Alice 3 Programming Assessment: Decisions and the Use of Functions

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Adapted from Alex Boldt’s Alice 2 assessment, “Decisions and Functions Assessment”

Assessment Overview

• This assessment is designed to cover the use of if/else statements and functions in Alice 3. *It should take 10-15 minutes to complete this challenge.*

• Before attempting this challenge, please complete the tutorial: “Alice 3 Functions Video Tutorial”
Starter World

• Open the functionsAssessmentStart.a3p world.

• You will see that there are already objects and methods written. These are the methods: this.myFirstMethod, penguin.big, penguin.hug, and adultPerson.big.

• Please review these methods to understand what they do, but you will only be editing myFirstMethod.

• Press play and view the current world.

The Problem

• As of now, the penguin just crashes into the adult and hugs him.

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

• For this assessment, you will only need to write code in `myFirstMethod` and call `penguin.big` and `adultPerson.big`.

• There are comments in `myFirstMethod` to help you and to show you where code should be written.

myFirstMethod

• The if/else statement needs to be edited so that `penguin.big` is called when the *penguin is shorter* than the adult person, and `adultPerson.big` is called otherwise.

• In order to prevent the penguin from crashing into the adult once the resizing has occurred, we need to use a more advanced function to accomplish this.
myFirstMethod

• After the if/else statement, the penguin will move forward and hug the adultPerson, 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 adultPerson 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 complete. You can compare with the solution online. You can resize the penguin and adultPerson for different end results.

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

• Congratulations!