

Write a class to represent a KSet. A KSet is a set that allows a maximum of K instances of every value. A traditional set is a KSet where K = 1. Your class should support the following operations:

1. Create a KSet.
2. Add a given value to the KSet
3. Remove one occurrence of a given value from the KSet
4. How many unique values are in the KSet?
5. Does the KSet contain a given value?
6. Print the KSet
7. Set the value of K
8. Empty the KSet

The before and after columns below show what would be printed if you executed the print method and does not imply how the data would be stored.

- Write a program that uses your KSet to execute each of the operations shown below. Print the KSet and the return value if there is one.
- Upload all of your code and output demonstrating that your methods works

	Operation	KSet Before	KSet After	Return Value
1.	<code>__init__(self, 2)</code>		K=2	
2.	<code>add('X')</code>	K=2	K=2 X	
3.	<code>add('X')</code>	K=2 X	K=2 X X	
4.	<code>add('X')</code>	K=2 X X	K=2 X X	
5.	<code>add('Y')</code>	K=2 X X	K=2 X X Y	
6.	<code>remove('X')</code>	K=2 X X Y	K=2 X Y	
7.	<code>uniqueValueCount()</code>	K=2 X X Y Z Z	K=2 X X Y Z Z	3
8.	<code>contains('Z')</code>	K=2 X X Y Z Z	K=2 X X Y Z Z	True
9.	<code>print()</code>	K=2 X X Y Z Z	K=2 X X Y Z Z	K=2 X X Y Z Z
10.	<code>setK(1)</code>	K=2 X X Y Z Z	K=1 X Y Z	
11.	<code>empty()</code>	K=1 X Y Z	K=1	