**Developer Case Study.**

We would like you to produce a simple web site and API layer with the following functionality.

The project should be done in C# on .Net Core, and delivered to us, ideally via github or bitbucket.

The API should expose two methods:

1. That accepts an applicant details – first name, last name, date of birth and e-mail, and returns a unique ID.
2. That takes details of mortgage requirements – property value and deposit amount – along with a user ID, and returns a list of available products.  
   The system will return 0 or more of the following three products, depending on the loan-to-value (LTV) ratio …

|  |  |  |  |
| --- | --- | --- | --- |
| Lender | Interest Rate | Fixed/Variable | Loan-to-value |
| Bank A | 2% | Variable | <60% |
| Bank B | 3% | Fixed | <60% |
| Bank C | 4% | Variable | <90% |

If the LTV is not less than 90%, or the applicant is under 18, no products should be returned.

The front-end website should provide enough functionality to use the API layer, i.e. allow a user to enter their details, then perform multiple searches, displaying the results. Note also that the API layer should be callable independently of the front-end website.

Please don’t use any real data in anything you send to us.