

You need to build an HTTP API that can call a request and respond a response format.



**Challenge 1:**

Build a simple LVR (Loan Valuation Ratio) API Calculator that will calculate the loan percentage of the property.

Parameters: Value of the Property and Loan Amount.

Formula:

$$\text{LVR} = \text{Loan Amount} / \text{Property Value}$$

Example:

$$\$900,000 / \$1,000,000 = 90\% \text{ LVR}$$

**Challenge 2:**

Build a simple landing page that will consume the LVR API

Example UI:

## LVR CALCULATOR

### Fill in the details

What is the value of the property?

\$100,000

How much are you planning to borrow?

\$80,000

Calculate

### Result

Property Value	\$100,000
Loan Amount	\$80,000
<b>LVR</b>	<b>80.00%</b>

**Requirements:**

- Must have at least 1 success and 1 fail Unit Test for each function
- Implement Entity Framework as the ORM
- We are running a code smell tool to check your code; We suggest to run your codes in SonarQubes or add SonarLint plugins to your Visual Studio (<https://www.sonarlint.org/>)
- Build a simple database diagram showing the relationship of each tables
- .NetFramework latest version or higher OR .NetCore 3.1/5.0
- C#.Net or any relevant programming language
- Visual Studio Community or equivalent
- Any FrontEnd client side (Ex. Angular, React, etc..)
- SQL Server DB or PostgreSQL or any standalone database engine

**Instructions:**

- The candidate should spend 2-4 hours maximum on the challenge. We do not want the candidate to use of too much of your time.
- We suggest to do this at your convenient time and no one disturbing you.
- Once completed, the candidate should upload the source code in the available public version control like Github that we can download.
- You can host your website and API in any available Free cloud hosting like azure (Personal)
- This is an open resources you can do whatever you want as long as we understand it.
- We also want to test your ability to think base on the available requirements. Expand your horizon.
- There is no "fail" or "pass" based on full completion.
- Extra points – swagger documentation for API