Computing Science

Variables
Lesson 2 of 6

G Kirk

Creative & Innovative Technologies

Task 1 part 1: Predict

Read the code below.

PREDICT exactly what you think will happen. This is not a test, so don't worry about your prediction being correct.

Task 1 part 2: Predict

Write down below (in as much detail as you can) what you think the code will do…

Task 1 part 3

Open the following Scratch program and select **See inside**

https://scratch.mit.edu/projects/493475814/

Were your predictions correct?	
Did anything surprise you about what happened when the code was executed?	
Did you miss anything out? If so, what?	

Task 2: Investigate - question 1

Question

Answer

How do the following two blocks of code relate to each other?
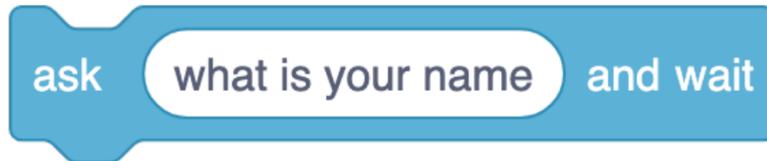
Task 2: Investigate - question 2

Question

Temporarily remove the following block:

Source: Scratch

What has this changed about the program when you run it?

Why do you think this is?

Answer

Task 2: Investigate - question 3

Question

Answer

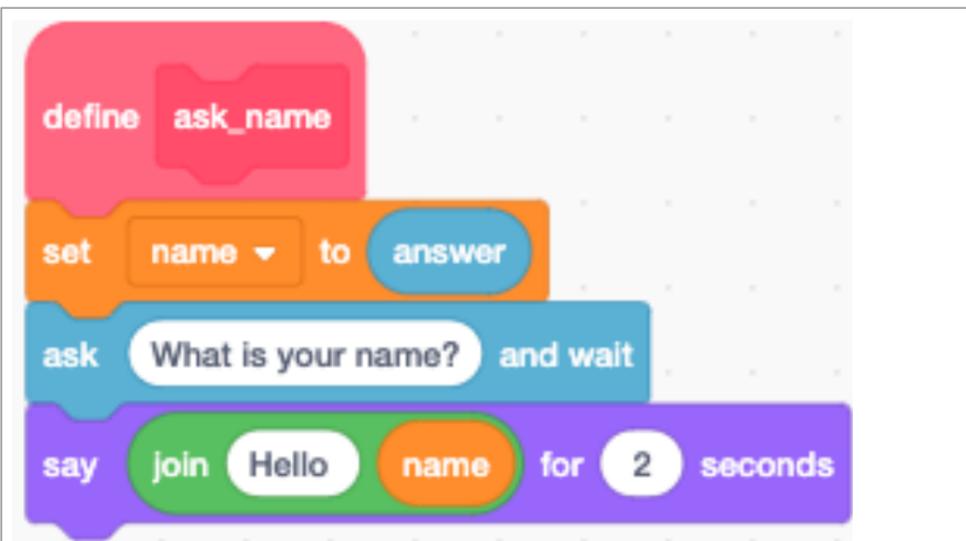Below **define ask_name**, there are two variables being used.

What are their names?

Task 2: Investigate - question 4

Now place the **ask what is your name and wait** block back into the code, but place it after the **set name to answer** block:

Question

Why do you think it only says "Hello" and not "Hello " and the name you entered?

Answer

Task 3 - part 1
The music question

All of the code needed to make Big Ed ask about your favourite music is included in the program.

Place the blocks on the right-hand side into the appropriate places in the subroutine.

Source: Scratch

Task 3 - part 1

The music question

When you have completed your code, if you know how, take a screenshot, and place it in the box to the right.	
Errors in code are known as 'bugs'. Fixing errors is known as 'debugging'. **Did your code work first time?** ● **If anything didn't work:** ● **Explain what didn't work** ● **How did you debug the errors?**	

Task 3 - part 2
The age question

Source: Scratch

Complete the **ask_age subroutine**. The subroutine has two lines of code provided. The subroutine should use the age variable to store the answer. Big Ed should then say the following two lines:

 "Wow [age]" for 2 seconds

"You're much older than me in the year 2182" for 2 seconds

Hint: Use the same structures from the previous two questions to build this question.

Task 3 - part 2
The age question

When you have completed your code, if you know how, take a screenshot, and place it in the box to the right.	
Errors in code are known as 'bugs'. Fixing errors is known as 'debugging'. **Did your code work first time?** ● **If anything didn't work:** ● **Explain what didn't work** ● **How did you debug the errors?**	

Task 4: What's the temperature?

Big Ed has just arrived on a new planet and he's measuring the temperature of his new environment.

In the program on the next slide, you will see that there is a variable called 'temperature'.

Each time the variable changes value, Big Ed will say its new value. Your task is to write down what Big Ed says each time you see the following:

Source: Scratch

Task 4: What's the temperature?

when ⚑ clicked

set temperature to 5

say temperature for 1 seconds →

change temperature by 5

say temperature for 1 seconds →

change temperature by -2

say temperature for 1 seconds →

set temperature to 0

say temperature for 1 seconds →

change temperature by 6

say temperature for 2 seconds →

Write in the space below the value of temperature when you see the **Say** block