

Nextens Coding Challenge

Instructions

The goal of this assessment is for you to show us **your knowledge and skills** as a software developer. You are free to make choices as you see fit but within the boundaries of the assignment. We expect that building this application should not take more than half a workday. We appreciate that this will cost you time so we are giving 5 days of space to build and send us the results.

Once you have completed the assignment, please email the contacts below with the code in a zip file. Also, **verify we have received the assignment**. The application should be ready to run out of the box. If some small steps need to be taken before running your application, please provide a README file. We can clone from GitHub if preferred.

After we have received the completed assignment, we will assess your work and provide feedback. If you have sparked our interest, we will organize a meeting to further discuss your work and development choices in an open conversation.

Assignment

You have been tasked with building an application that will parse the financial data of our clients. The application must use 1 or more of the following indicators. Each indicator spots a financial state in the data that makes a client eligible for tax optimisation. You have been provided with a set of financial client data. Using the data provided you must build a report for each unique client. Choose at least one indicator to implement:

- **A Wealth Tax Indicator:** If the Total Capital is larger than (200 000). Calculation: *Total Capital* = *BankBalanceNational* + *BankbalanceInternational* + *StockInvestments*. Check this indicator only for a customer's most recent year.
- **Real estate / property value growth indicator:** If the *RealEstatePropertyValue* of the customer's most recent year has increased by at least 15% compared to any of 3 previous years. Display total percentage gain compared to each of the 3 years and the total values.
- **Income volatility indicator:** If the *Income* between two sequential years is significantly (50% difference) higher or lower, record the following. List the details of the difference by displaying both years, *Income* and % of change.

The report should be ordered by most relevant customer first. For example, the wealthiest or most volatile income. Only display customers that have at least one triggered indicator to report on.

The example data

Each blob contains the data of one customer and for one year. Hence, one customer might have 1 or more blobs, one for each year. A blob has an identifier, a *clientId* (customer identifier) and the data fields required to calculate the indicators. As in real world assignments do not assume the data is flawless.

Requirements

The main application logic must be written in C# .NET Core. The data provided cannot be altered/changed in any way. We expect you to use industry best practices (for example, such as separation of concerns, clean code). In the future we might expand the application with more indicators, it would be good if you take this into consideration while thinking of your design. An application will need to present the reports so we can see it working. If you feel comfortable building user interfaces then please choose a frontend framework of your liking. Or you can show the output on a console application or in a file.

A word from Nextens

Add comments to your code if it helps you explain your thinking. Follow best practises throughout this assignment. We encourage you flex your coding muscles as long as you fulfil the assignment. We cannot stress enough to only apply patterns, practices and technology that are necessary and that you understand.

If you need more detail or are unclear about the assignment, please feel free to reach out to us and ask as many questions as you like. If you are not going to finish the assignment within the given time, communicate this with us. All the best.

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