# This is CS50x

OpenCourseWare

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## **Mario**

If you already started to work on Problem Set 1 in CS50 Lab, you may **continue working on it**(https://lab.cs50.io/cs50/labs/2020/x/mario/more/) there. If you're just now starting to work in this problem, be sure to use CS50 IDE instead by following the instructions below!

#### World 1-1

Toward the beginning of World 1-1 in Nintendo's Super Mario Brothers, Mario must hop over adjacent pyramids of blocks, per the below.



Let's recreate those pyramids in C, albeit in text, using hashes (#) for bricks, a lathe below. Each hash is a bit taller than it is wide, so the pyramids themselves are also be taller than they are wide.

```
# #
## ##
### ###
####
```

The program we'll write will be called mario. And let's allow the user to decide just how tall the pyramids should be by first prompting them for a positive integer between, say, 1 and 8, inclusive.

Here's how the program might work if the user inputs 8 when prompted:

```
$ ./mario
Height: 8
```

Here's how the program might work if the user inputs 4 when prompted:

```
$ ./mario
Height: 4
    # #
    ## ##
### ###
#### ####
```

Here's how the program might work if the user inputs 2 when prompted:

```
$ ./mario
Height: 2
# #
##
```

And here's how the program might work if the user inputs 1 when prompted:

```
$ ./mario
Height: 1
# #
```

If the user doesn't, in fact, input a positive integer between 1 and 8, inclusive, when prompted, the program should re-prompt the user until they cooperate:

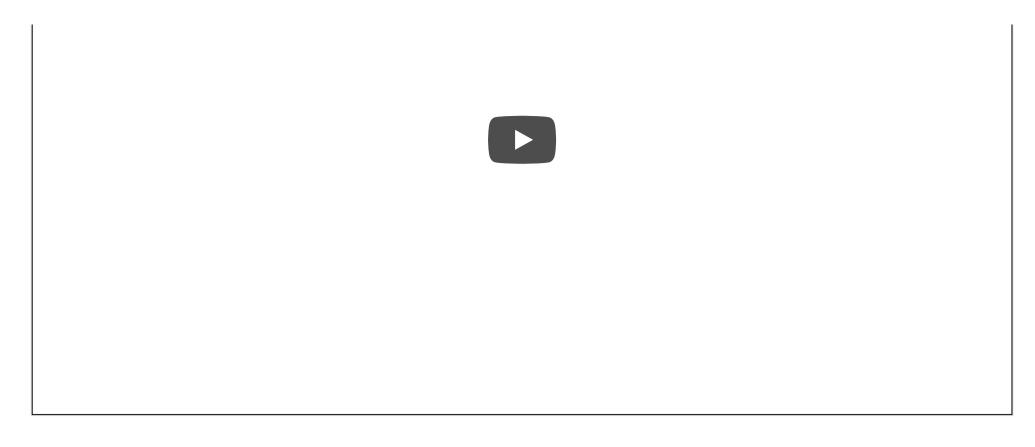
Notice that width of the "gap" between adjacent pyramids is equal to the width of two hashes, irrespective of the pyramids' heights.

Create a new directory called mario inside of your pset1 directory by executing

```
~/ $ mkdir ~/pset1/mario
```

Create a new file called mario.c inside your mario directory. Modify mario.c in such a way that it implements this program as described!

#### Walkthrough



#### **How to Test Your Code**

Does your code work as prescribed when you input

- -1 (or other negative numbers)?
- 0?
- 1 through 8?
- 9 or other positive numbers?
- letters or words?
- no input at all, when you only hit Enter?

You can also execute the below to evaluate the correctness of your code using check50. But be sure to compile and test it yourself as well!

check50 cs50/problems/2020/x/mario/more

Execute the below to evaluate the style of your code using style50.

style50 mario.c

### **How to Submit**

Execute the below, logging in with your GitHub username and password when prompted. For security, you'll see asterisks (\*) instead of the actual characters in your password.

submit50 cs50/problems/2020/x/mario/more