2 - Programming Concepts

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Assignment

Assignment is the concept of giving a value to a variable or a constant.

Selection

Selection is when the computer is told to compare two values, make a decision and then execute the corresponding code. This is usually achieved with an if-statement.

Nested Selection

Nested selection is when you implement selection within one of the code options that branches from another selection. I.e. one choice within another. An example of this would be to ask: are you a boy or a girl? And then if the answer is "boy" you could prompt: do you go to a boys school? And then do something from there. Here you have implemented nested selection.

Iteration (including. Definite vs Indefinite)

Iteration is the process of repeating a snippet of code. The code could be repeated a definite (fixed) number of times or an indefinite (not known at compile-time) number of times. You could use definite iteration to print times tables and indefinite iteration in a while loop to move a robot forward whilst an obstacle is not detected.

Nested Iteration

Nested iteration is the process of looping over something on each iteration of looping over something else. For instance you could loop over a from 1 to 10 and then in each iteration (nested) you could loop over b from 1 to 10 and print a * b to output a multiplication table.