Software Tester Programming Test (Python)

## Overview

Your team has written a small utility package that will be used around the organization. Your task is to pick two of the methods in that package and write unit tests for them. The methods may or may not contains bugs.

## The code to test:

Along with this document you have received a folder containing the code to test. It exposes a class called *VariousMethods* with the following methods:

    def ConvertToAtlasCopcoString(self, toConvert):

    def ReverseString(self, toReverse):

    def FindMax(self, toGetMaxValueFrom):

    def GetDistinct(self, toRemoveDuplicatesFrom):

    def IsItFibonacci(self, toTest):

    def \_isPerfectSquare(self, x):

Below is the documentation for each method.

### ConvertToAtlasCopcoString

This method accepts an integer between 1 – 100 and returns a string. If the integer is a multiple of three it will return the string “Atlas”. If the integer is a multiple of five it will return “Copco”. If the integer is a multiple of both three and five it returns “AtlasCopco”.

Some examples: for the integer 1 the method should return the string “1”; the integer 3 should generate the string “Atlas” and 15 should give you “AtlasCopco”.

For values outside of the range 1-100 the method will throw a value exception.

### ReverseString

This method accepts a string and returns the same string reversed. Eg. for the string “abc” the method returns “cba”.

For null values and empty strings the method will throw a value exception.

### FindMax

This method accepts an array of integers and returns the integer containing the highest value in the sequence.

For the array [1,2,3] the method should return the integer 3.

For null values and empty collections the method will throw a value exception.

### GetDistinct

The *GetDistinct* method removes duplicate values from a collection of integers. It accepts an array of integers and returns the collection with any duplicate values removed.

Example: for the array [1,1,2,3] the method should return [1,2,3]

For null values and empty collections the method will throw a value exception.

### IsItFibonacci

The *IsItFibonacci* method is used to determine if an integer between 1 – 25 is I Fibonacci number. If the number is part of the Fibonacci sequence the method returns true otherwise false.

Eg. for the value 3 the method should return true, and for 4 false.

For values outside of the range 1-25 the method will throw a value exception.

## The task

Create a unit test in python and import the provided package. Don’t put the unit test code in the same folder as the code. Pick two of the above methods and write as many test cases as you think is necessary to test them. Make a note of any bugs you may find in a separate .txt file and return the entire solution.