# Building the Neural Network Class

We will now start the journey to make our own neural network with the Python we've just learned. We'll progress along this journey is short easy to tackle steps, and build up a Python program bit by bit.

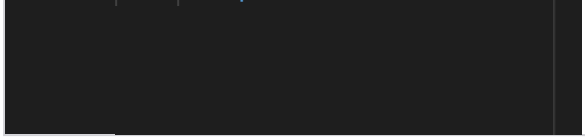
> Starting small, then growing, is a wise approach to building computer code of even moderate complexity. After the work we've just done, it seems really natural to start to build the skeleton of a neural network class. Let's jump right in!
>
> **The Skeleton Code**
>
> Let's sketch out what a neural network class should look like. We know it should have at least three functions:
>
> - *initialization* - to set the number of input, hidden and output nodes
> - *train* - refine the weights after being given a training set example to learn from
> - *query* - give an answer from the output nodes after being given an input
>
> These might not be perfectly defined right now, and there may be more functions needed, but for now, let's use these to make a start.
>
> The code taking shape would be something like the following:

```
# neural network class definit
class neuralNetwork:

    # initialise the neural ne
    def __init__():
        pass

    # train the neural network
    def train():
        pass

    # query the neural network
    def query():
        pass
```



That’s not a bad start at all. In fact, that’s a solid framework on which to flesh out the working of the neural network in detail.