**Prerequisites:**

**IDE and Database Servers:**

* Visual studio 2019
* SQL Server Local Database (MSSQLLocalDB)

**Web Technologies:**

* C#
* .NET 5 Web API
* EF Core 5 Core First
* xUnit test framework for unit and integration testing

**Architecture**:

* Clean Architecture

**Design pattern:**

* CQRS using Mediator library
* Dependency injection

**Business Rule & Validation:**

* Fluent Validation

**API documentation:**

* Swagger UI

**EF Core 5 Migration steps from Visual Studio 2019:**

**Step 1:** Open **Package Manager Console**

**Step 2:** Select Default Project as **SocieteGenerale.Persistence** layer

**Step 3:** Enter add-migration Initial in **Package Manager Console**

**Step 4:** Migration files will be created under the **SocieteGenerale.Persistence** layer

Graphical user interface

Description automatically generated with medium confidence

**Step 5 : Enter** update-database -verbose in **Package Manager Console**

Now, all the database schemas will be generated with minimal data on **SocieteGeneraleDB**.

**Step 6:** **Open SQL Server Object Explorer** and verify the database successfully created.

Graphical user interface, application

Description automatically generated

**Step 7:** Open **Solution Explorer**, Set **SocieteGenerale.API** as Startup Project

Graphical user interface, text, application

Description automatically generated with medium confidence

**Step 8:** Press **F5** or press **IIS Express** to run the project.

Now the Swagger UI will be appeared.

Graphical user interface, text, application, email

Description automatically generated

**API endpoints Inputs and outputs:**

|  |  |
| --- | --- |
| **Customer management** | |
| A picture containing graphical user interface  Description automatically generated | Create new user |
| Graphical user interface  Description automatically generated with medium confidence | Get all customers list |
| **Transaction management** | |
| Shape  Description automatically generated with medium confidence | Purchase a item using Immediate or Credit payment mode(Payment Type – 1 (Immediate, 2 - Credit) |
| Graphical user interface, text, application, Word  Description automatically generated | Get all outstanding transactions details with rate of interest for each purchase and its total amount with interest by **CustomerId**. |
|  | Get all outstanding transactions total amount with interest by CustomerId |
| Text  Description automatically generated with low confidence | Payment with Principle amount + Interest against to the transaction Id by Customer Id |

**Transactions:**