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= **MONEYME EXAM WEB AND API PROJECT SETUP AND CONFIGURATIONS:** =

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A. TECHNOLOGY STACK USED:

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1. **.NET 8 MVC and REST API**
2. **Filters** (for centralized exception handling)
3. **Log4net** (for file-based exception logging mechanism)
4. **xUnit** (for unit test)
5. **Moq** (for mocking objects in unit test)
6. **N-tier** design/architecture
7. **JwtBearer** (for Token Generation in API)
8. **Entity Framework Core 8**
9. **Mapster** (for object-to-object mapping)

B. RUNNING THE APPLICATION (WEB and API):

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1. Restore the Database included (***MoneyMeDbExam_09232024.bak***)

2. Apply necessary credentials after restore.

3. 4 lookup tables are already pre-populated (***e.g. NamePrefixes, DomainBlacklist, MobileBlacklist, and Products***)

4. The .Net Solution (***e.g. MoneyMe.Solution.sln***) is configured to run multiple projects, both Web and API at the same time once it is being Started.
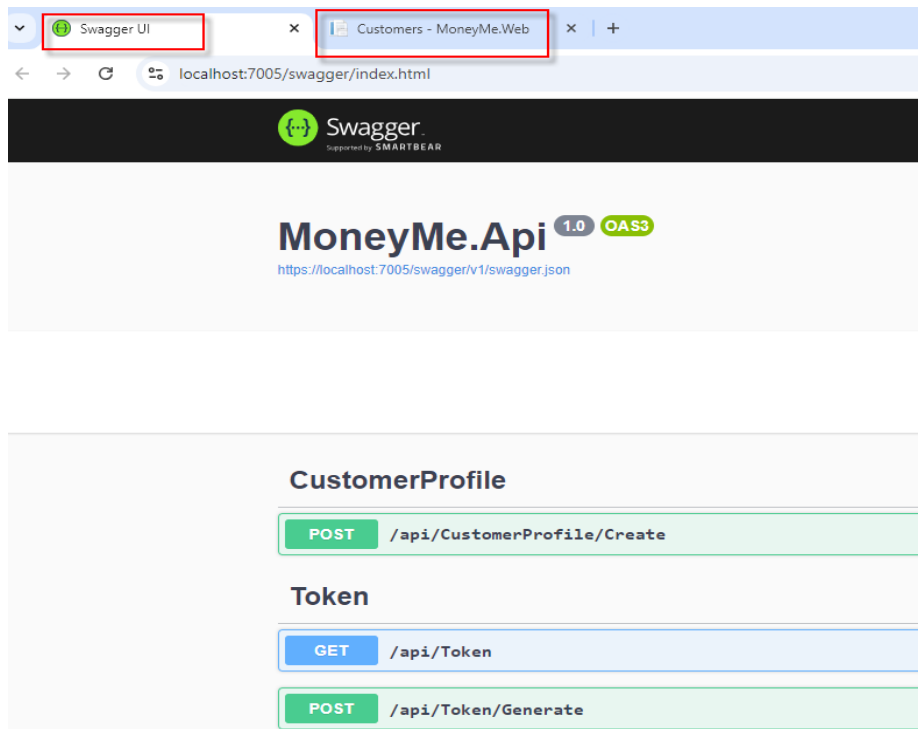
5. Modify the folder paths in the **"Log4Net.config"** file located in the both **"\ MoneyMe.Web\Configuration"** and **"\ MoneyMe.API\Configuration"** folders, below sample:

<p style="text-align:center"><file value="C:_PROJECTS_SPROUT_LOGS\Exception_.txt" /></p>

6. Modify connection string value in the **"appsettings.json"** file for new data source dB server connectivity in both **MoneyMe.API** and **MoneyMe.Web**

7. All Product types (**e.g. A. B. and C**) Repayment/Loan Application computations lookup values are in the **"appsettings.json"** in **MoneyMe.Web** to be configurable for future changes.

8. Run first API below and Generate Token to be used for Authorization:

Use this test account in JSON format to generate token:
```
{
  "username": "Api.Test",
  "password": "M@n3yM3.@pi"
}
```

Get generated token below:

9. Click the Authorize button to supply generated token to authorize API endpoint execution:

This should be the proper way to supply the token:

bearer
eyJhbGciOiJodHRwOi8vd3d3LnczLm9yZy8yMDAxLzA0L3htbGRzaWctbW9yZSNobWFjLXNoYTUxMiIsInR5cCI6IkpXVCJ9.eyJVc2VyTmFtZSI6IkFwaS5UZXN0IiwiaHR0cDovL3NjaGVtYXMubWljcm9zb2Z0LmNvbS93cy8yMDA4LzA2L2lkZW50aXR5L2NsYWltcy9yb2xlIjoiQWRtaW4iLCJleHAiOjE3MjcwNzMxNzN9.JdTpK4U4o5fw_mcgtjoz8vDoSf2DSEb2H1lgK2DtN5Q3wfnEuYPmU1jjmdmDlQHNx5FTrAZdmnn2VBu1Pkl11g

Then click Authorize button

10. We can now insert data using the API endpoint below with the following request body:
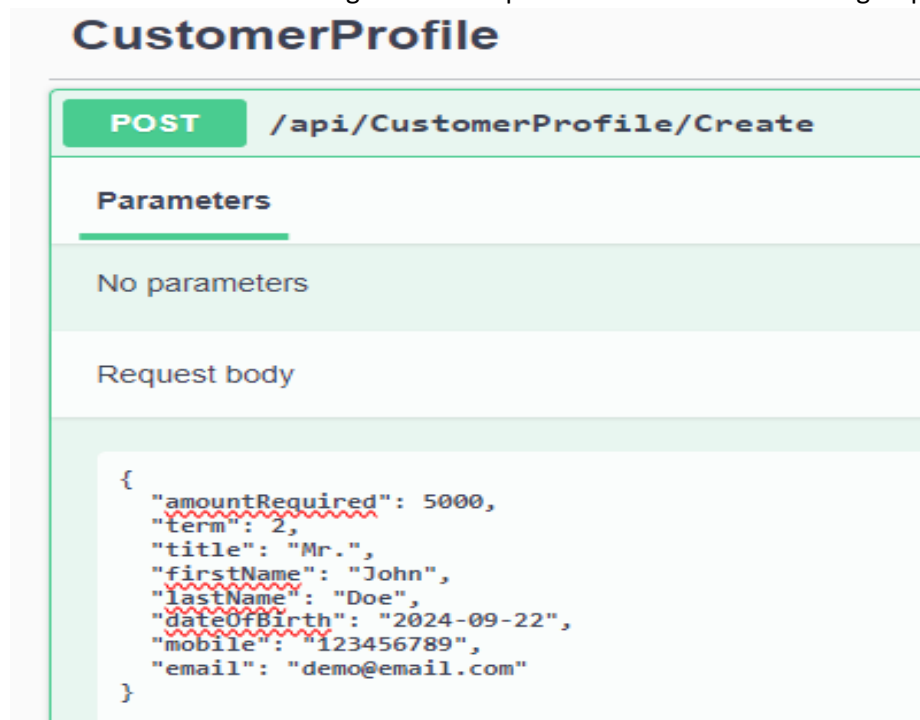
Sample request body in JSON format to use:
```
{
  "amountRequired": 5000,
  "term": 2,
  "title": "Mr.",
  "firstName": "John",
  "lastName": "Doe",
  "dateOfBirth": "2024-09-22",
  "mobile": "123456789",
  "email": "demo@email.com"
}
```

11. Upon successful execution, the response body will be a URL that will redirect the customer to a page similar to the exam requirements in the PDF file provided:

Code	Details
200	**Response body**
	`https://localhost:7058/CustomerProfile/QuoteCalculator/7`
	Response headers

	`content-type: text/plain; charset=utf-8`
	`date: Mon,23 Sep 2024 15:14:48 GMT`
	`server: Kestrel`

Sample URL below:

https://localhost:7058/CustomerProfile/QuoteCalculator/7

12. Since both the API and Web applications are both running, the URL generated above can be directly pasted in browser and can view now the "***Quote Calculator***" page similar to the exam requirements in the PDF file provided:

13. Clicking the **"Calculate Quote"** button will redirect the customer to a page similar to the exam requirements in the PDF file provided:

Your Quote

Your information:

Name	John Doe
Mobile	123456789
Email	demo@email.com
Birthdate	9/22/2024

Finance details:

Finance Amount	5000.00
--------------------	over 12 months
Repayments From	2500.00
--------------------	monthly

Apply Now | Back To Quote Calculator | Back To Home

14. Clicking the **"Apply Now"** button will have some validations below:

- The applicant must be at least 18 years old.
- Check for blacklisted mobile numbers.
- Check for blacklisted domain names.

15. After above 3 checks passed, the application will be saved in the database and the customer will be redirected to a *Customer Profile Home* page below which also can view the loans applied:

Customer Profile Home

AmountRequired	Term	Title	FirstName	LastName	DateOfBirth	Mobile	Email		
5000.00	2	Mr.	John	Doe	9/22/2024	123456789	demo@email.com	Quote Calculator	Loan Details
5000.00	36	Mr.	John 1	Doe 1	9/22/2004	0422111333	layton@gmail.com	Quote Calculator	Loan Details

Loan Details

Customer Profile

AmountRequired	5000.00
Term	36
Title	Mr.
FirstName	John 1
LastName	Doe 1
DateOfBirth	9/22/2004
Mobile	0422111333
Email	layton@gmail.com

Loan Applications

Product Name	Repayment	Total Repayment
ProductC	156.68	5640.55
ProductB	1868.70	11212.21

Back To Home