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| Programming practice “Garage” |
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# How to do it

Please read this document carefully and implement a working solution for the given problem. You can use any programming language you’re familiar with. You can use any IDE you’d like to use and any test environment. Usage of frameworks, tools and libraries is possible as long as these can be used freely in commercial environments. This is because we’d like to compile and execute your written codebase. And as we’re a company, we must be able to do so from a legal point of view.

We would like you to do the work yourself, without any help from other persons.

When time is up or you’re finished, please provide us with the results. Make sure that we receive all files, documents, sketches, weblinks etc. which are needed to understand your work and to compile the code into a working solution. Please describe which environment would be needed to successfully do so.

Very simple solutions as plain single code files are fine. Same for full projects with make files etc. (i.e. Visual Studio solutions, Eclipse projects, Amplify files, …).

# What to do

The city of Vence needs help with the implementation of a new parking garage and asks you for your support.

The garage should support different types of vehicles:

• Cars

• Motorbikes

Every vehicle has a unique identifier (the license plate), and can exist only once – thus being either within the garage or outside of it.

The planned garage should support multiple parking levels – the city of Vence is currently undecided how high they will be able to build for stability reasons. As a result, your implementation should allow for arbitrary numbers of parking levels – at least 1 level, but keep it flexible.

The same goes for the number of parking spaces per level – the area where the garage will be built is not yet decided upon. So again, keep this flexible and configurable.

Your task is to develop a simulation program for the garage. Vehicles should be able to enter and exit the garage – the garage should then assign a free space or reject the vehicle if there are no more free parking lots.   
  
Please keep in mind, that also non IT persons should be able to work with your simulation.

You can choose between either Python or C# for backend and ReactJs or Angular for the frontend to complete the practice.