

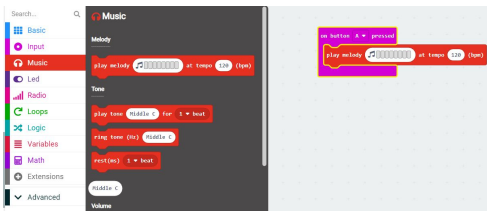
Year 7 MICRO:BITS

Programming with Micro:bits



Coding the MICRO:BIT

1. To get coding your microbit, simply visit this website...
<https://makecode.microbit.org/>
2. Select “New Project”
3. Give New Project a suitable name
4. Simply combine blocks to create a program



Writing error-free code

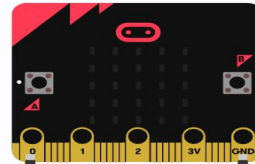
When writing programs, code should be as legible and error free as possible. **Debugging** helps keep code free of errors and documenting helps keep code clear enough to read.

Microbit is a Tiny Computer Device

The buttons can be used to INPUT an instruction to the micro:bit.

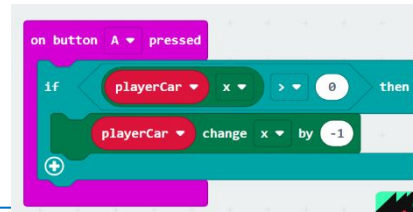
A PROCESS is carried out on the micro:bit.

The OUTPUT can be displayed on the LEDs.



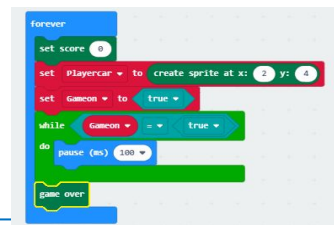
Selection

When designing programs, there are often points where a decision must be made. This decision is known as selection and is implemented in programming using IF statements.



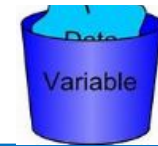
Iteration

Iteration (looping) is a way of repeating a specific chunk of code several times. It might be a specific number of times, e.g. 10, or it might be until a certain condition is met.



Variables

Variables are used to store information to be referenced and manipulated in a computer program. They also provide a way of labelling data with a descriptive name, so our programs can be understood more clearly by the reader and ourselves. It is helpful to think of variables as containers that hold information. Their sole purpose is to label and store data in memory. This data can then be used throughout your program.



Functions

In a computer program there are often sections of the program (instructions/lines of code) that we want to re-use or repeat. Chunks of instructions (lines of code) can be given a name. This name can then be called to reuse the instructions over and over again.



Syntax errors

Syntax is the spelling and grammar of a programming language. In programming, a syntax error occurs when:

- there is a spelling mistake.
- there is a grammatical mistake.