Alice Programming Assessment: Decisions and the Use of Functions

Assessment Overview

This assessment is designed to cover use of if/else statements and functions in Alice. It should take 10-15 minutes to complete this challenge.

Before attempting this challenge please complete the tutorial: “How Tall Are You? Introducing Decisions and the use of Functions.”

Starter World

Open the Decisions&Functions.a2w world

You will see that there are already objects and methods written: world.myFirstMethod, penguin.big, and normalGuy.big.

Press play and view the current state of the world

The Problem

Right now, the penguin just crashed into the normalGuy and hugs him.

The goal is to either the penguin or the normalGuy resize themselves and announce their transformation, depending on which one is shorter than the other. Then we want the penguin to hug the normalGuy without them crashing. We will use if/else statements and functions to accomplish this.
**Methods**

For this assessment, you only need to write code in `world.myFirstMethod` and call `penguin.big` and `normalGuy.big`.

There are comments in `world.myFirstMethod` to show where code should be written.

**World.myFirstMethod**

The if/else statement here needs to be edited so `penguin.big` is called when the *penguin is shorter* than the `normalGuy`, and `normalGuy.big` is called otherwise.

In order to prevent the penguin from crashing into the `normalGuy` once the penguin or `normalGuy` has become bigger, we need to use a more advanced function to accomplish this.

**World.myFirstMethod**

After the if/else statement, the penguin will move forward and hug the `normalGuy`, but we need to use another function to make sure the penguin doesn’t crash if his size has changed.

To do this, subtract *distance to normalGuy by half of the penguin’s depth*. This can be done using the penguin’s functions and math on that function.

**Completion**

Once these methods are written, the world should be good to go. You can resize the penguin and `normalGuy` for different end results.

If the penguin is shorter (default) the world will end up like the image on the right.