At the ACME school they need help with the management of their courses and students.

They have asked us for a program that is capable of the following:

- Register a student specifying their name and age (only adults can register).
- Register courses with a name, registration fee, start date, and end date.
- Allow a student to contract a course, after payment if applicable, of the registration fee through a payment gateway.
- A list of courses that have occurred between a date range and their students.

They want something straightforward for now, so I have asked us for a solution in C# with a class library including production code and a test project using xUnit.net (whose tests should work without requiring any manual intervention or prior configuration).

For now, they do not want any dependency on a Web API, nor on any database nor on the payment gateway.

However, If the PoC convinces them, later they will want to publish it as an API and persist the information in a DB (we don't know what type yet). Therefore, it is important that there are the correct abstractions and that we leave the code ready to return to it if necessary.

For the evaluation, the following will be considered:

- *Clean code, easy to read and maintain.*
- *Create a rich domain model (although we know that currently, the program does not seem to do much)*
- *Create the required abstractions to be able to make decisions later and that do not involve rewriting all the code (this includes use cases, database, and dependency on external services such as the payment gateway).*
- *Create as many tests as necessary to show the correctness of the program and serve as a self-explanation of what the program does.*
- *Use, when necessary, test doubles to guide test execution.*
- *A README.md file explaining the why of things and any other considerations you consider appropriate.*
    - *What things would you have liked to do but didn't do?*
    - *What things did you do but you think could be improved or would be necessary to return to them if the project goes ahead.*
    - *What third-party libraries have you used and why.*

The README.md can be written in English or Spanish.

Additionally, they would like to know how much time we have invested in doing the project and what things you have had to research and what things were new to you.