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Programming with BBC micro: bit

Innovative

Inclusive

Diverse

CS Athena Swan Outreach Lead

Nadine Aburumman

CodeMe Workshop: Programming with BBC micro: bit

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The CodeMe Workshop is a Hands-On Experience

The objectives:

An opportunity for all of you to gain knowledge of computer science.

An introduction to fundamental concepts and applications of computer science.

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The CodeMe Workshop is a Hands-On Experience

The objectives:

- Run a range of activities that focus on physical computing, featuring things that move, buzz, or light up.
- Having fun with coding while also learning.

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Hardware Equipment

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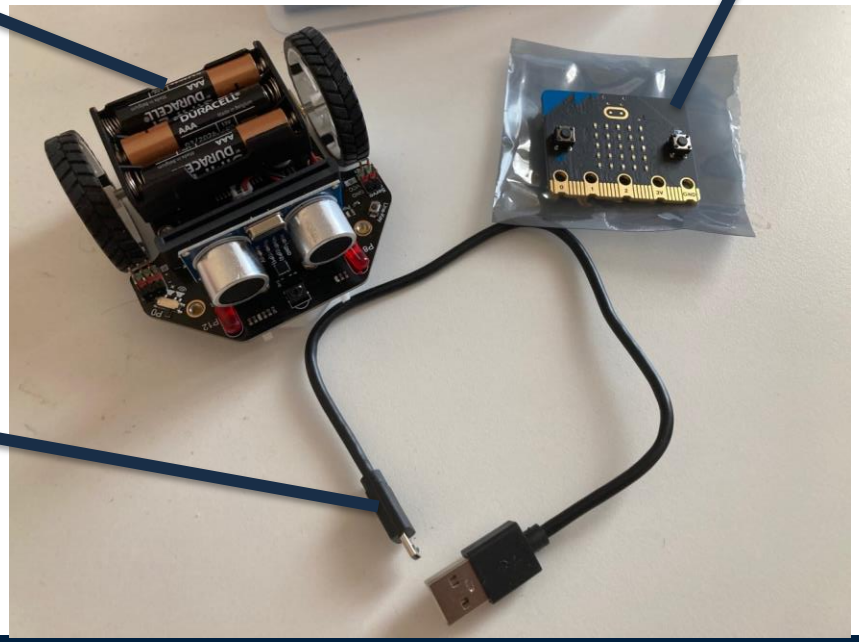
Hardware Equipment

micro: bit

micro: Maqueen



USB cable

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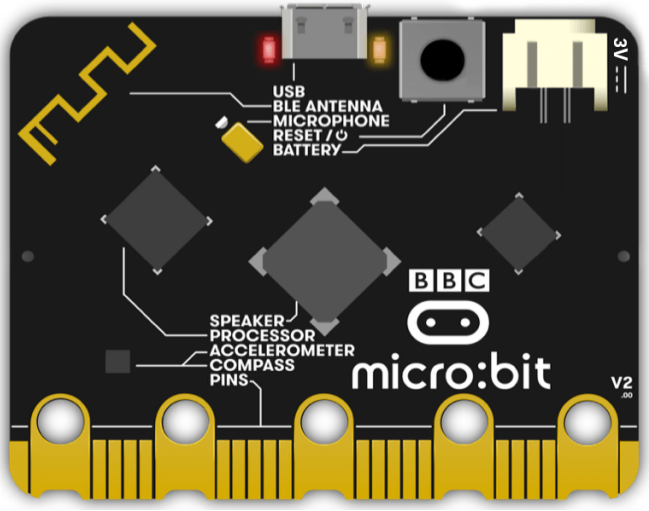
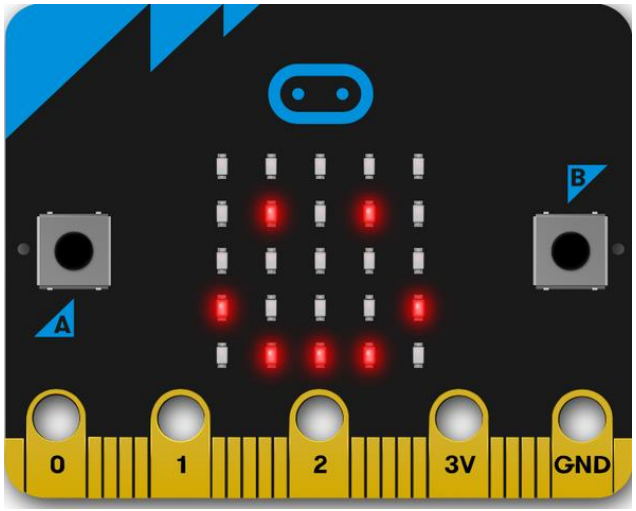
Hardware Equipment

micro:bit

a pocket-sized computer that lets you be creative with digital technologies





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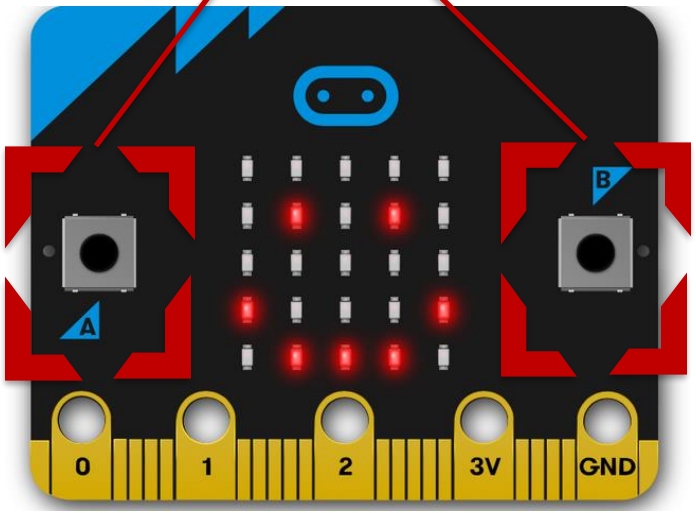
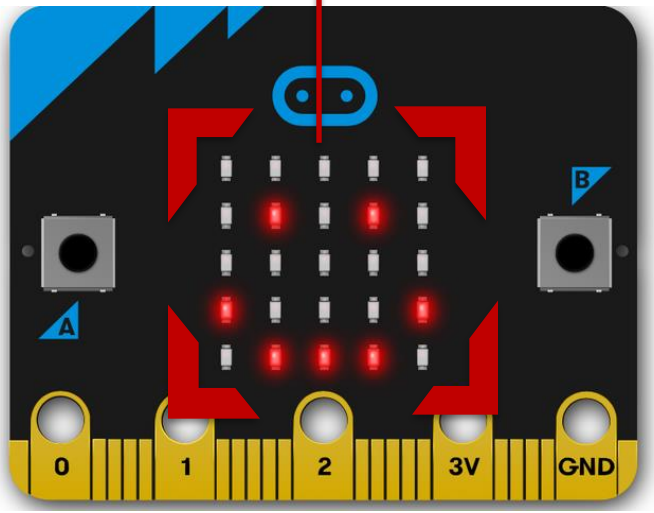
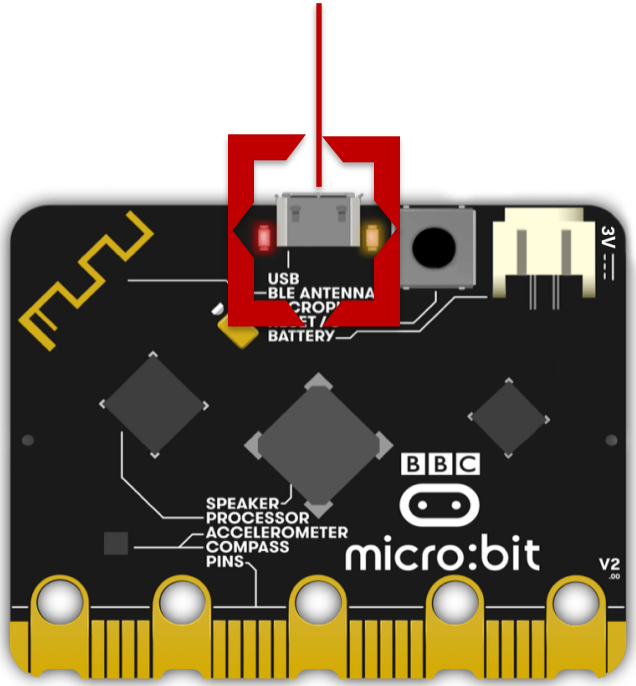
2 programmable buttons

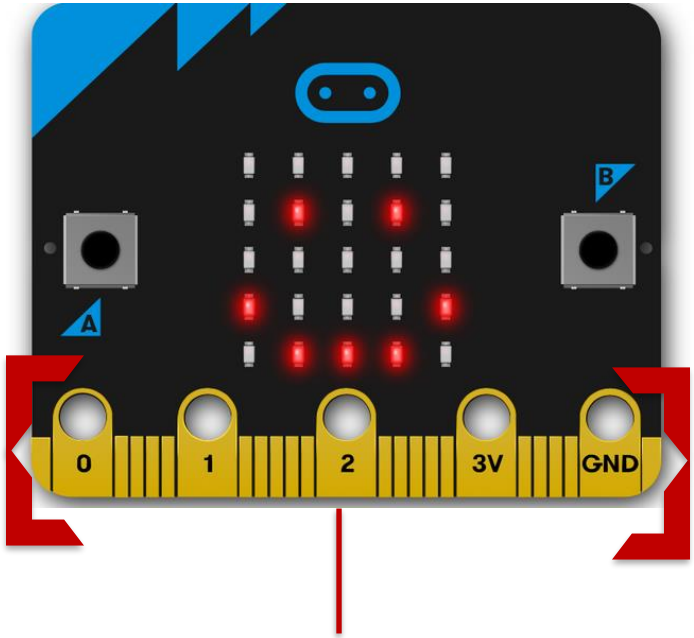


25 LEDs



USB connector



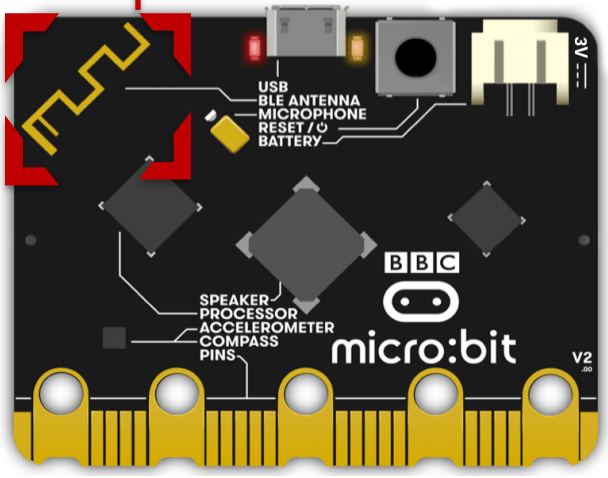


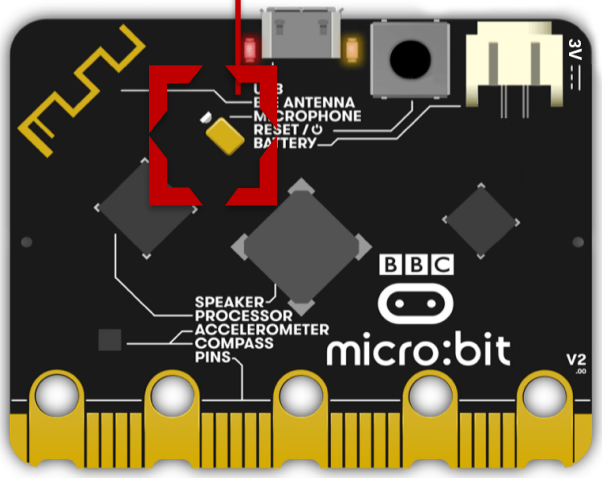
- 20 gold tab edge pins
- 5 ring connectors
- 3 for digital/analogue input/output
- 2 for power

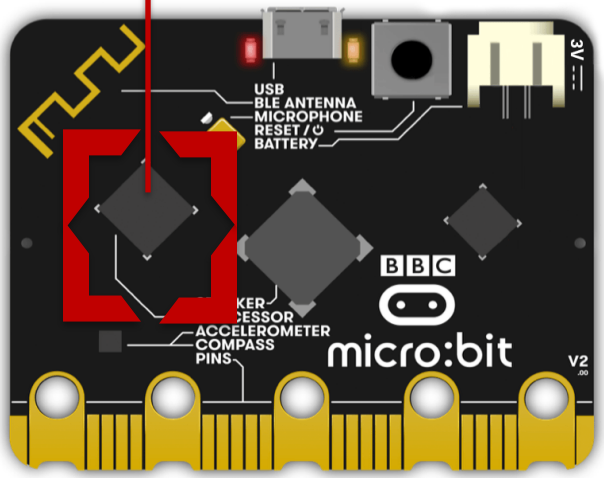
Radio Antenna

Microphone

Processor







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Software

Microsoft MakeCode

an online learn-to-code platform

https://makecode.microbit.org/

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Activity 1: Looping Concept

- A loop is something that repeats again and again until it is told to stop.

- Programmer specifies several processing steps and instructs the computer to carry out the loop as many times as they need.

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Task 1: 5 Minutes

1 person is coding

3 people are observing and assisting

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Task 1: write this simple code and test it with your micro: bit

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Activity 2: Selection Concept

- Selection statements (also known as conditional statements) are pieces of code that are only completed if certain conditions are met.

- These are often referred to as “IF-THEN” statements.

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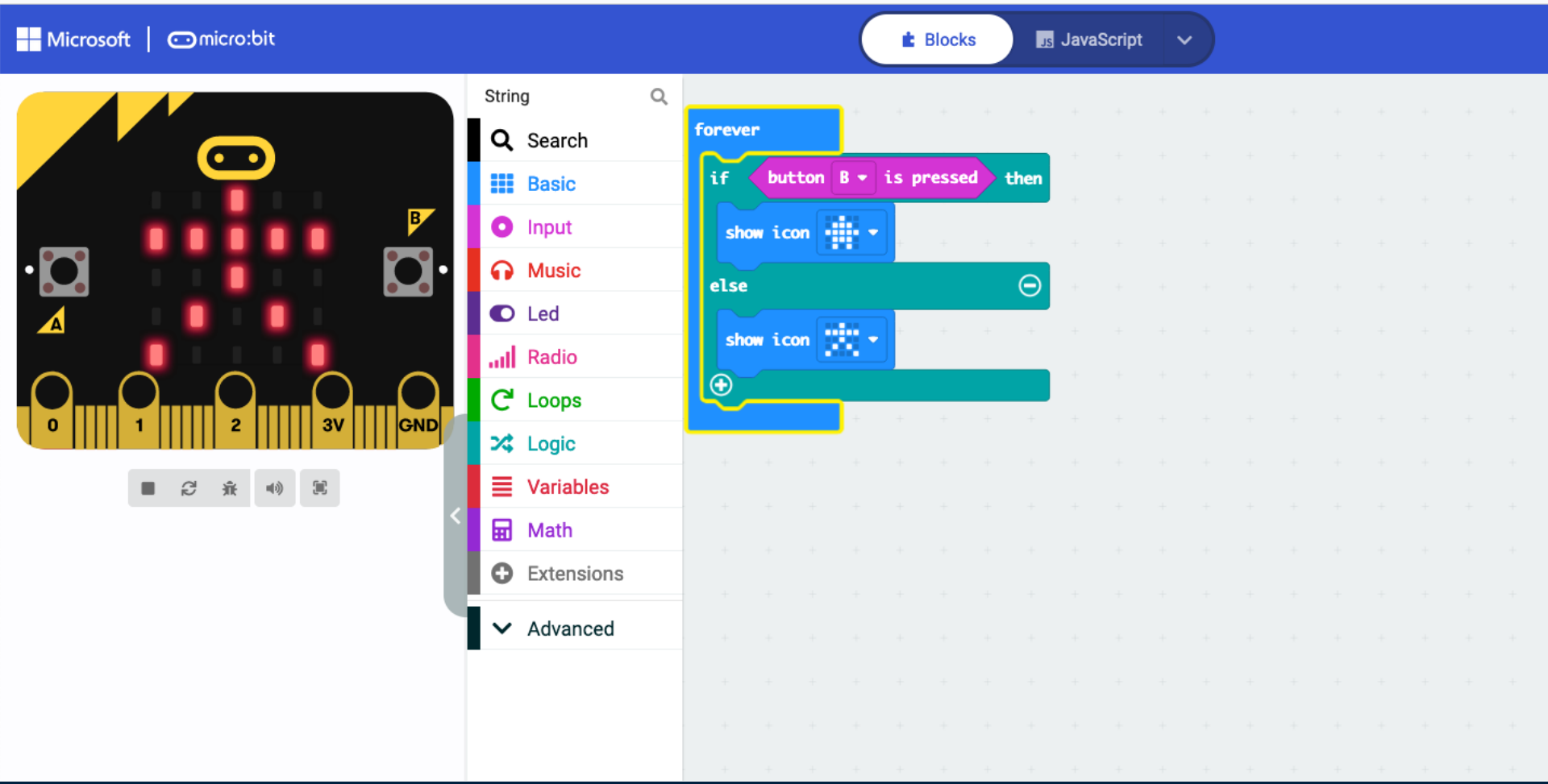
Task 2: 5 Minutes

1 person is coding

3 people are observing and assisting



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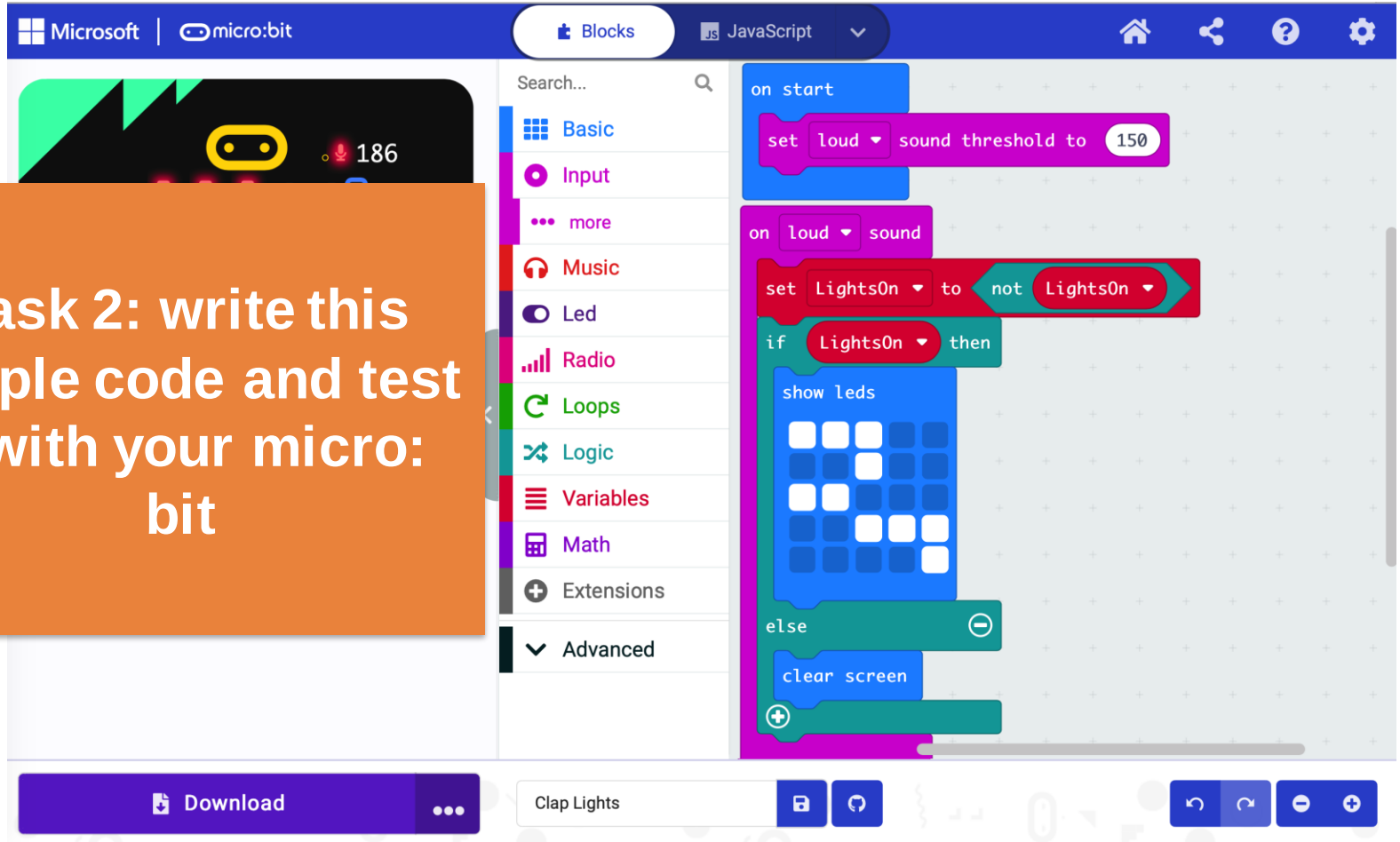
Task 2: write this simple code and test it with your micro: bit



Activity 3: Sequencing concept

A sequence simply specifies the order of the tasks.

A programmer tells a computer which tasks to perform first, which to perform second, and so on, so that every requirement falls into place in its proper sequence.

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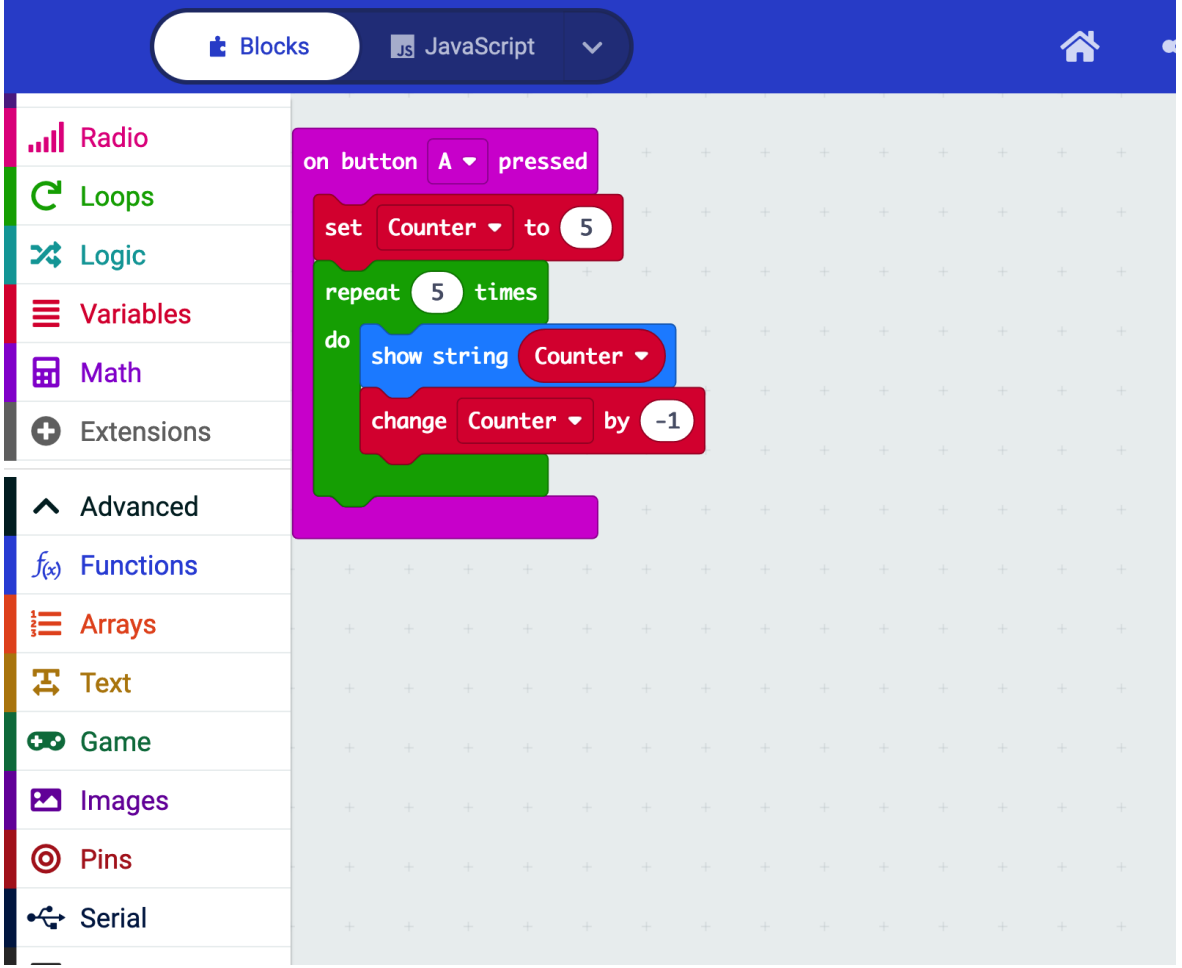
Task 3: 5 Minutes

1 person is coding

3 people are observing and assisting

Task 3: write this simple code and test it with your micro: bit



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Any Questions?

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