

# Challenge - Name Address Postcode - A made up OOP Challenge to design from scratch

After the lecture was finished we started discussing an ad-hoc design for a made up OOP challenge and started sketching out the initial ideas for how it might be structured and some minimal skeleton code to get started.

The Challenge is to take it further

Add appropriate validation, throw appropriate exceptions, tweak the design to be better, do appropriate unit testing etc etc etc.

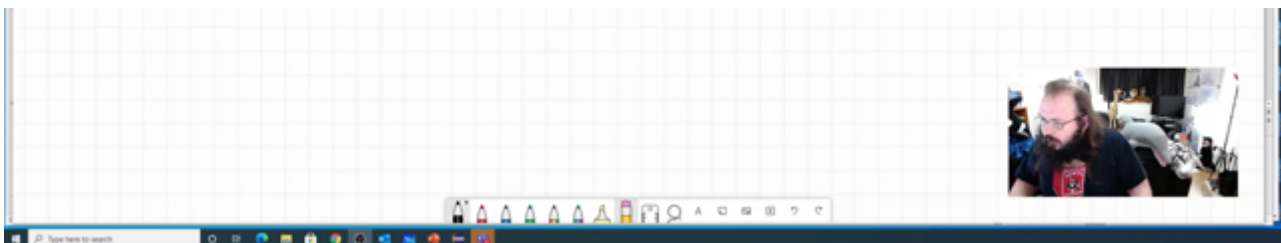
At the very least flesh out and unit test the Postcode class.

The main goal of this is not so much the specific challenge itself, but to get you thinking about how you can make up and design your own scenarios and produce an OOP solution for it.

## A starting point

### CSC7081 - Name and Address Challenge Starting Point

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Direct Link if required: [Link](https://web.microsoftstream.com/video/10ab53ef-0ec5-4333-b8c3-eab2b12c2195) [\(https://web.microsoftstream.com/video/10ab53ef-0ec5-4333-b8c3-eab2b12c2195\)](https://web.microsoftstream.com/video/10ab53ef-0ec5-4333-b8c3-eab2b12c2195)

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An attempt at a solution for Postcode class based on layout rules described here: <https://ideal-postcodes.co.uk/guides/uk-postcode-format> [\(https://ideal-postcodes.co.uk/guides/uk-postcode-format\)](https://ideal-postcodes.co.uk/guides/uk-postcode-format)

Regular expressions using String.matches() function would probably be a tidier way to achieve this, but without learning regex patterns this works reasonably well too.

[Postcode.java](https://canvas.qub.ac.uk/courses/11041/files/1703733?wrap=1) [\(https://canvas.qub.ac.uk/courses/11041/files/1703733?wrap=1\)](https://canvas.qub.ac.uk/courses/11041/files/1703733?wrap=1) ↓  
 [\(https://canvas.qub.ac.uk/courses/11041/files/1703733/download?download\\_frd=1\)](https://canvas.qub.ac.uk/courses/11041/files/1703733/download?download_frd=1) - few issues with this one that came up in testing eg can pass null values into the constructor. It does throw an exception but could perhaps be handled better. Also letter check isn't really strict enough. Allows A-Z as intended, but also allows other letters like Á. (only rigorous test data would spot that one as a more naïve test could still be passed).