Week 4

← Week 4

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I am almost on the edge of desperation (2-SAT case 16)

Dmitry Assignment: Programming Assignment 4 · a year ago

Please, can you provide some tests for 2-SAT? My algorithm is failed on test case 16. In this algorithm, I can not use the stress test technique because there could be different assignments. All the tests I was able to come up with work correctly.

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YH

Yijun He · a year ago

Same here. As I keep getting the error as wrong answer - "Failed case #16/36: Wrong answer (Time used: 0.78/16.00, memory used: 69718016/1073741824.)" However, it seems the error reported not the actual reason of failure. Instead, it's a recursive overflow error. Someone shared the solution https://www.coursera.org/learn/advanced-algorithms-and-complexity/discussions/all/threads/mhYeldR9Eeazcw6hvE_jtg/replies/seGqrsZfEemRWg4GTNs16g

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Igor Kuksov · a year ago

Hi Dmitry,

I spent some time fighting against test #14 but stress-testing helped to catch the bug. Please find my stress-testing harness below:

```
def test():
    import random

    times = 10

    for i in range(2, 100, 1):
        for _ in range(times):
            cs = []
            ncs = i
            all_vars = list([x for x in range(-i, i+1) if x!=0])
            for c in range(ncs):
                x1 = random.choice(all_vars)
                x2 = random.choice(all_vars)
                while abs(x1) != abs(x2):
                    x2 = random.choice(all_vars)
                cs.append([x1, x2])

            result = isSatisfiable(i, ncs, cs)
            bf_res = isSatisfiable_bf(i, ncs, cs)
            if bf_res:
                bf_result = [-x-1 if bf_res[x] else x+1 for x in range
                    (i)]
            else:
                bf_result = []

            if set(bf_result) != set(result):
                print('''%s: NOT OK:
                        bf:     %s
                        res:    %s
                        input:  %s
                        ''' % (i, bf_result, result, cs))
                return
            else:
                print('%s: OK %s\n' % (i, 'SAT' if result else 'UN'))

```

Good luck!

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