

## Task 1:

Define a `Vector` class. A `Vector` should have a `Point2D` as each of its endpoints. For now, just create a constructor and a `toString` method, and then create a few object instances to make sure that things work properly. Make sure that when you print the vector, its endpoints look reasonable too.

## Task 2:

Overload the `+` and `-` operators in your `Vector` class so that you can add two `Vectors`, or subtract two `Vectors`. Like in our example, this should return a *new* `Vector`, rather than modifying either operand. Recall, the method that implements `+` is called `__add__`; the method that implements `-` is called `__sub__`. If you want a reminder on how to do so, take a look [here](#).

## Task 3:

Add a `normalise` method to your `Vector` class. This should return a new `Vector` that has the same direction as the original vector, a magnitude of 1, and starts at the origin (0, 0). [This page](#) shows instructions on how to normalise a vector; you will also need a way for your code to figure out the length of the X and Y components of the `Vector` from its endpoints. Think carefully about where to put this code – some of it might be better located somewhere other than in the `normalise` method.