

Courseware

Updates & News Calendar Wiki Discussion Progress

de l

## PROBLEM 4 (10/10 points)

Answer the following question without running the code. The procedure <code>isMyNumber</code> is used to hide a secret number (integer). It takes an integer <code>x</code> as a parameter and compares it to the secret number. It returns:

- -1 if the parameter x is less than the secret number
- 0 if the parameter x is correct
- 1 if the parameter x is greater than the secret number

The following procedure, <code>jumpAndBackPedal</code>, attempts to guess a secret number. The only way it can interact with the secret number is through the <code>isMyNumber</code> procedure explained above.

```
def jumpAndBackpedal(isMyNumber):
    isMyNumber: Procedure that hides a secret number.
     It takes as a parameter one number and returns:
     * -1 if the number is less than the secret number
     * 0 if the number is equal to the secret number
     * 1 if the number is greater than the secret number
    returns: integer, the secret number
    guess = 1
    if isMyNumber(guess) == 1:
       return guess
    foundNumber = False
    while not foundNumber:
        sign = isMyNumber(guess)
        if sign == -1:
            guess *= 2
        else:
            guess -= 1
    return guess
```

Unfortunately, the implementation given does not correctly return the secret number. Please fix the errors in the code such that <code>jumpAndBackpedal</code> correctly returns the secret number.

You will not be able to see the "Full Output" test cases. This question is meant to test your ability to analyze what code does at a higher level.

•

Correct

## Test results

CORRECT

Hide output

Check Save You have used 1 of 10 submissions



EdX offers interactive online classes and MOOCs from the world's best universities. Online courses from MITx, HarvardX, BerkeleyX, UTx and many other universities. Topics include biology, business, chemistry, computer science, economics, finance, electronics, engineering, food and nutrition, history, humanities, law, literature, math, medicine, music, philosophy, physics, science, statistics and more. EdX is a non-profit online initiative created by founding partners Harvard and MIT.

 $\hbox{@ 2014 edX, some rights reserved.}$ 

Terms of Service and Honor Code

Privacy Policy (Revised 4/16/2014)

## **About & Company Info**

About

News

Contact

FAQ

edX Blog

Donate to edX

Jobs at edX

## Follow Us

Twitter

**F**acebook

Meetup

n LinkedIn

Google+