploy secara manual

The screenshot shows the GitHub repository page for 'han-payment-api'. The 'Deploy' tab is selected, displaying the 'Build Log' for the latest deployment. The log shows the following steps: 'Publishing /tmp/build_e15e6347/ToDoApp.csproj for Release on heroku_output', 'Welcome to .NET 6.0!', 'SDK Version: 6.0.201', 'Installed an ASP.NET Core HTTPS development certificate.', 'To trust the certificate run \'dotnet dev-certs https --trust\' (Windows and macOS only).', 'Learn about HTTPS: https://aka.ms/dotnet-https', 'Write your first app: https://aka.ms/dotnet-hello-world', 'Find out what's new: https://aka.ms/dotnet-whats-new', 'Explore documentation: https://aka.ms/dotnet-docs', 'Report issues and find source on GitHub: https://github.com/dotnet/core', 'Use \'dotnet --help\' to see available commands or visit: https://aka.ms/dotnet-cli', 'Microsoft (R) Build Engine version 17.1.0+ae57d105c for .NET', 'Copyright (C) Microsoft Corporation. All rights reserved.', 'Determining projects to restore...', 'Restored /tmp/build_e15e6347/ToDoApp.csproj (in 14.09 sec).', 'ToDoApp -> /tmp/build_e15e6347/bin/Release/net5.0/linux-x64/ToDoApp.dll', 'ToDoApp -> /tmp/build_e15e6347/heroku_output/', 'Add web process to Procfile', '-----> Discovering process types', 'Procfile declares types -> web', '-----> Compressing...', 'Done: 167.4M', '-----> Launching...', 'Released v3', 'https://han-payment-api.herokuapp.com/ deployed to Heroku', and 'Build finished'.

- h. Link dapat diakses di [Swagger UI \(han-payment-api.herokuapp.com\)](https://han-payment-api.herokuapp.com)

Cara Penggunaan

1. Akses [Swagger UI \(han-payment-api.herokuapp.com\)](https://han-payment-api.herokuapp.com)
2. Pilih menu AuthManagement, submenu register untuk registrasi akun terlebih dahulu. Jika sudah memiliki akun maka pilih submenu login untuk login akun.
3. Klik Try it out.
4. Pada notes JSON, ganti nilai dari masing-masing key

- ## TESTING

Postman

File Edit View Help

Home Workspaces API Network Reports Explore

Search Postman

My Workspace

New Import

FinalProjectOnline / PaymentGet

GET https://han-payment-api.herokuapp.com/api/PaymentApi

Params Auth Headers (7) Body Pre-req. Tests Settings

Headers 6 hidden

KEY	VALUE	DESC	Bulk Edit	Presets
<input checked="" type="checkbox"/> Authorization	Bearer eyJhbGciOiJIUzI1NiIsInR5cCI...			
Key	Value	Description		

Body

200 OK 2.08 s 294 B

Pretty Raw Preview Visualize JSON

```
1 {
2   "id": 1,
3   "cardOwnerName": "Faizhan",
4   "cardNumber": "236649",
5   "expirationDate": "2026",
6   "securityCode": "someguy"
7 }
```

Home Workspaces API Network Reports Explore

Search Postman

My Workspace

New Import

FinalProjectOnline / PaymentGetWhere

GET https://han-payment-api.herokuapp.com/api/PaymentApi/1

Params Auth Headers (7) Body Pre-req. Tests Settings

Headers 6 hidden

KEY	VALUE	DESC	Bulk Edit	Presets
<input checked="" type="checkbox"/> Authorization	Bearer eyJhbGciOiJIUzI1NiIsInR5cCI...			
Key	Value	Description		

Body

200 OK 1928 ms 292 B

Pretty Raw Preview Visualize JSON

```
1 {
2   "id": 1,
3   "cardOwnerName": "Faizhan",
4   "cardNumber": "236649",
5   "expirationDate": "2026",
6   "securityCode": "someguy"
7 }
```

My Workspace New Import

FinalProjectOnline / PaymentPost

POST https://han-payment-api.herokuapp.com/api/PaymentApi Send

Params Auth Headers (9) Body Pre-req. Tests Settings Cookies Beautify

raw JSON

```
1 {
2   "id": 3,
3   "cardOwnerName": "Andhika",
4   "cardNumber": "533564",
5   "expirationDate": "2024",
6   "securityCode": "quickguy"
7 }
```

Body 201 Created 1862 ms 347 B Save Response

Home Workspaces API Network Reports Explore Search Postman Invite Upgrade

My Workspace New Import

FinalProjectOnline / PaymentPut

PUT https://han-payment-api.herokuapp.com/api/PaymentApi/3 Send

Params Auth Headers (9) Body Pre-req. Tests Settings Cookies Beautify

raw JSON

```
1 {
2   "id": 3,
3   "cardOwnerName": "Pradana",
4   "cardNumber": "654321",
5   "expirationDate": "2021",
6   "securityCode": "lastofguy"
7 }
```

Body 204 No Content 3.04 s 140 B Save Response

Home Workspaces API Network Reports Explore Search Postman Invite Upgrade

My Workspace New Import

FinalProjectOnline / PaymentDelete

DELETE https://han-payment-api.herokuapp.com/api/PaymentApi/3 Send

Params Auth Headers (7) Body Pre-req. Tests Settings Cookies Beautify

Headers 6 hidden

KEY	VALUE	DESC	Bulk Edit	Presets
<input checked="" type="checkbox"/> Authorization	Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXLT...			
Key	Value	Description		

Body 200 OK 3.19 s 295 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "id": 3,
3   "cardOwnerName": "Pradana",
4   "cardNumber": "654321",
5   "expirationDate": "2021",
6   "securityCode": "lastofguy"
7 }
```