

Simple Exchange Service API

Create a HTTP API to convert between 2 currencies making use of a public API. It is recommended to spend **no more than 1 to 2 hours** on this task. We are not looking for an extensive and comprehensive solution although it should be functionally complete.

We are looking for evidence of good software development practices, principally (but not limited to):

- Maintainability
- Extensibility
- Use of appropriate tooling/framework
- Testability

Highlight in your submission areas where you believe you would want to improve to prepare the API for production – code comments are fine. Please also provide a README highlighting how to run your solution, caveats and other improvements you'd make.

What we are **not** looking for:

- Implementation of additional functionality beyond the stated requirements e.g. support for additional currencies
- Implementation of additional architectural complexity e.g. API gateways etc
- Comprehensive testing of all scenarios
- A ChatGPT or similar generative AI created solution (we know what these look like)

Requirements

Create a C# API in ASP.NET Core that can convert from Australian Dollars to US dollars.

Your API must make use of the free API service at [exchangerate-api](https://www.exchangerate-api.com/docs/free) to convert from Australian dollar (AUD) to US dollars (USD) (<https://www.exchangerate-api.com/docs/free>)

It is expected that your API would respond to the following curl request:

```
curl -X 'POST' \
  'http://localhost:port/ExchangeService' \
  -H 'accept: text/plain' \
  -H 'Content-Type: application/json' \
  -d '{
    "amount": 5,
    "inputCurrency": "AUD",
    "outputCurrency": "USD"
  }'
```

```
}
```

Expected Json Response Payload from the request:

```
{  
  "amount": 5,  
  "inputCurrency": "AUD",  
  "outputCurrency": "USD",  
  "value": 3.28  
}
```

* the *value* is dependent on the current exchange rate

Please be aware while developing that there is a limit to how often you can call the exchangegenerate API from any IP address.

Submission

Please respond with a link to your Visual Studio solution in public git repository. We request that you remove it from your public repo afterwards once we have assessed it.