

Programming Assignment 7

1. Create a function, called **setComp**, that uses Python set comprehension to generate a set of pair tuples consisting of all of the integers between 1 and 10,000 and the square of that number but only if the square is divisible by 3 and return that set. (20 points)
For example (3, 9) would be in the set since 3^2 is 9 and 9 is divisible by 3.
2. Write a function, called **minMaxSet**, that takes a set of numbers and returns the minimum and maximum value in the set. Cannot use the built-in functions min()/max(). (20 points)
3. Write a function, **uniqueElems**, that given a list of values, determines if all elements are unique (no repeated values). (20 points)
You must use a set to perform this task.
4. Write a function, called **commonElems**, that takes two sets, A and B, and returns a new frozen set containing elements that are in either A or B but NOT in the intersection of A and B. (20 points)
5. Write a function, called **addsToK**, that given an integer k and a list of n unordered integers A, determines if there is a **distinct** pair of integers in A that add up to k. (20 points)
You must perform this task using sets.

-Please remember that all functions need to have proper DocString documentation.
-Refer to the CE_functionComment0.pdf and CE_functionComment1.pdf files for reference.
-Please avoid the use of global variables in your code. Any variable that is required for your functions to perform their respective tasks must be defined inside of the functions themselves. Only the input to your functions, when it applies, can be defined in the global scope.