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Gateway Computing Python Project C solutions.pdf

Q1 answer:

The purpose of overriding the __add__ and __sub__ methods in the Vec2D class definition is to ensure that the type of the output is a vector, instead of a point object.

Q2 answer:

It is not necessary to override the __iadd__, __isub__, and __str__ methods since they are inherited from the Point class and do not return a new object. Since the initial type of the parameter of the isub and iadd methods are maintained, we can simply inherit from Point class.

Q3 answer:

You could probably add a modulus function to reduce the number of lines in the rotate method since this would aid in parsing through the indices of the list of vertices. Instead of having two conditions to check if you reached the end of the list you can use the modulus function to check the index (if the index number plus one modulus the total number of vertices is zero you have to go back to the first element in the list).