Built-in Types Assignment

Write code that allows a user to enter a set relationship query (as a string) and have Python determine whether or not the specified relationship holds. For instance, if the user enters

```
{1} in {{1,2}}
```

the output should be `False`, and if the user enters

```
{1} subset {1,{2,3}}
```

the output should be `True`.

The program must accomplish this by converting portions of the string that is input into two Python values belonging to the built-in set data type. As shown, an input set can consist of elements that are one-digit integers and/or sets of integers (hint: these sets-within-sets must be stored as frozenset data values in Python). You can assume that no input set will contain a set that in turn contains a set. However, the empty set (`{}`) can appear anywhere a non-empty set can appear. You can assume that the only spaces in the input string separate a word (`in` or `subset`) from the two sets. That is, there are no spaces within the string representing a set

A word representing a set relationship operator will appear between the two input sets. The word `in` represents the element-of relationship ∈, and the word `subset` represents the proper-subset-or-equal relationship ⊆.

You are not allowed to use any functions/methods other than those we have studied, with one exception: You are allowed to use the split() method of the str built-in class. See documentation for this method at

https://docs.python.org/3/library/stdtypes.html#str.split

Grading

0: Program does not run or uses Python features not yet covered (other than split() method of str class)
10: Program runs and conforms perfectly with specifications above
8: Program runs and is mostly correct but deviates from the above specification in one way
6: Program runs and is mostly correct but deviates from the above specification in two ways
0: Program does not run or deviates from the above specification in three or more ways