

Programming Project 0 (Advanced)

Implement the following Python “magic methods” in your `Molecule` class:

<u>name</u>	<u>returns</u>	<u>args</u>	<u>called by</u> ¹	<u>description</u>
<code>__len__</code>	<code>int</code>		<code>len(mol)</code>	return the “length” (number of atoms) of a molecule instance
<code>__str__</code>	<code>str</code>		<code>str(mol)</code> , <code>print(mol)</code>	return a pretty <code>str</code> representation of the contents of your <code>Molecule</code> object
<code>__repr__</code>	<code>str</code>		<code>>>> mol, repr(mol)</code>	return a <code>str</code> representation of the your <code>Molecule</code> object in <code>.xyz</code> format
<code>__iter__</code>	iterator		<code>for _ in mol</code>	iterates over <code>(str, numpy.array)</code> tuples, each of which contains the atomic symbol and Cartesian coordinates of an atom in the molecule
<code>__add__</code>	<code>Molecule</code>	<code>Molecule</code>	<code>mol1 + mol2</code>	returns a new molecule object containing the atoms of both molecules

¹Assume `mol`, `mol1`, and `mol2` are all instances of your `Molecule` class.