

ICMarkets WEB API .NET Developer Project

Greetings from ICMarkets team.

The purpose of this project is to validate the candidate's approach of designing a Web API. The app stores all data into the database from ETH, Dash, BTC, LTC API(s). Source *Blockcypher*.

1. <https://api.blockcypher.com/v1/eth/main>
2. <https://api.blockcypher.com/v1/dash/main>
3. <https://api.blockcypher.com/v1/btc/main>
4. <https://api.blockcypher.com/v1/btc/test3>
5. <https://api.blockcypher.com/v1/ltc/main>

Documentation: [Blockchain API - Blockchain Developer API for Bitcoin, Ethereum, Testnet, Litecoin and More | BlockCypher](#)

Minimum Functionality needed:

1. .NET Core Application based on clean or vertical architecture with SOLID.
2. API endpoints that show all https requests into Swagger endpoints. The API endpoints must show the history of each blockchain's data stored in the database.
3. Storing blockchain's data into the database with additional timestamp - *CreatedAt*. A new column adding the time requested from the API endpoint. The history of data should be shown with the *CreatedAt* in descending order.
4. HealthChecks route and basic CORS policy.
5. Dependency injection, logging, model mapping, API serialization, automatic behavior validation.
6. Integration, Functional and Unit Test projects.
7. Runtime profiles on .NET, Docker (Linux) (..)

Frameworks Requirements:

1. Implementation with .NET Core preferable >= .NET 6
2. Database options of your choice: SQLite (EF) or Database in Docker, or NoSQL.
3. Main data should be stored as provided in the API's JSON responses.
4. The app must illustrate best practices based on performance, inheritance and scalability.
5. Asynchronous or parallel event patterns.e.g Tasks, PLinq (..)
6. Provide at least two design patterns: UOW, Repository, CQRS, Event Sourcing,
7. Optional: API Gateway

Please, the solution should be submitted back to the email by providing a public github URL, a ReadMe.md file with instructions. The repository should have main and development branches.

Best of Luck!