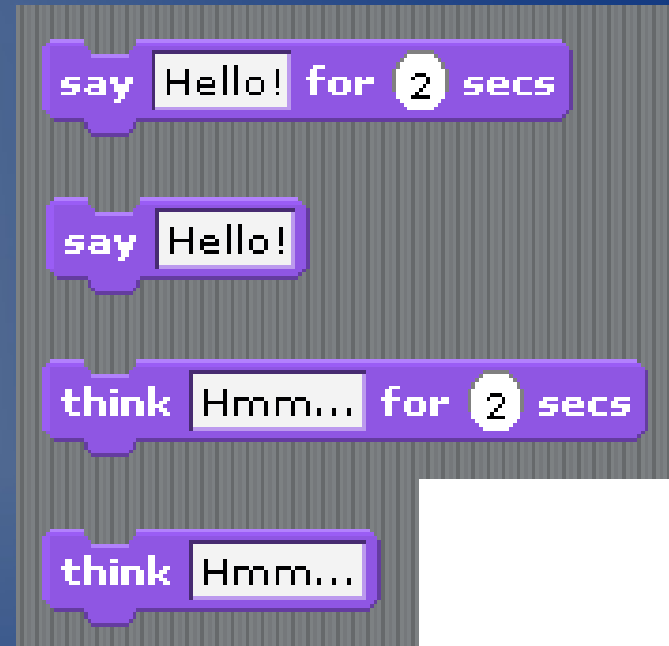# Introduction to Scratch Programming
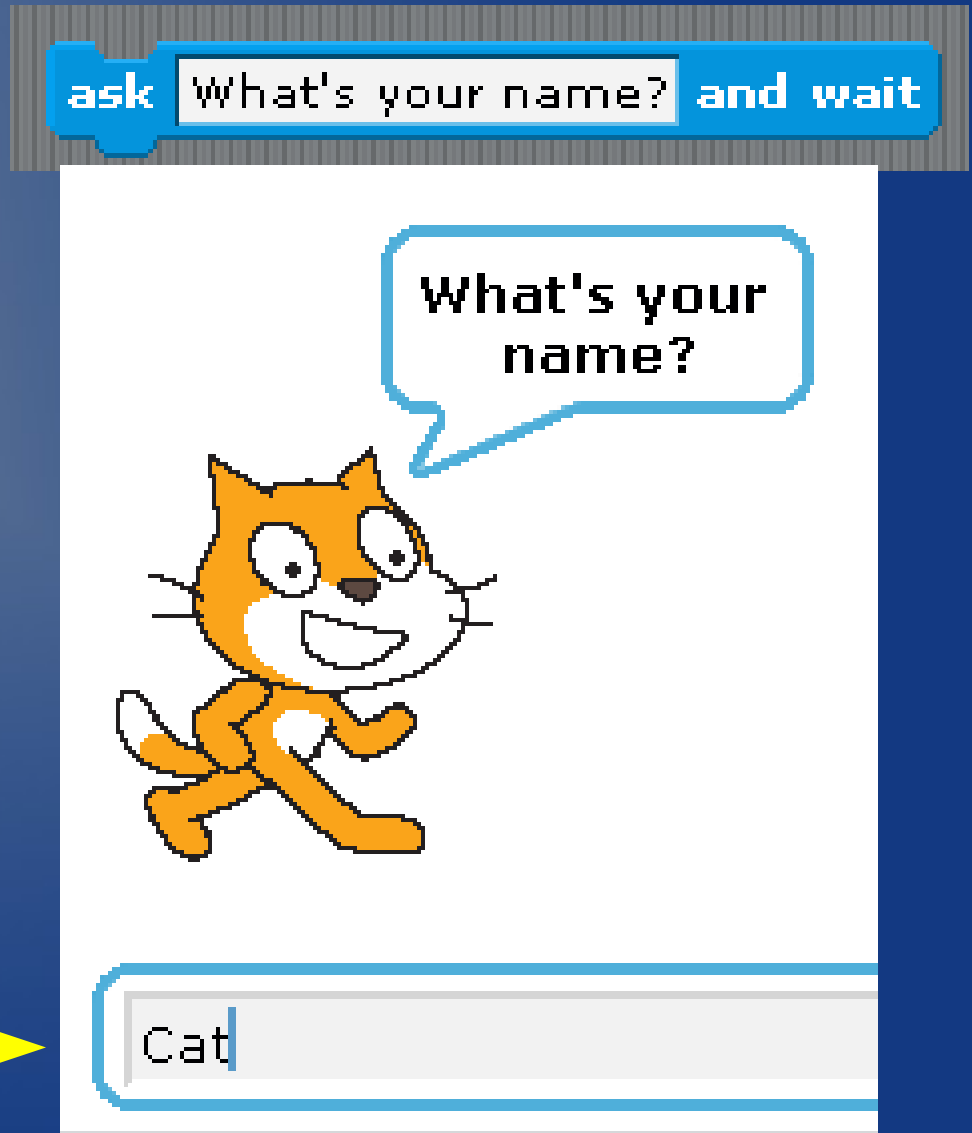
Output in Scratch

- there are only a few options for communicating with the user using text or numbers
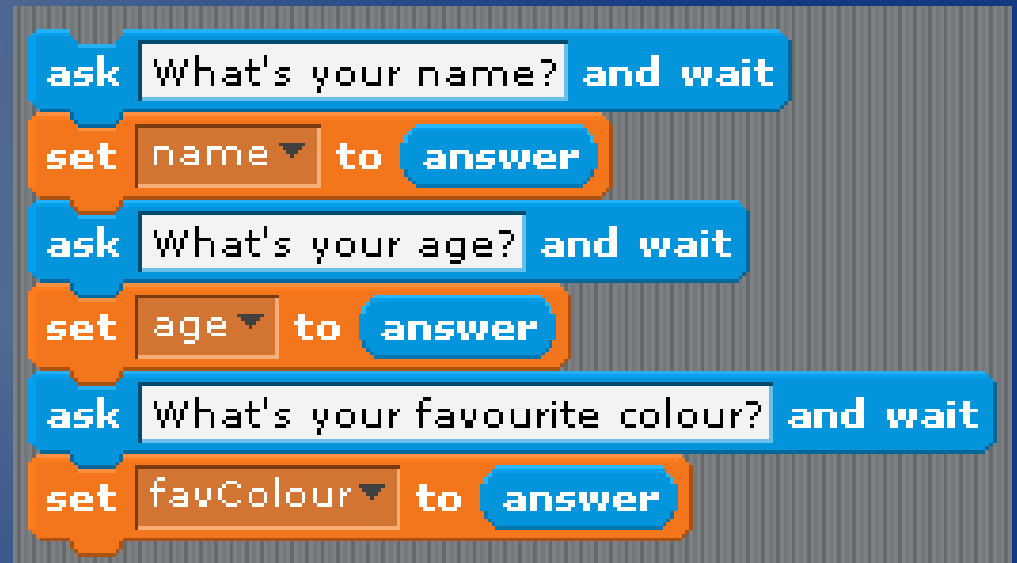
Input in Scratch

- many types of input (mouse, keyboard, microphone)

- we focus on text input from keyboard

- ask the user a question and wait for their answer

user types response here ⟶

Variables in Scratch

- by default, all user responses are saved in the 'answer' variable

- treat this as <u>temporary storage</u>

- create your own variables to store answers to questions

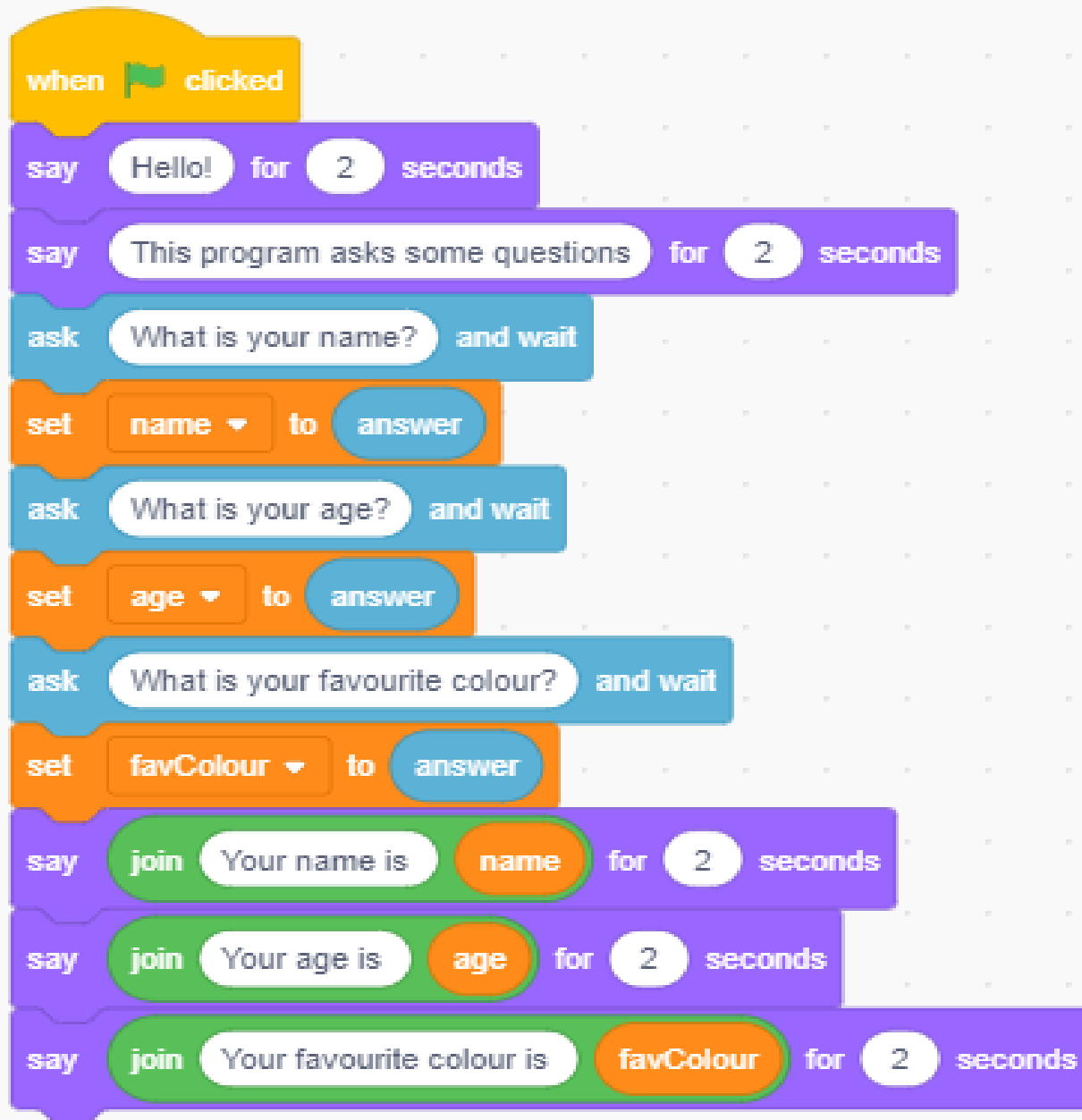# Creating a Variable in Scratch

- make a variable for each value you input or calculate

- try to use good names for variables

- short but meaningful

Creating Variable Names

- a variable name should make it fairly clear what the variable is for

- start with a lowercase letter

- for multiple words, use uppercase to start other words

- avoid including words like 'a', 'the', 'of, etc...

- if variables names are getting too long, contract the word (removing some letters, usually vowels, can work)

Input & Output in Scratch

The 'join' Command

- a bit more advanced, but so useful in making 'nice' output

- lets your combine text and numbers with variables

- don't forget to include spaces where necessary!

- it is also possible to join multiple 'join' commands together

- beware overly long lines!