# Introduction

DVSA has many systems that include the ability to find and populate UK address information. However, they all use different methods to do this, which is an inefficient and expensive use of resources.

There is an Ordnance Survey API which provides up-to-date information on all UK addresses:

|  |  |
| --- | --- |
| Ordnance Survey API | |
| Tech Spec | <https://osdatahub.os.uk/docs/places/technicalSpecification> |
| Base URL | <https://api.os.uk/search/places/v1/> |
| API Key | Kow8cDq81mli3bbnpMZGmFWqYgAsxkZ7 |

The Ordnance Survey API contains the following endpoints:

* Postcode which accepts parameters called ‘postcode’ and ‘lr’
* Find endpoint which accepts a parameter called ‘query’

You have been asked to work with a team to build a new application to search for and display address information. The solution will contain an application for the Ordnance Survey API.

You will be asked to present and demonstrate your working solution, and will be assessed against the following:

* Readability
* Maintainability
* Code reuse
* Error handling
* Security
* Testing

Online research and reference to previous development work is permitted, but please make sure you understand and can explain any code you have used. *This assessment is designed to test your problem-solving skills and not your ability to memorise code.*

# Front-End Developers

Using the programming language of your choice, build an application with the facility to search using the Postcode and Find endpoints.

When data is returned for either endpoint, present the ‘ADDRESS’ field, formatted into title case.

If the search was made using the Find endpoint, then also display the ‘MATCH’ field alongside it and convert to a percentage.

Only display results where the language of address returned is English.

With both the Postcode and Find responses, provide the facility to auto-populate the following fields in a read-only display:

* Address (Remove any mention of a post town and/or postcode)
* UPRN
* Post town
* Postcode
* Country (Mapping can be found on Tech Spec to display full name)
* Last update date (formatted in `YYYY-MM-DD`)
* Entry date (formatted in `YYYY-MM-DD`)
* Number of days from entry to last updated (Difference between Last update date and Entry date in days)