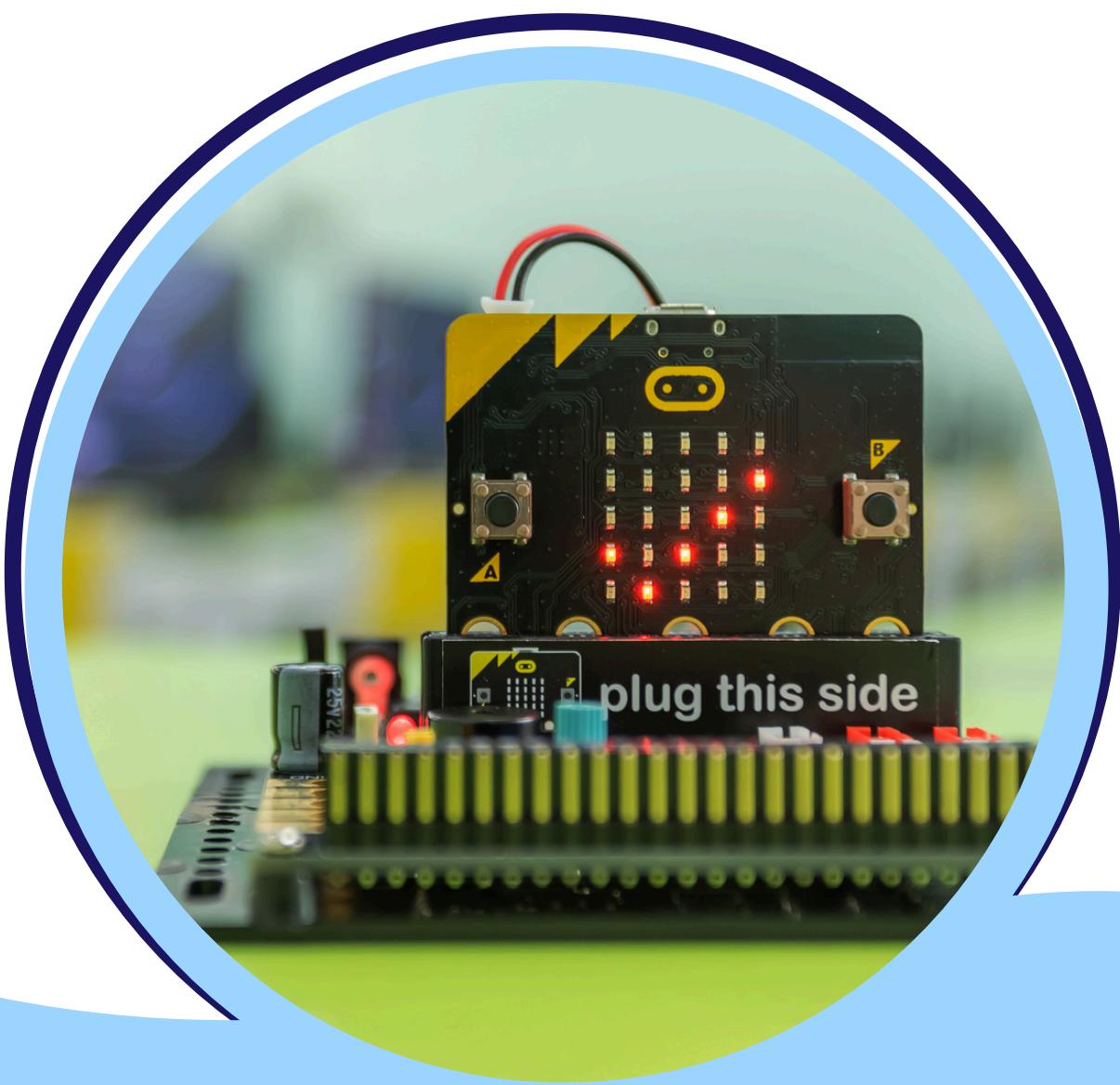


I E S K O O L

# MICROBIT PROJECTS



POWERED BY  
**INFINITE ENGINEERS**

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## Part 1

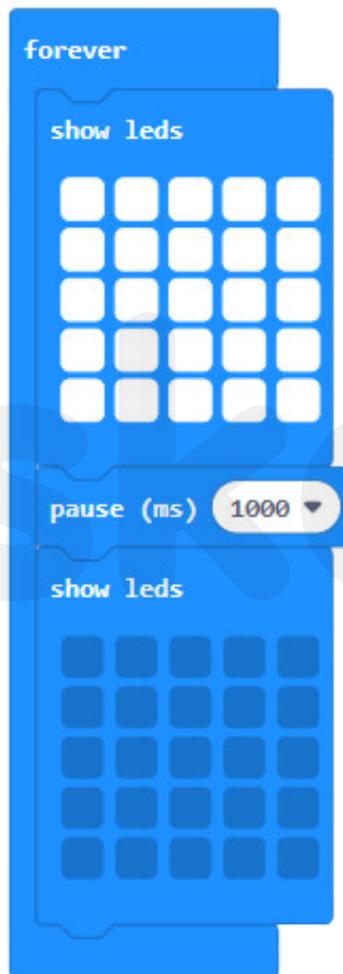
### Project 1: Light up

**Aim:** Light up your microbit

#### Materials Required:

- Microbit
- USB cable
- Power source

#### Block code:



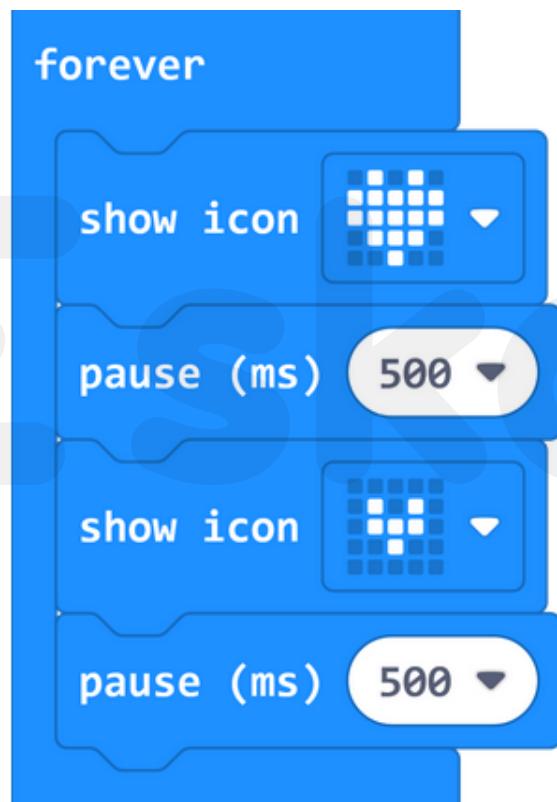
## Project 2: Beating Heart

**Aim:** Make your microbit's heartbeat using loops to create an animation.

### Materials Required:

- Microbit
- USB cable
- Power source

### Block code:



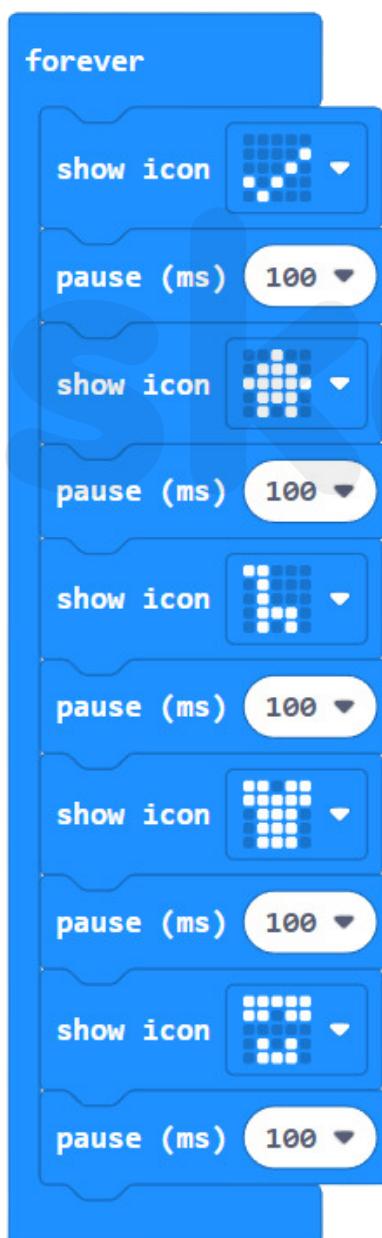
## Project 3: Icons

**Aim:** Make your microbit's icons using loops to create an animation.

### Materials Required:

- Microbit
- USB cable
- Power source

### Block code:



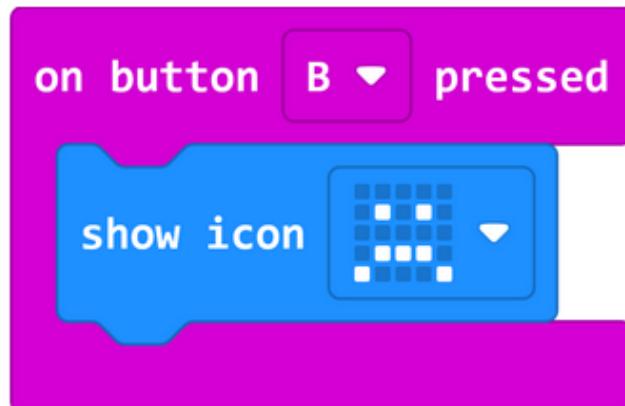
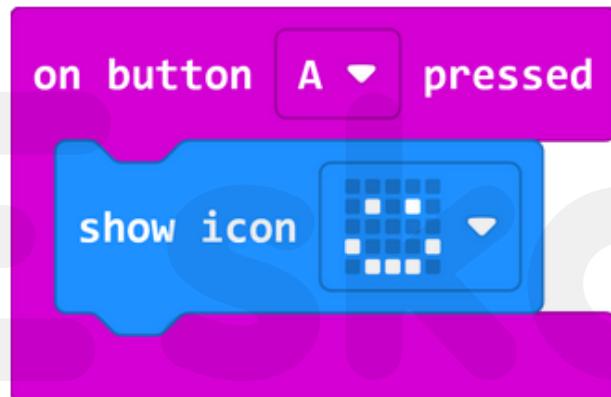
## Project 4: Emotion Badge

**Aim:** Use your micro bit to tell the world how you're feeling.

### Materials Required:

- Microbit
- USB cable
- Power source

### Block code:



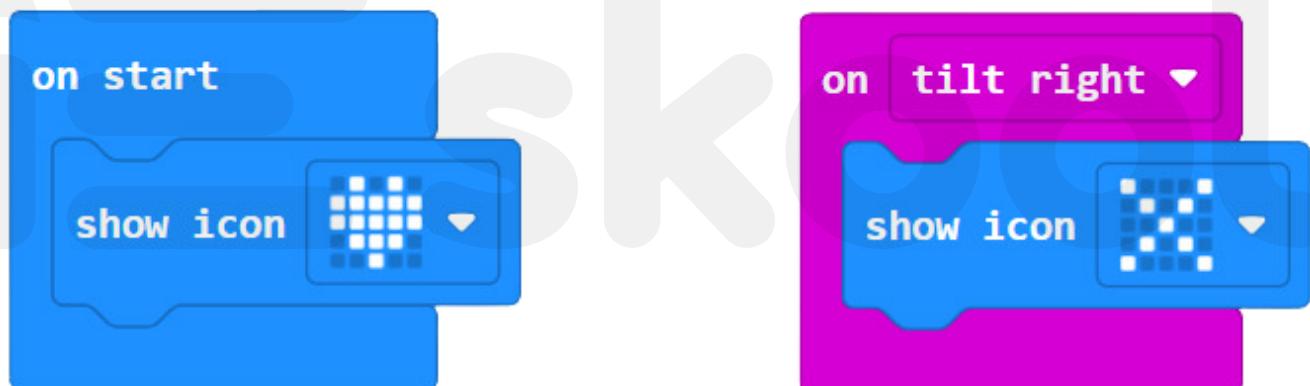
## Project 5: Water Bottle Alert

**Aim:** Make your very own water bottle alert using a microbit.

### Materials Required:

- Microbit
- USB cable
- Power source

### Block code:



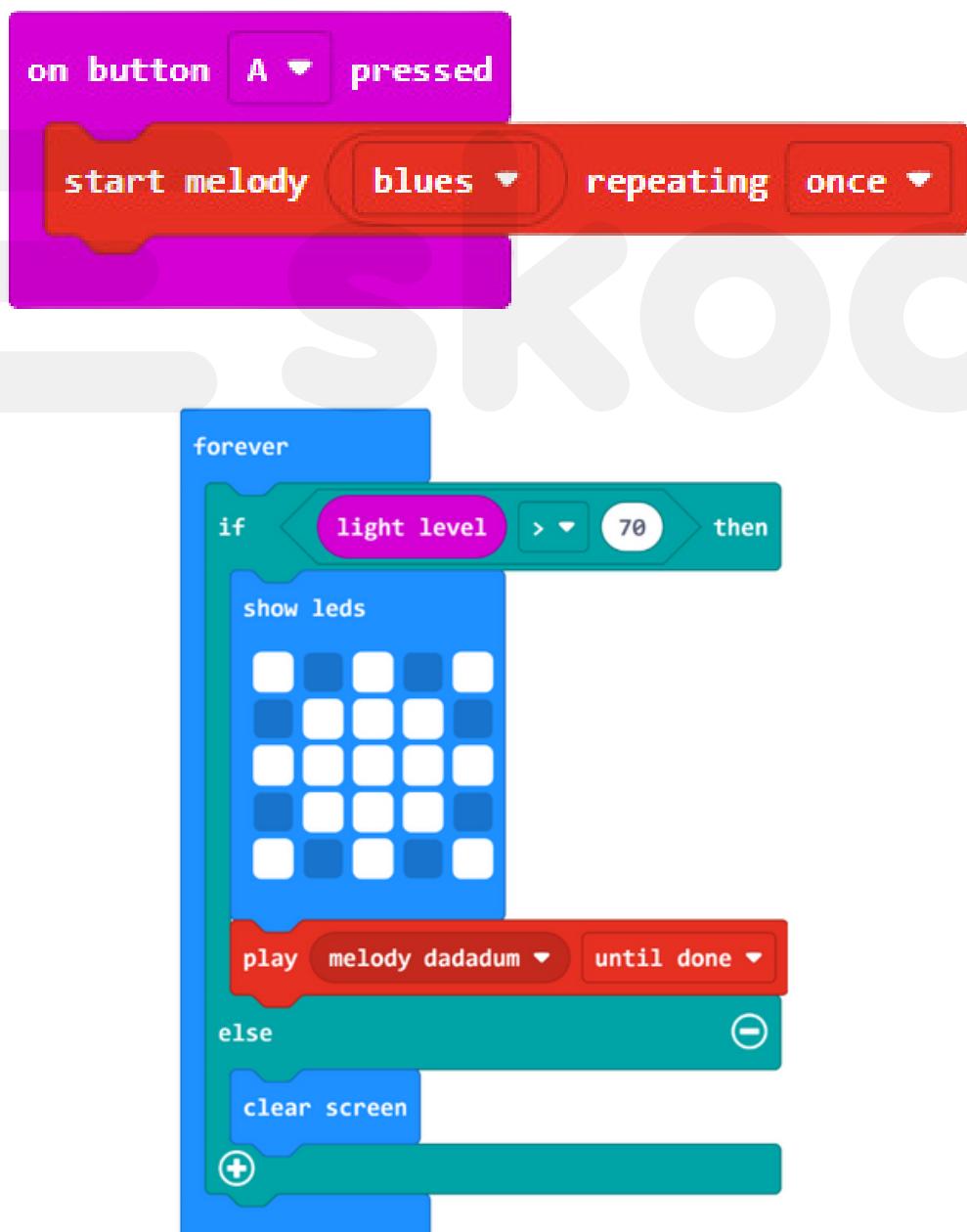
## Project 6: Make some Noise

**Aim:** Create a micro bit that can be programmed to make various sounds.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



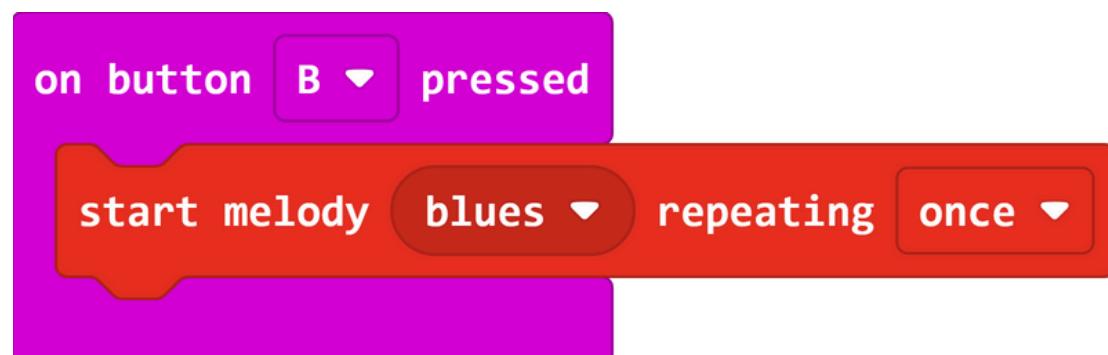
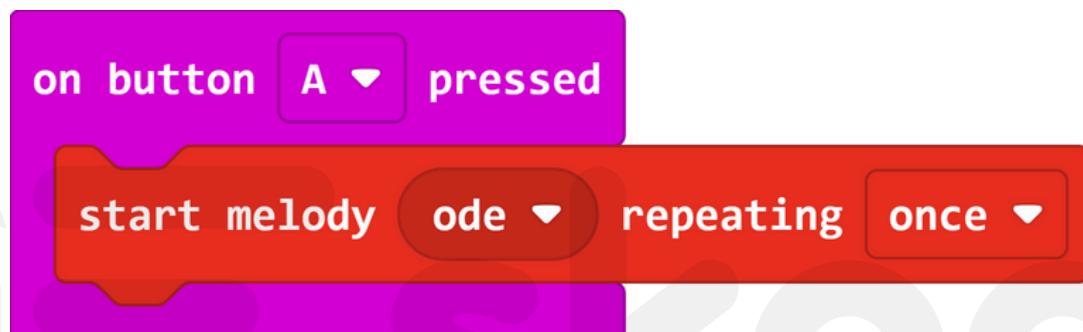
## Project 7: Jukebox

**Aim:** Make a music machine that plays different tunes at the push of a button.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



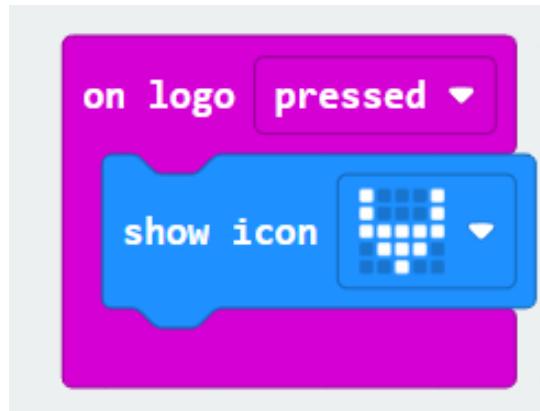
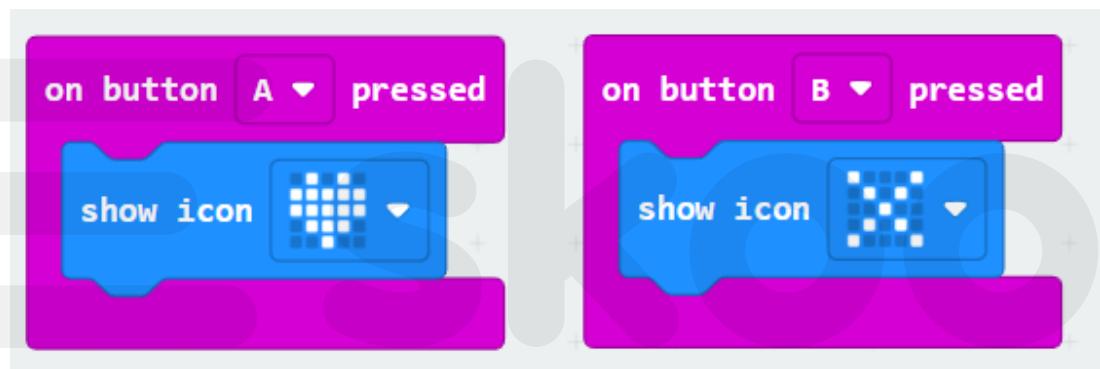
## Project 8: Touch Emotion Badge

**Aim:** Add expression to an emotion badge project using the new micro bit's touch logo sensor as an extra expression.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



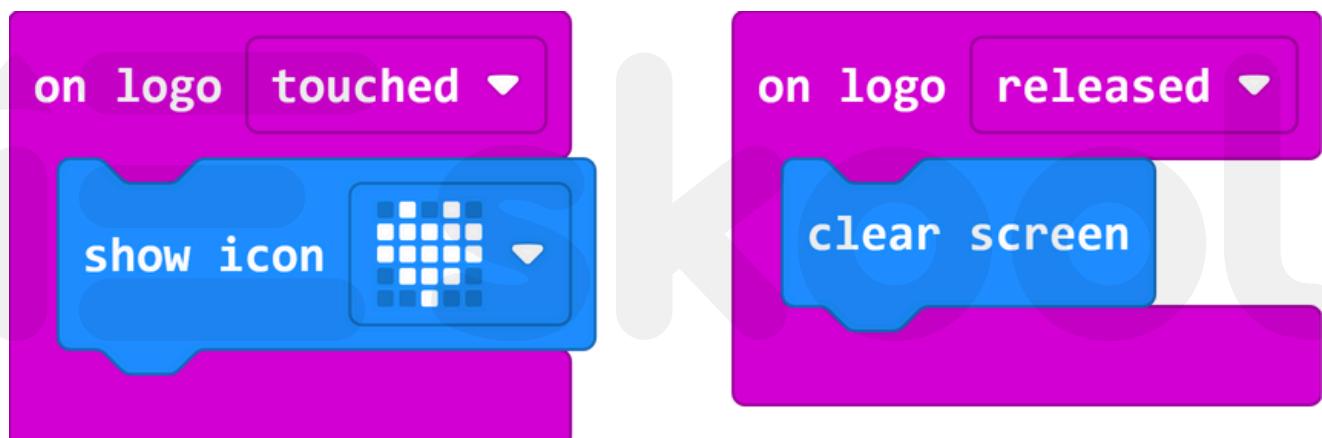
## Project 9: Touch Heart

**Aim:** Light up your microbit with a heart - but only while you touch it!

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



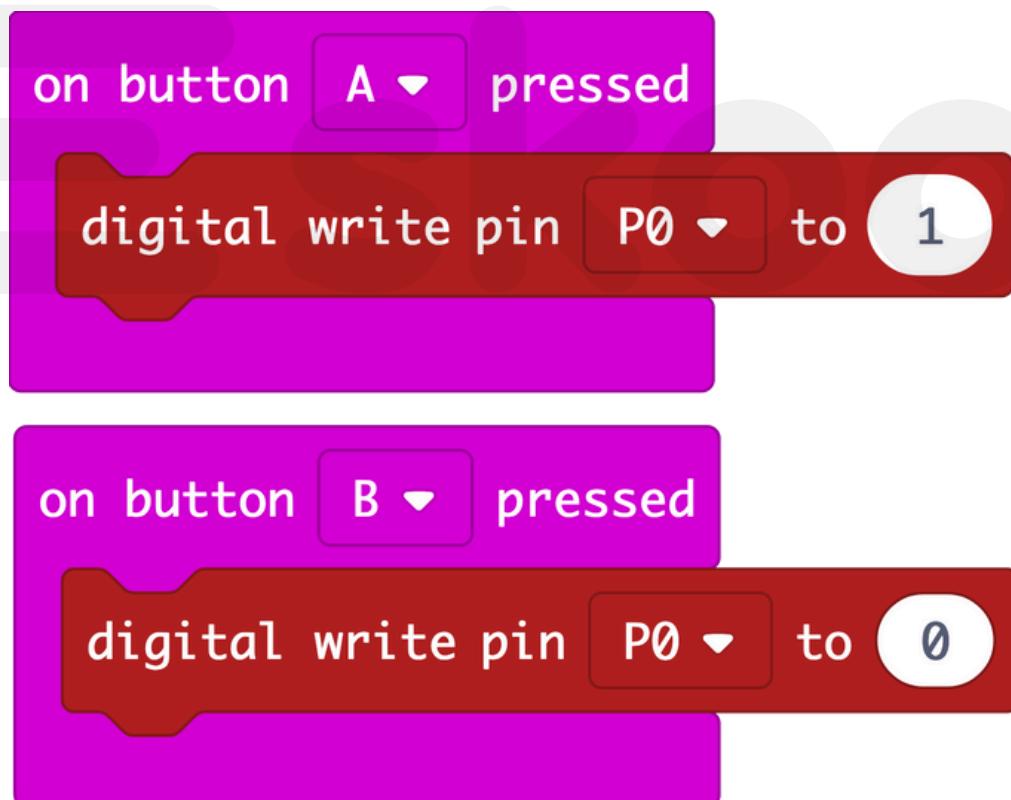
## Project 10: LED Control

**Aim:** We will control the lighting of an LED via the two buttons A and B of the microbit

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



## Part 2

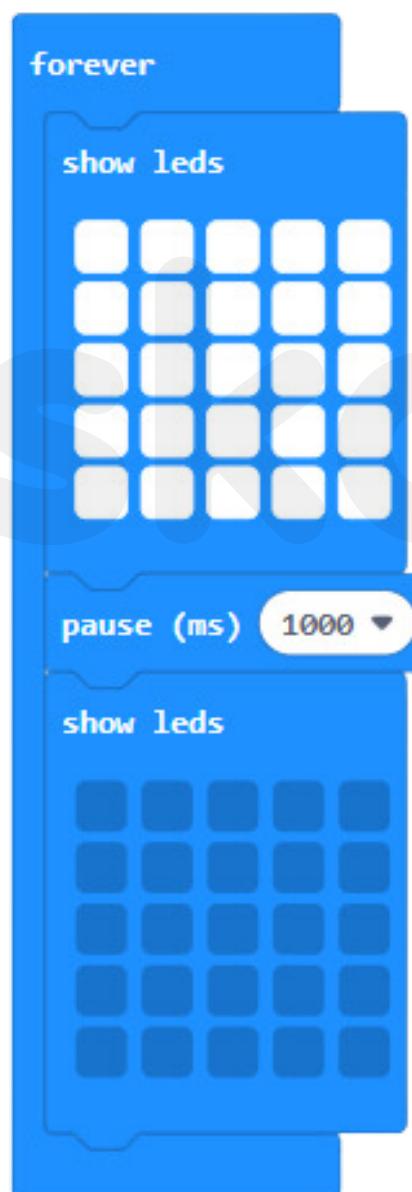
### Project 1: Light up

**Aim:** Light up your microbit.

#### Materials Required:

- Microbit
- Power source
- USB cable

#### Block code:



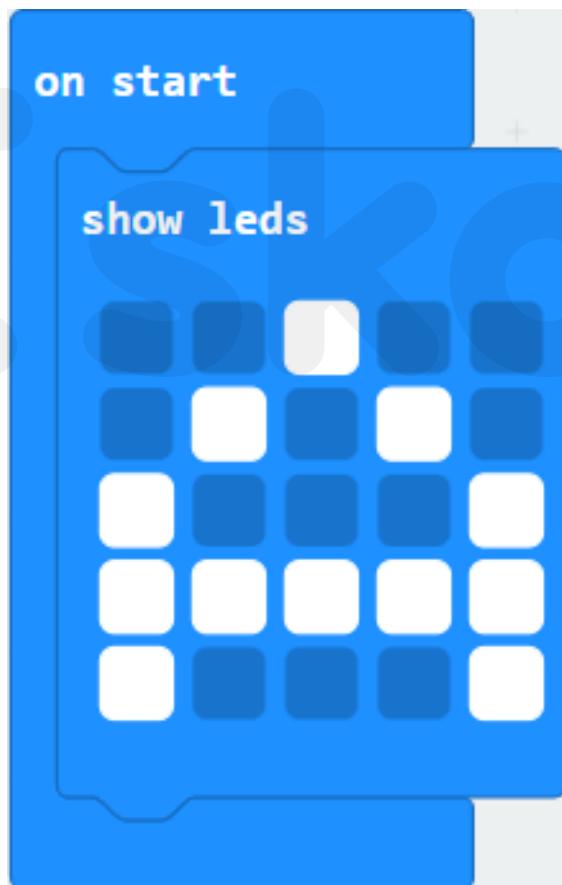
## Project 2: LED Matrix - Create Different Characters

**Aim:** Make your microbit show your name starting letter alphabet.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



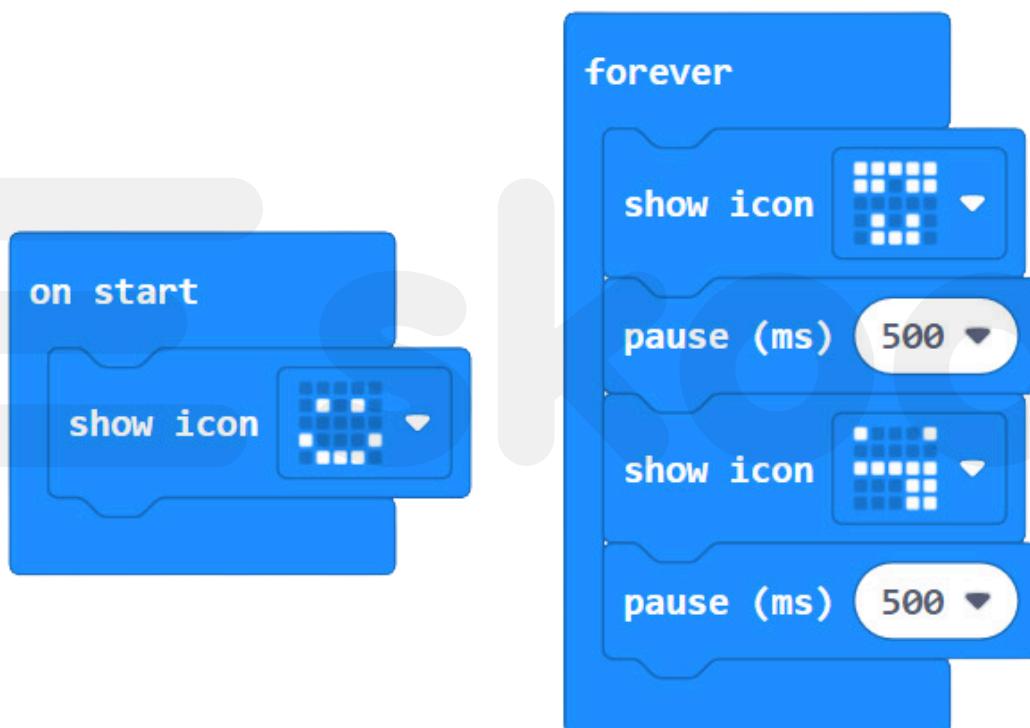
## Project 3: LED Matrix - Create Different Emoji

**Aim:** Make different emojis using microbit leds.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



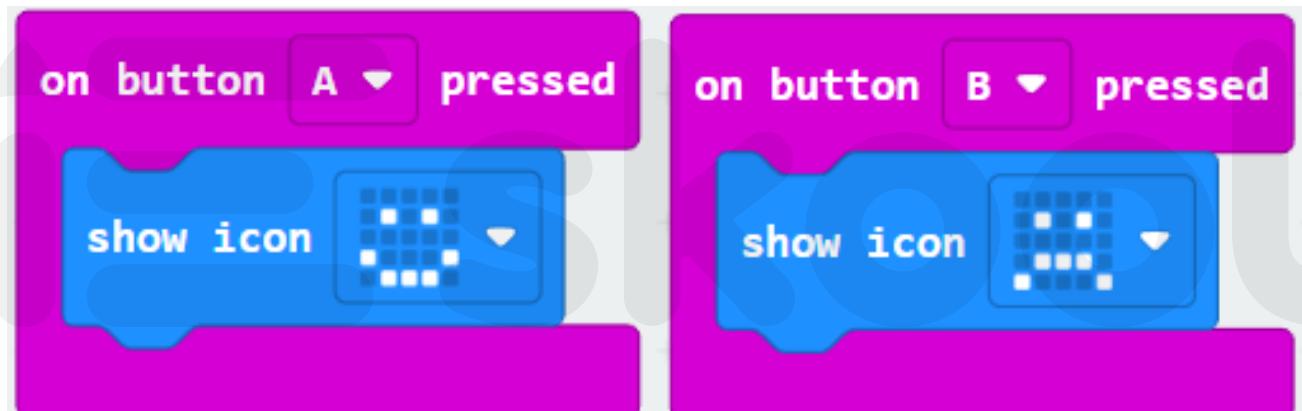
## Project 4: Flashing Emotions

**Aim:** Use your microbit to tell the world how you're feeling.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



## Project 5: Jukebox with volume

**Aim:** To design and develop a digital jukebox system with volume control functionality, enabling users to select and play music tracks while adjusting volume levels

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:

```
on start
  set volume ▾ to 128
```

```
forever
  set volume volume ▾
  plot bar graph of volume ▾
    up to 255
  +
```

```
on tilt left ▾
  change volume ▾ by -32
  if volume ▾ < 0 then
    set volume ▾ to 0
  +
```

```
on button A ▾ pressed
  play melody entertainer ▾ in background ▾
```

```
on button B ▾ pressed
  play melody prelude ▾ in background ▾
```

```
on tilt right ▾
  change volume ▾ by 32
  if volume ▾ > 255 then
    set volume ▾ to 255
  +
```

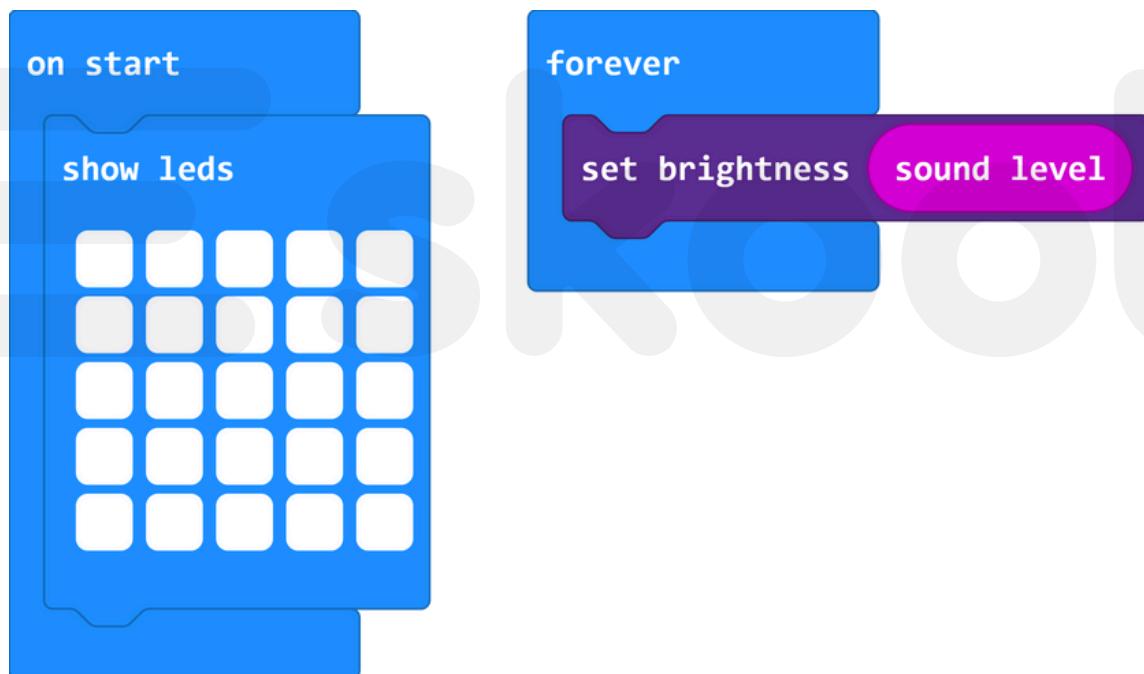
## Project 6: Disco Light

**Aim:** Make your disco light show with the new microbit! The louder the sounds, the brighter they glow.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



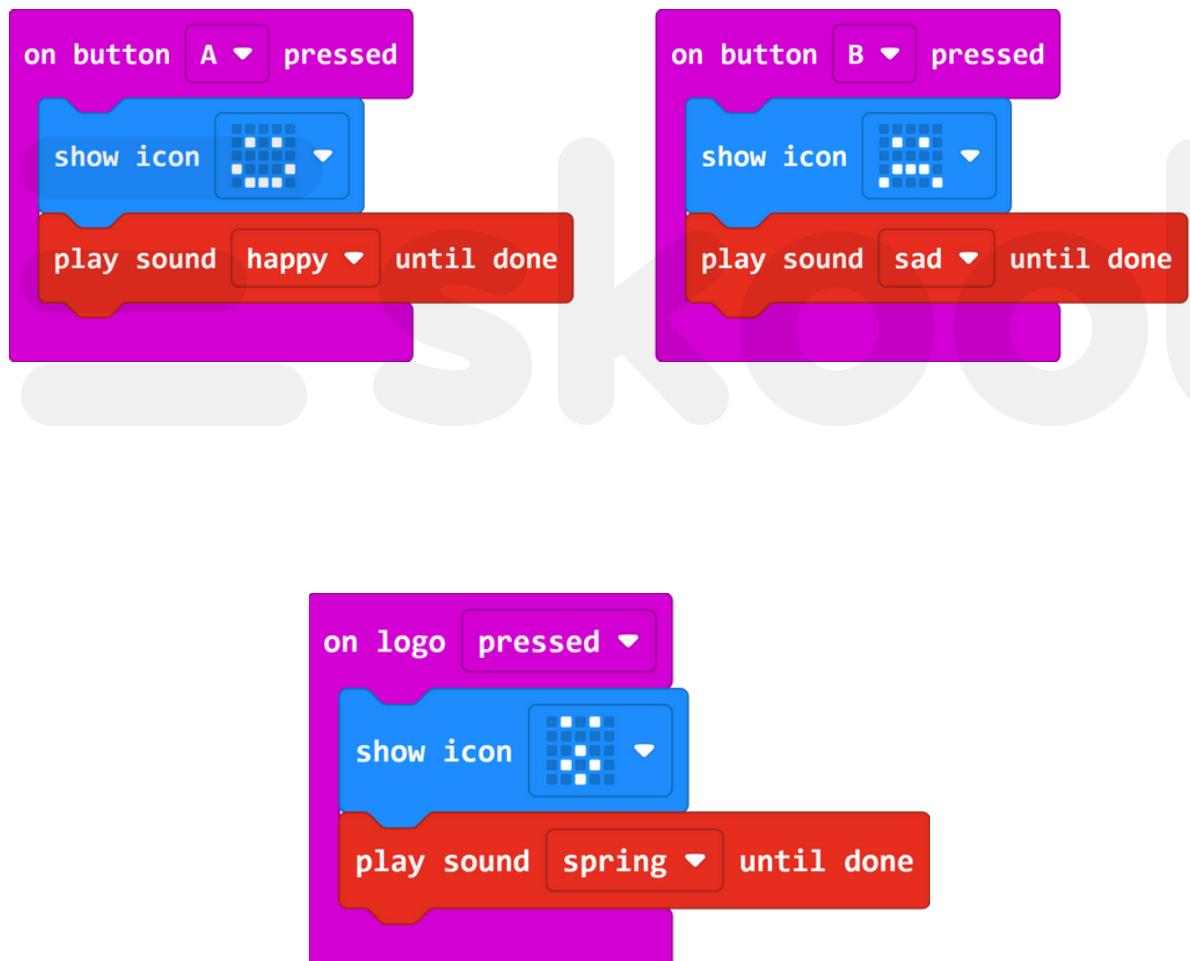
## Project 7: Sound Emotion Badge

**Aim:** Make an emotion badge that expresses how you feel in sounds and pictures.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



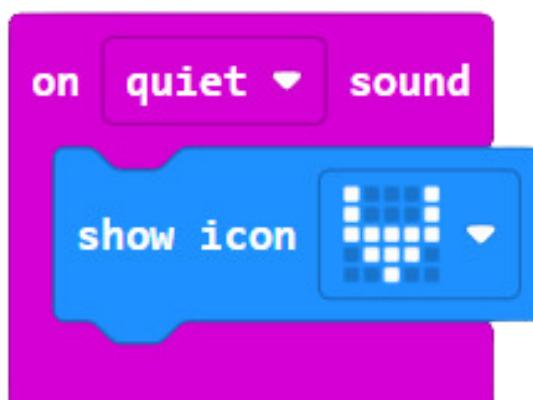
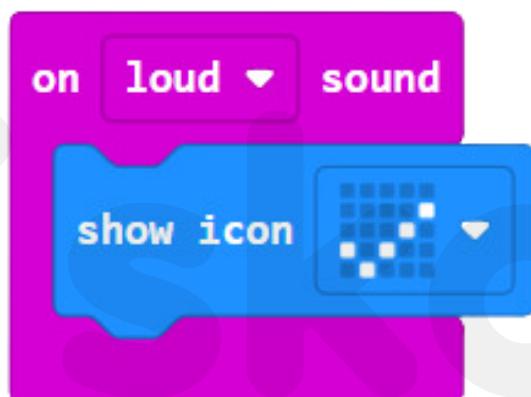
## Project 8: Microphone Clap Lights

**Aim:** Make the micro bit's microphone respond to claps and beats with an animated light show.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



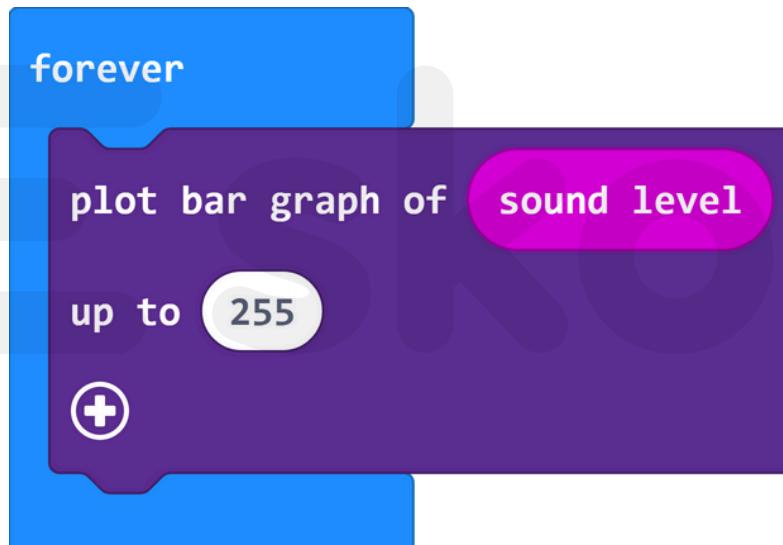
## Project 9: Sound Sensor

**Aim:** Measure how noisy it is around you using the microbit's microphone sensor and a simple bar chart display.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



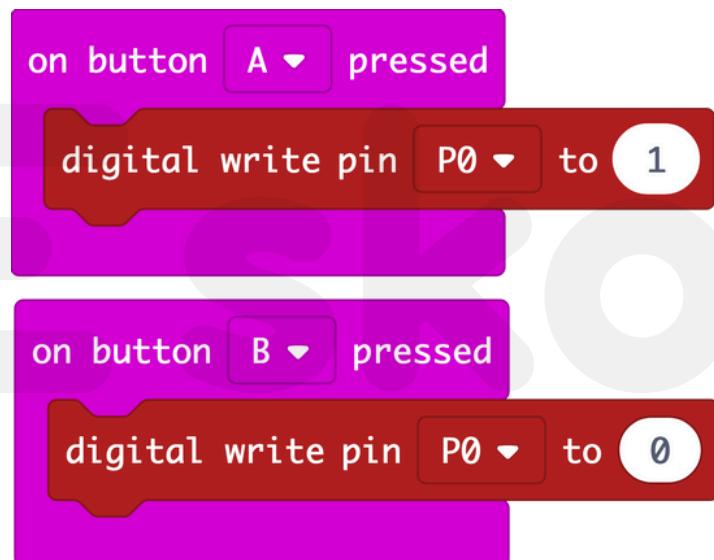
## Project 10: Buzzer Control

**Aim:** We will control the Buzzer via the two buttons A and B of the microbit

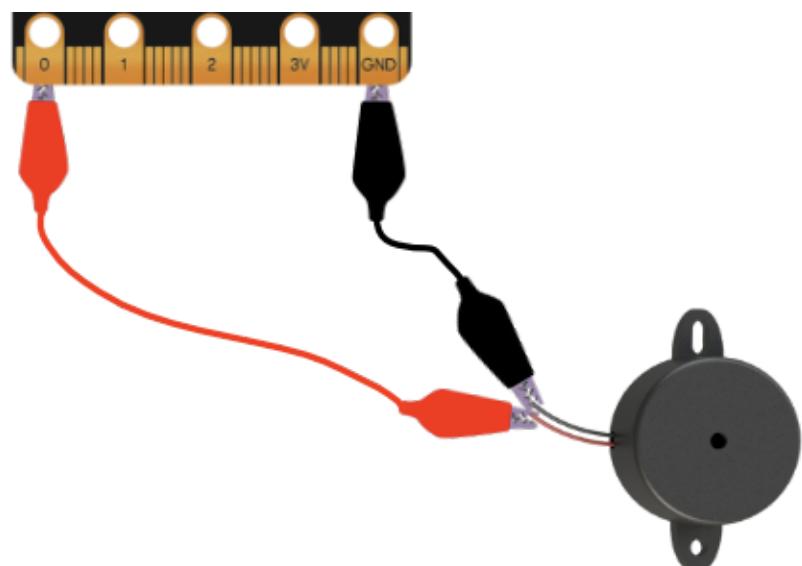
### Materials Required:

- Microbit
- Power source
- USB cable
- Buzzer
- Alligator Clips

### Block code:



### Circuit Diagram:



## Part 3

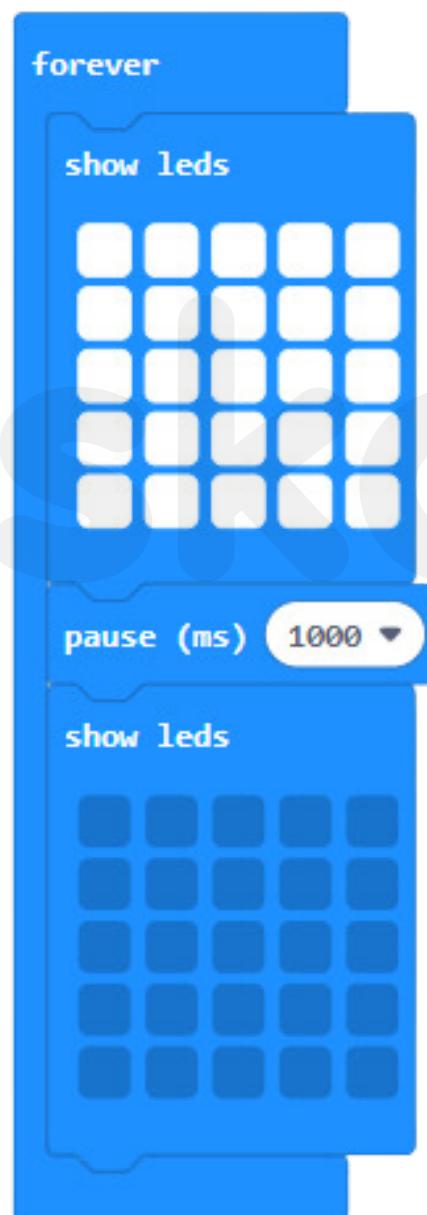
### Project 1: Light up

**Aim:** Light up your microbit

#### Materials Required:

- Microbit
- Power source
- USB cable

#### Block code:



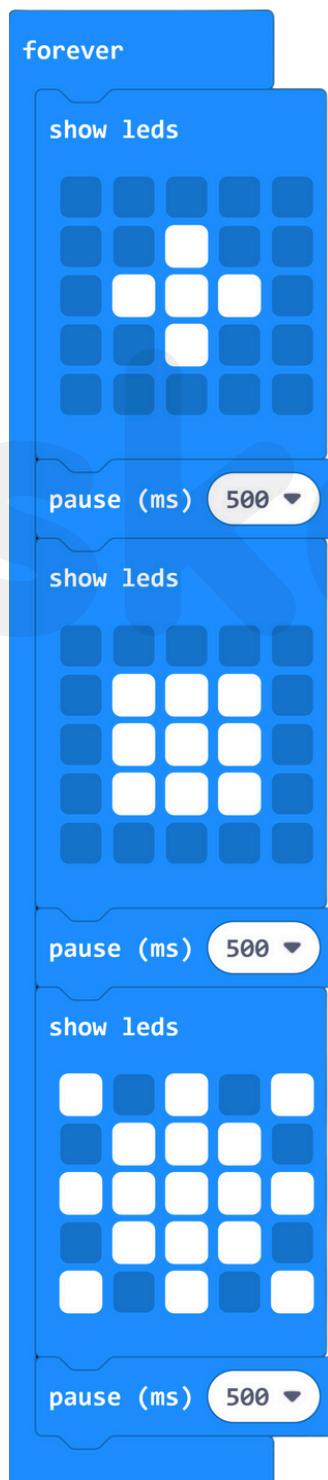
## Project 2: Shining sunbeams

**Aim:** Use the sun icon to make a sunbeam animation.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



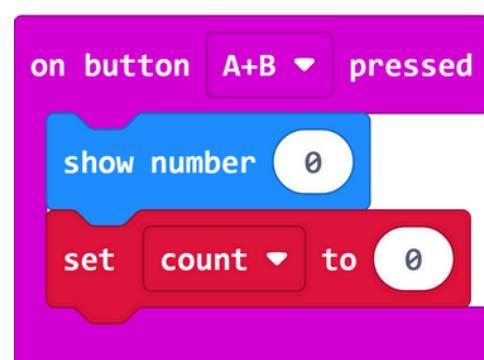
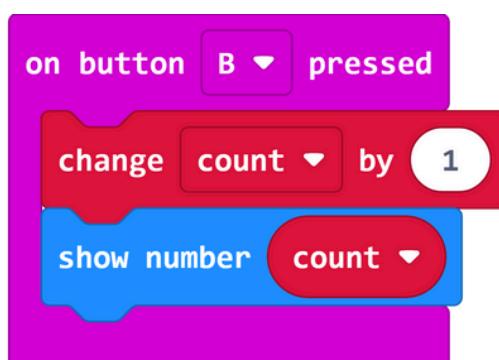
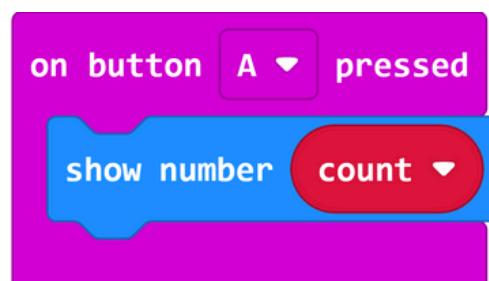
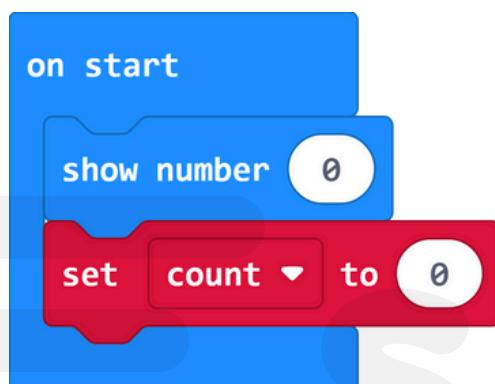
## Project 3: Counter

**Aim:** A simple project to help you count... skips, jumps, birds you see out of your window - anything!

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



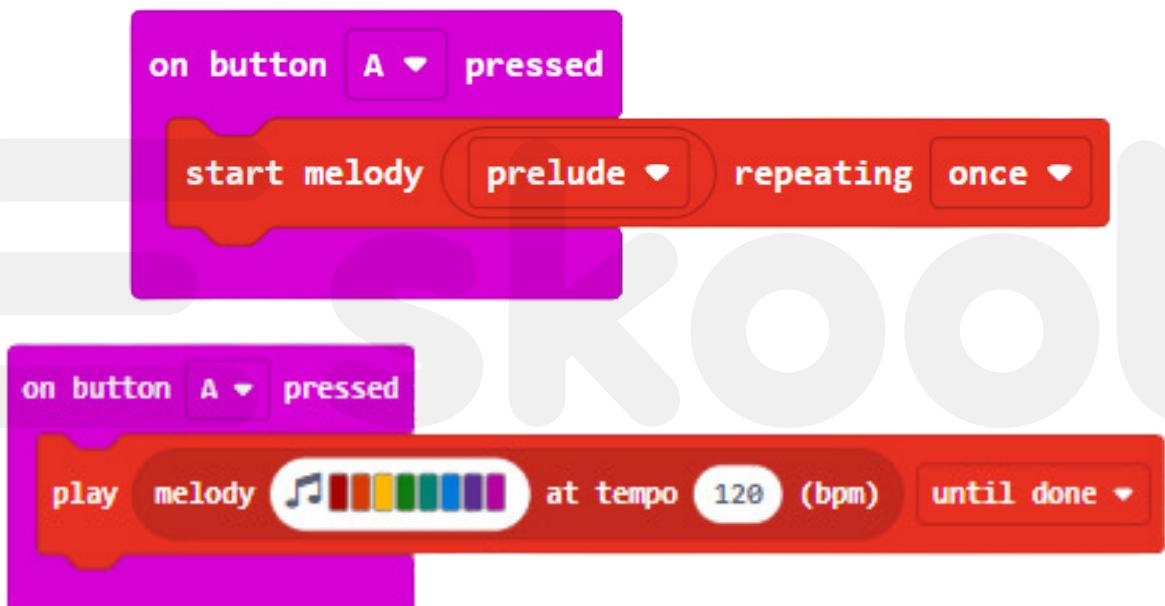
## Project 4: Make some noise

**Aim:** Create a program to make a wide variety of sounds.

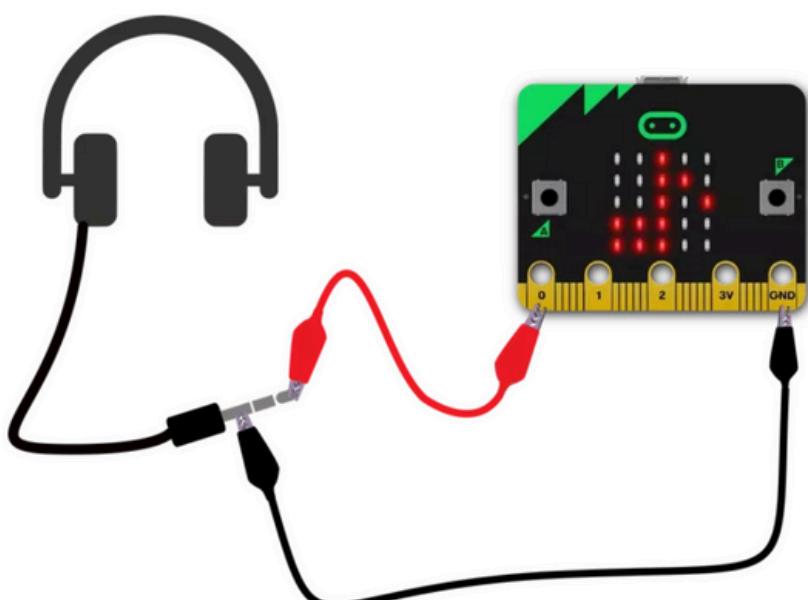
### Materials Required:

- Microbit
- Power source
- USB cable
- Crocodile clips
- Headphone
- Alligator Clips

### Block code:



### Circuit Diagram:



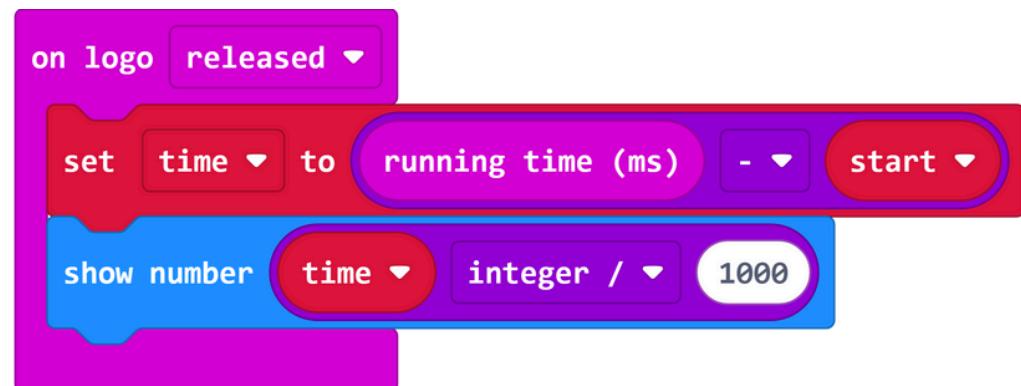
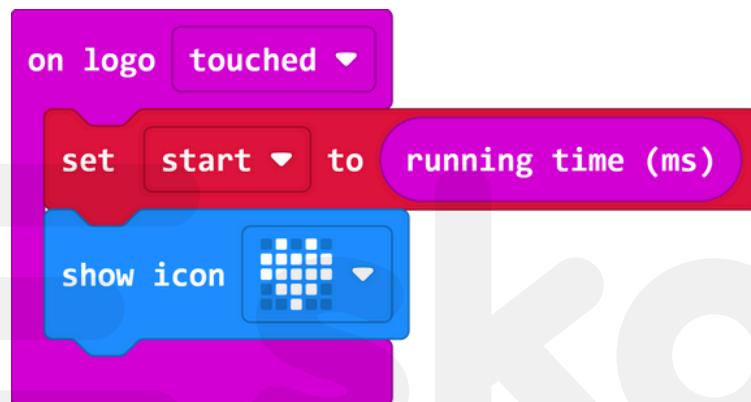
## Project 5: Touch timer

**Aim:** Make a simple timer using the microbit's touch logo sensor.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



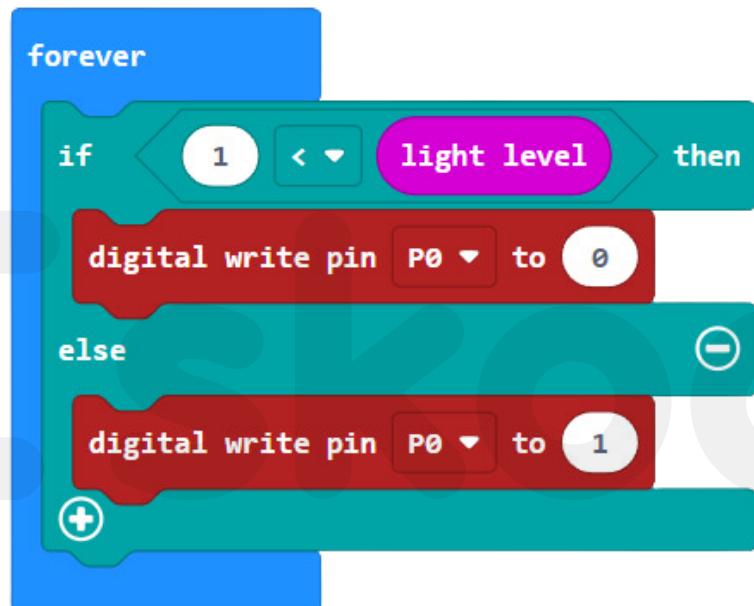
## Project 6: Automatic light system

**Aim:** Create a program that can control an LED using light levels.

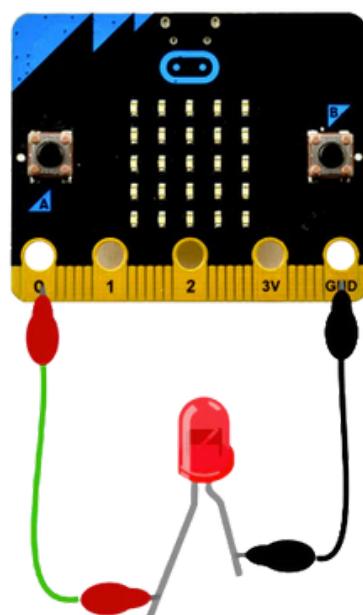
### Materials Required:

- Microbit
- Power source
- USB cable
- Crocodile clips (2)
- LED Bulb

### Block code:



### Circuit Diagram:



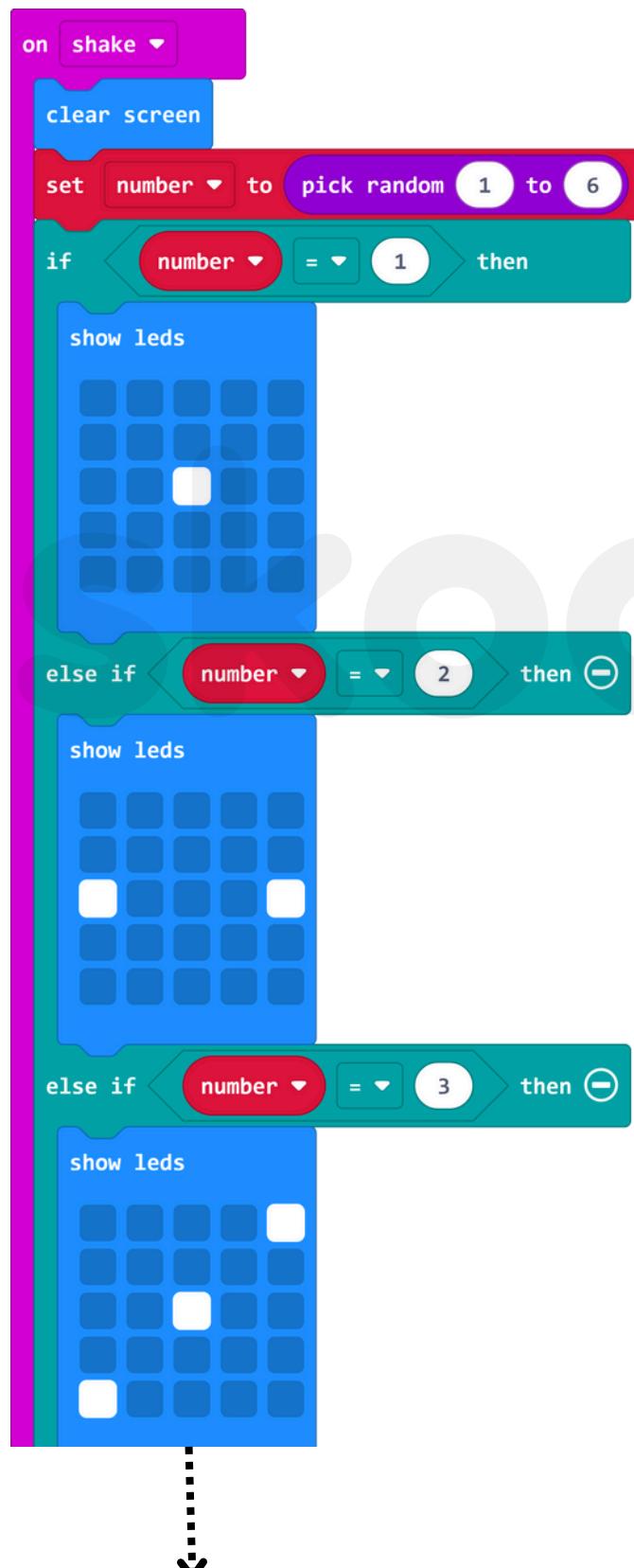
## Project 7: Graphical dice

**Aim:** A dice project that looks like a real dice with patterns of dots instead of numbers.

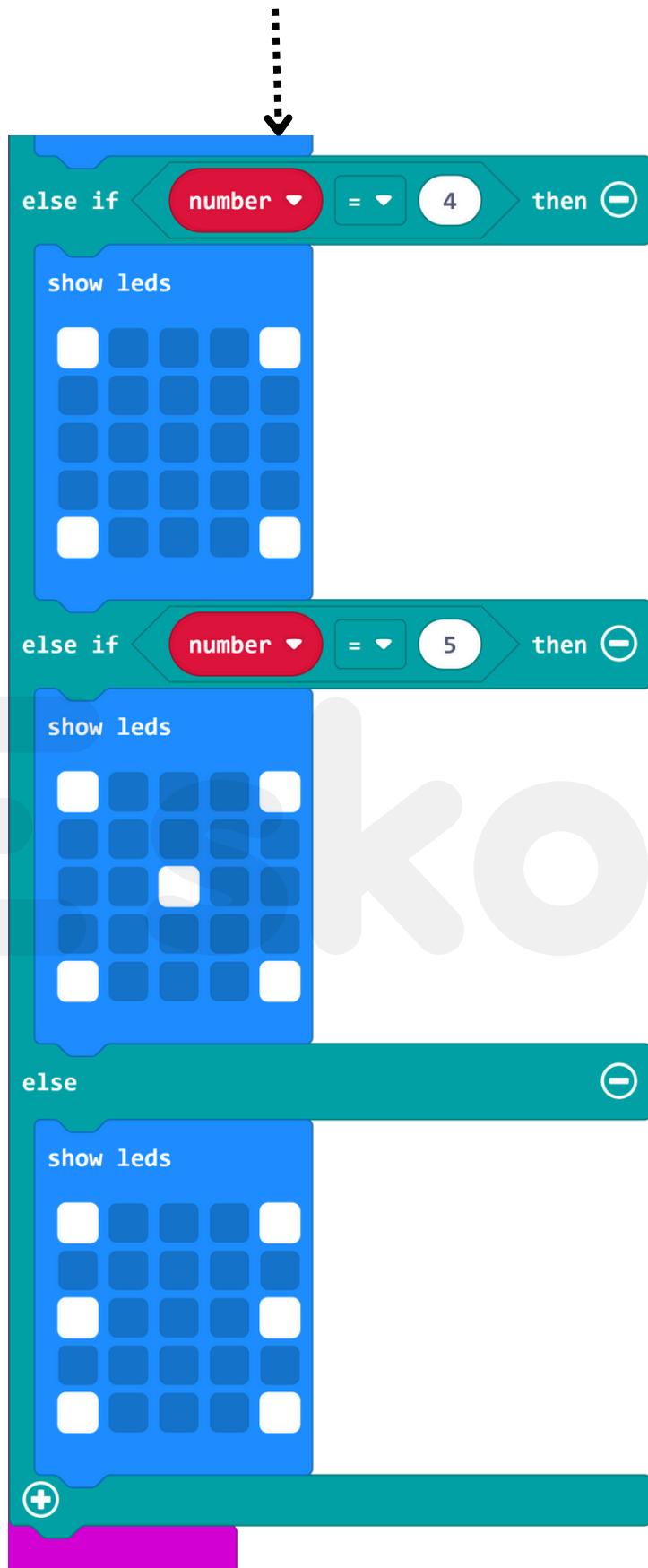
### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



**Block code:**



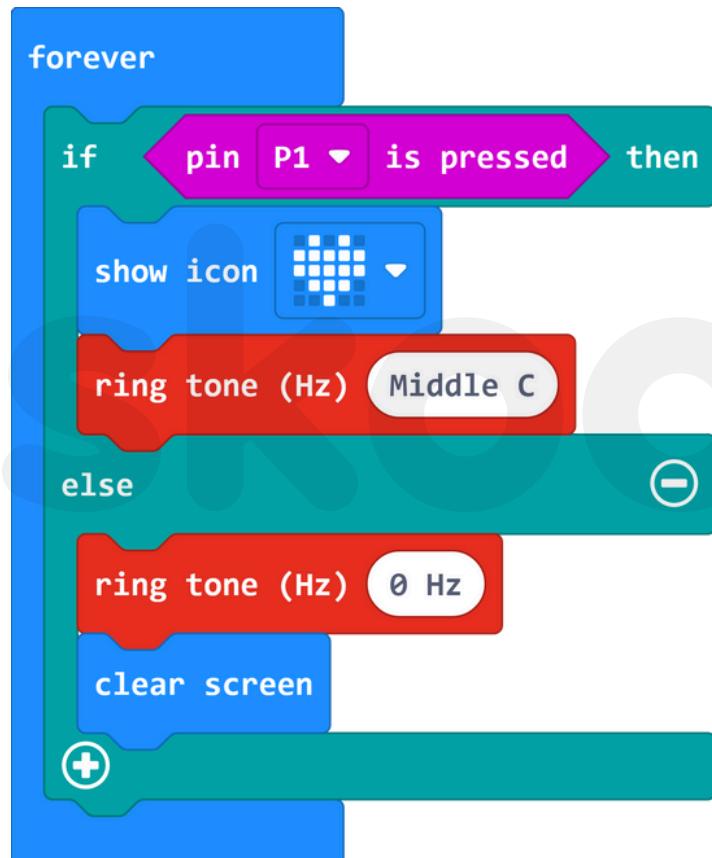
## Project 8: Conductivity Tester

**Aim:** Use your microbit with two crocodile clip leads to investigate if a material conducts electricity.

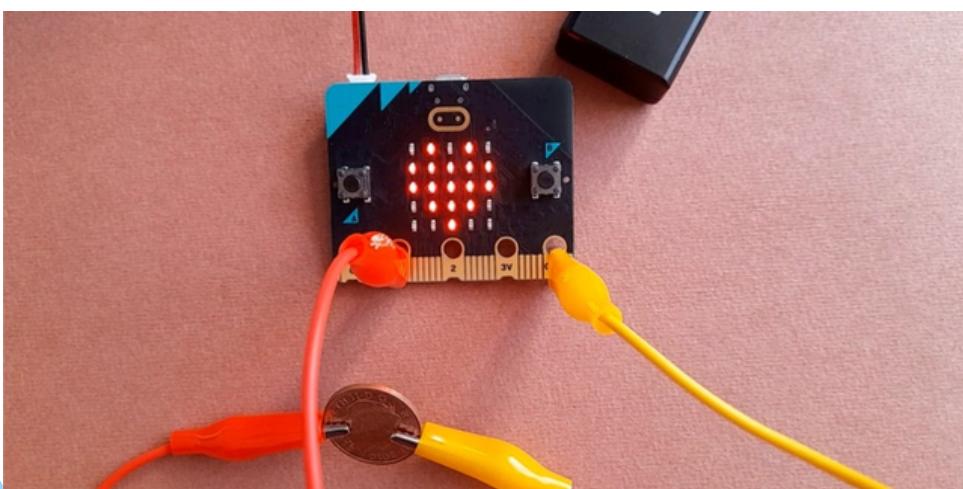
### Materials Required:

- Microbit
- Power source
- USB cable
- Two Crocodile clips
- Take some conducting and insulating materials

### Block code:



### Circuit Diagram:



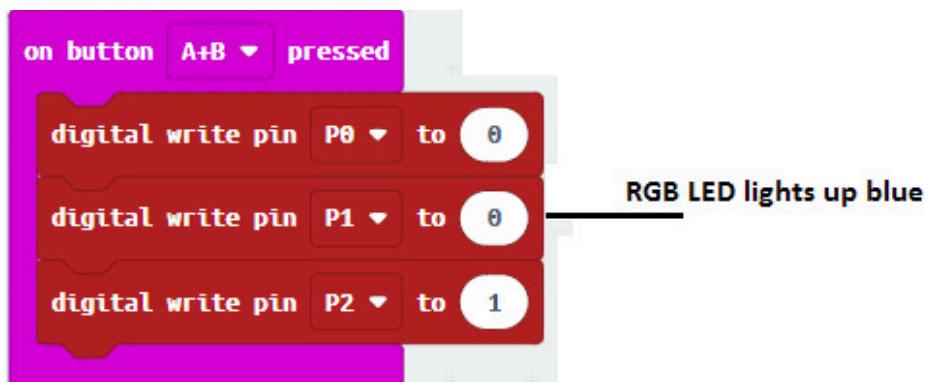
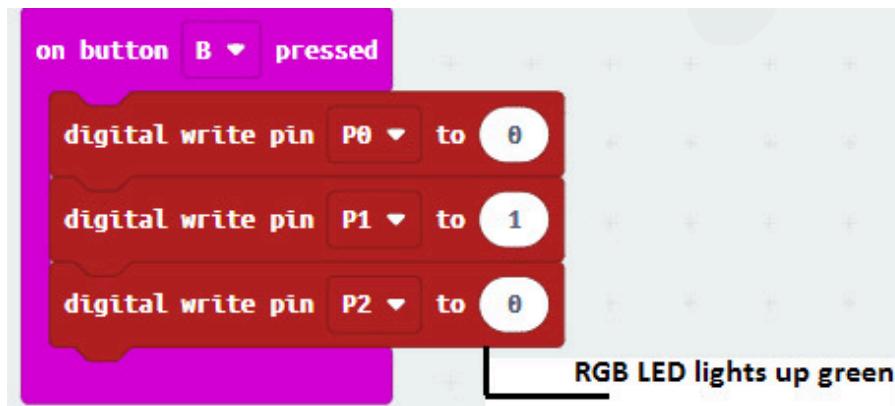
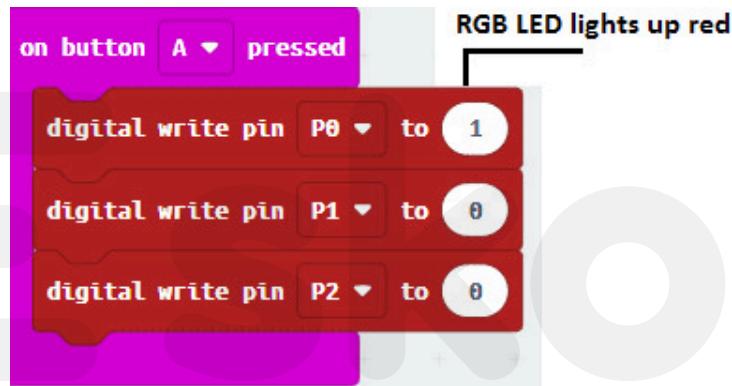
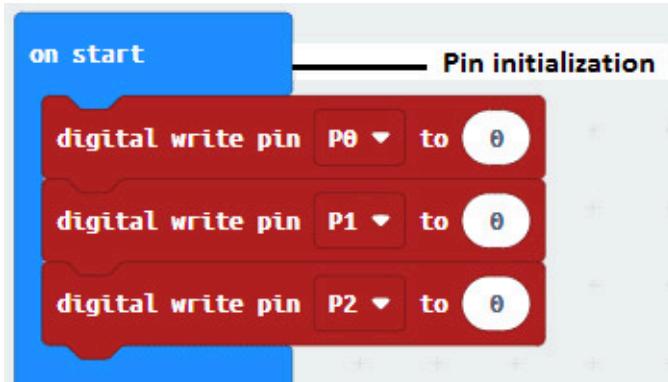
## Project 9: RGB LED

**Aim:** Check the RGB LED by the microbit buttons.

### Materials Required:

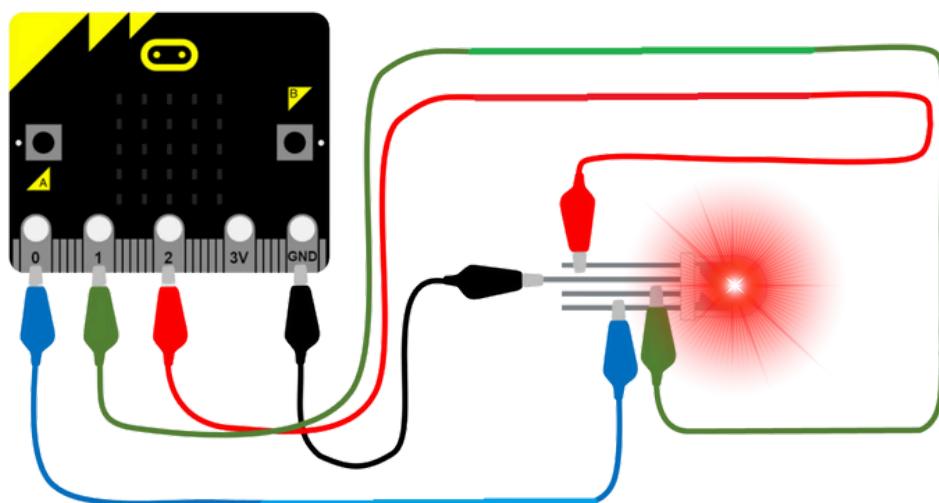
- Microbit
- Power source
- USB cable
- 4 - Crocodile clips
- 1 - RGB led (4 pins)

### Block code:

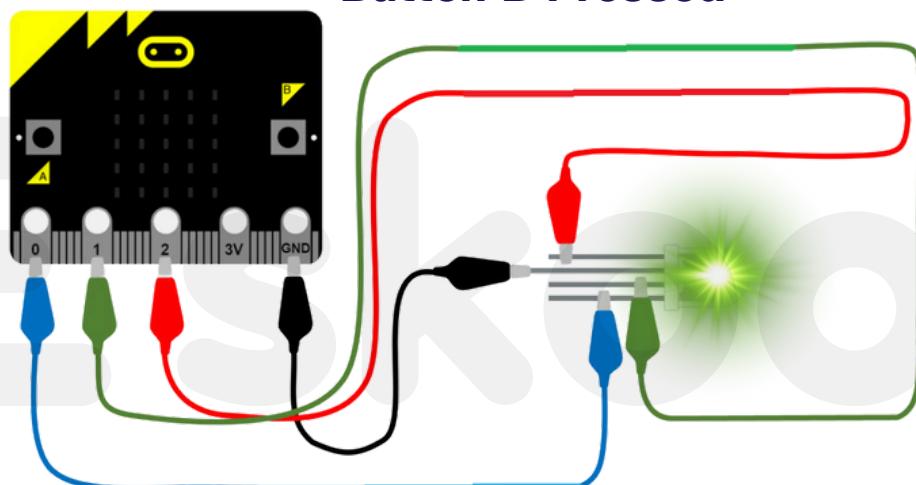


Circuit Diagram:

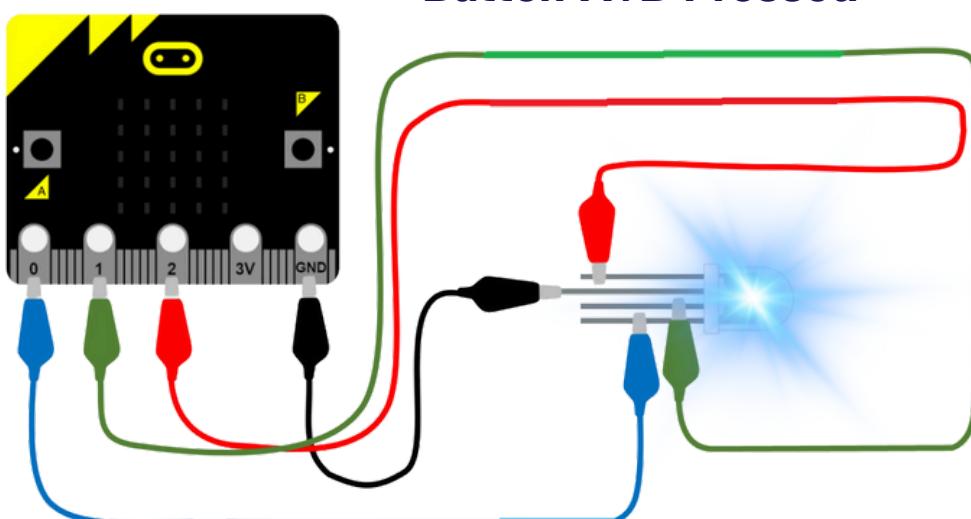
**Button A Pressed**



**Button B Pressed**



**Button A+B Pressed**



## Project 10: Microbit Pet

**Aim:** Code your electronic pet and customize it to make it your own. The microbit's built-in speaker makes it even more fun with its expressive sounds.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:

The Scratch script consists of three main sections:

- on start:** Sets up initial conditions with `show leds` (a 2x4 grid of lights), `play hello until done`, and a `set timer to 0`.
- on shake:** Triggers when the microbit is shaken, showing a surprised icon and playing a giggle sound until done.
- on logo pressed:** Triggers when the microbit logo is pressed, showing a happy icon and playing a happy sound until done.

The Scratch script is a `forever` loop containing the following logic:

- Initializes a timer at 0.
- Every 1000ms:
  - Increases the timer by 1.
  - If the timer equals 20, shows a sad icon and plays a sad sound until done.
  - If the timer equals 30, shows a yawn icon and plays a yawn sound until done.
  - If the timer equals 40, plays a mysterious sound until done.
- After the timer reaches 40, sets the built-in speaker to OFF.
- Enters a `while true` loop:
  - Shows a happy icon.
  - Enters a `do` loop:
    - Shows a happy icon.

## Project 11: Guitar - touch tunes

**Aim:** Play different tunes by using the microbit's touch sensor.

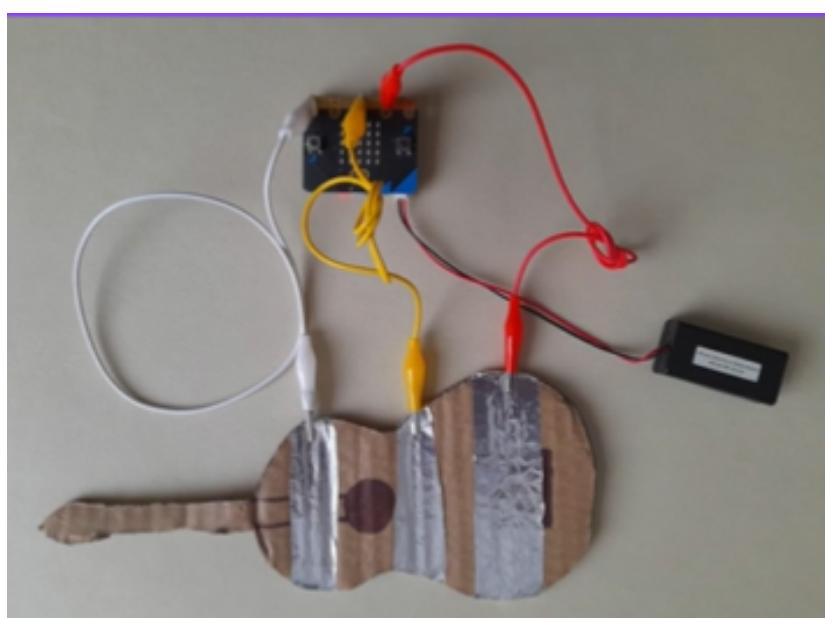
### Materials Required:

- Microbit
- Power source
- USB cable
- Three Crocodile clips
- Cardboard, tin foil, glue stick, and scissors to make a guitar

### Block code:



### Circuit Diagram:



## Part 4

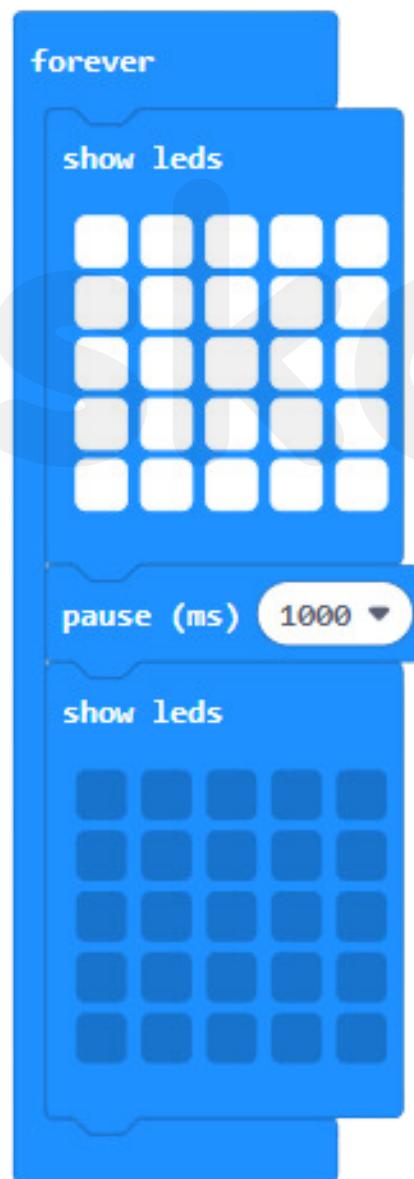
### Project 1: Light up

**Aim:** Light up your microbit

#### Materials Required:

- Microbit
- Power source
- USB cable

#### Block code:

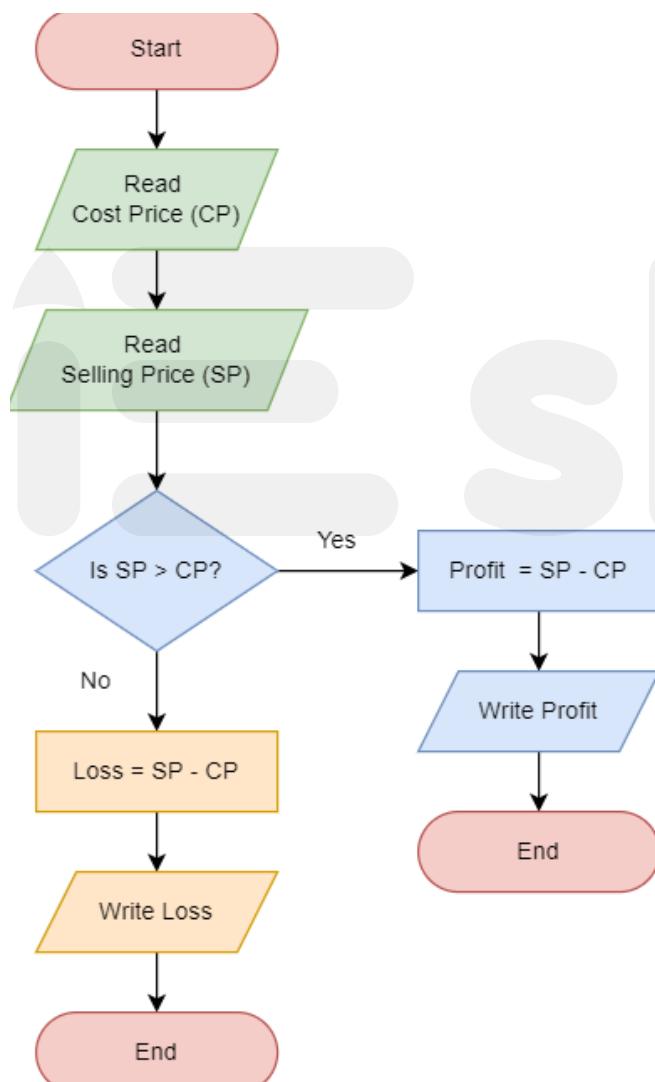


# Project 2: Basics of Algorithm and Flowchart

## ACTIVITY

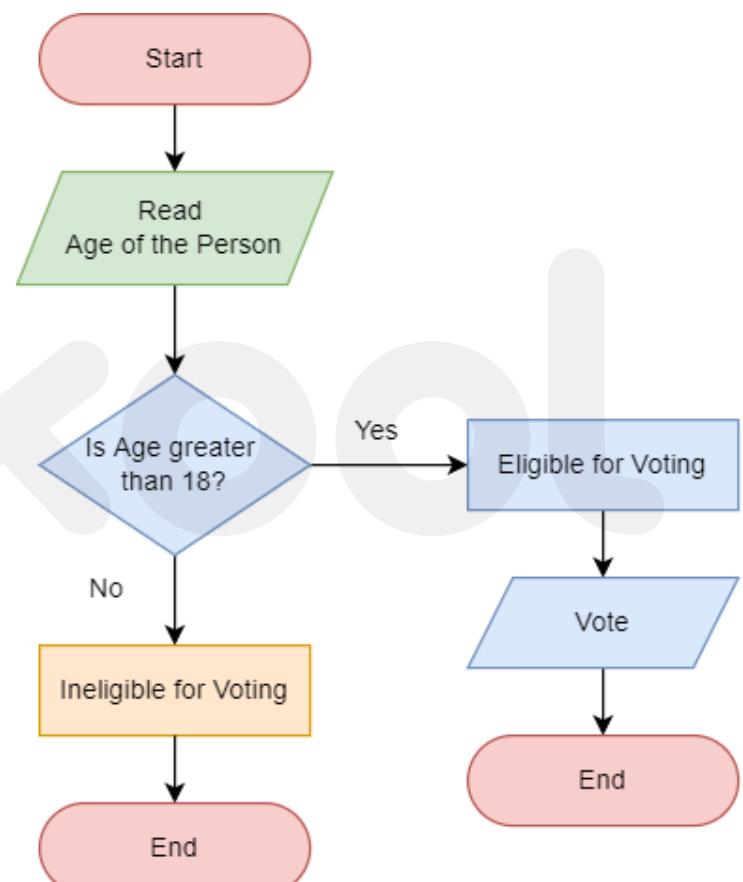
### Activity 1: Profit & Loss

Prepare a flowchart for Profit and Loss using different symbols.



### Activity 2: Profit & Loss

Prepare a flowchart to check Eligibility for Voting using different symbols.



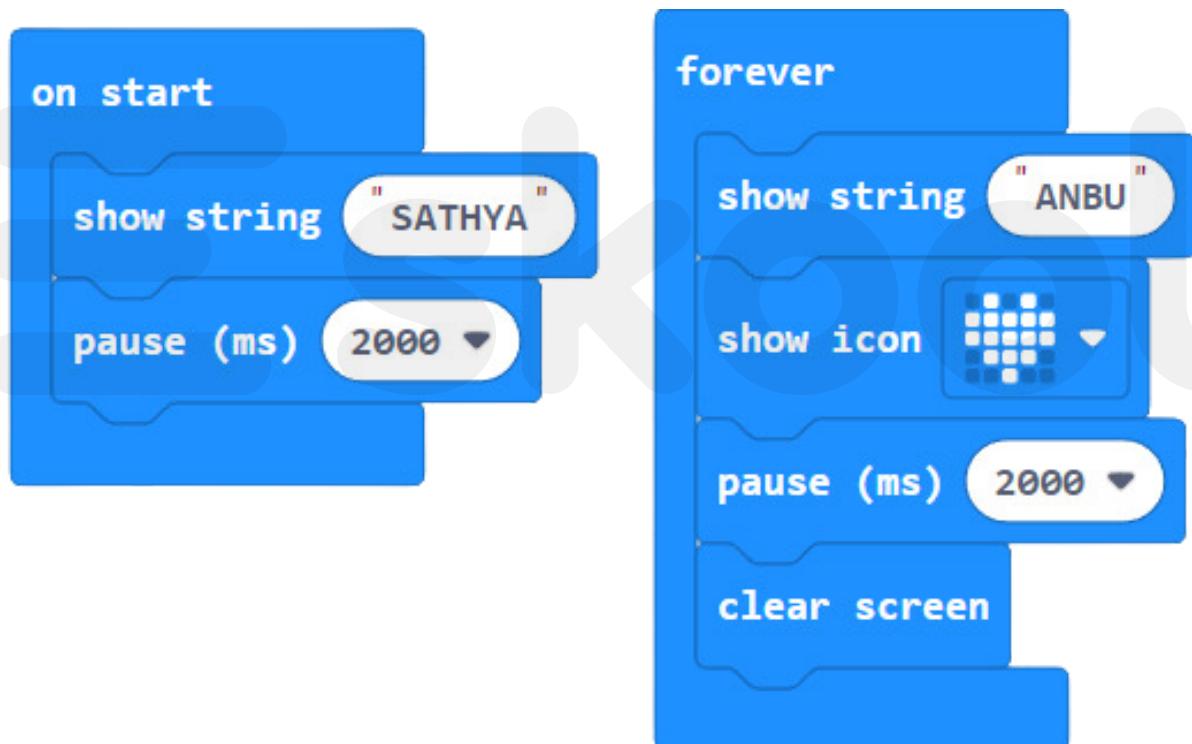
## Project 3: LED Matrix Name Badge

**Aim:** Turn your micro bit into a scrolling name badge with just a few instructions

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



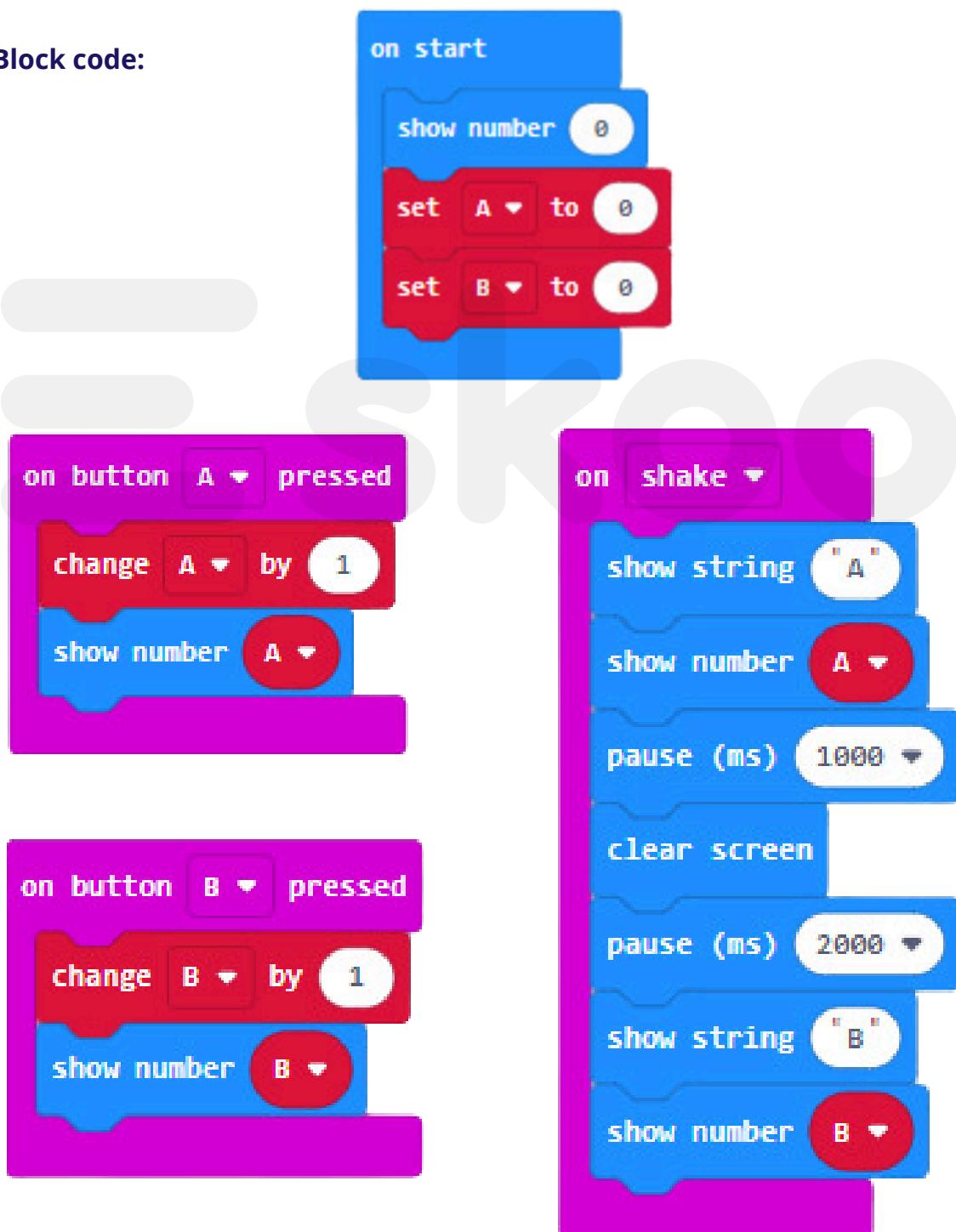
## Project 4: Switches Special counter

**Aim:** Turn your micro bit to help you count two different species of plants or animals in your school playground, garden, or local park.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



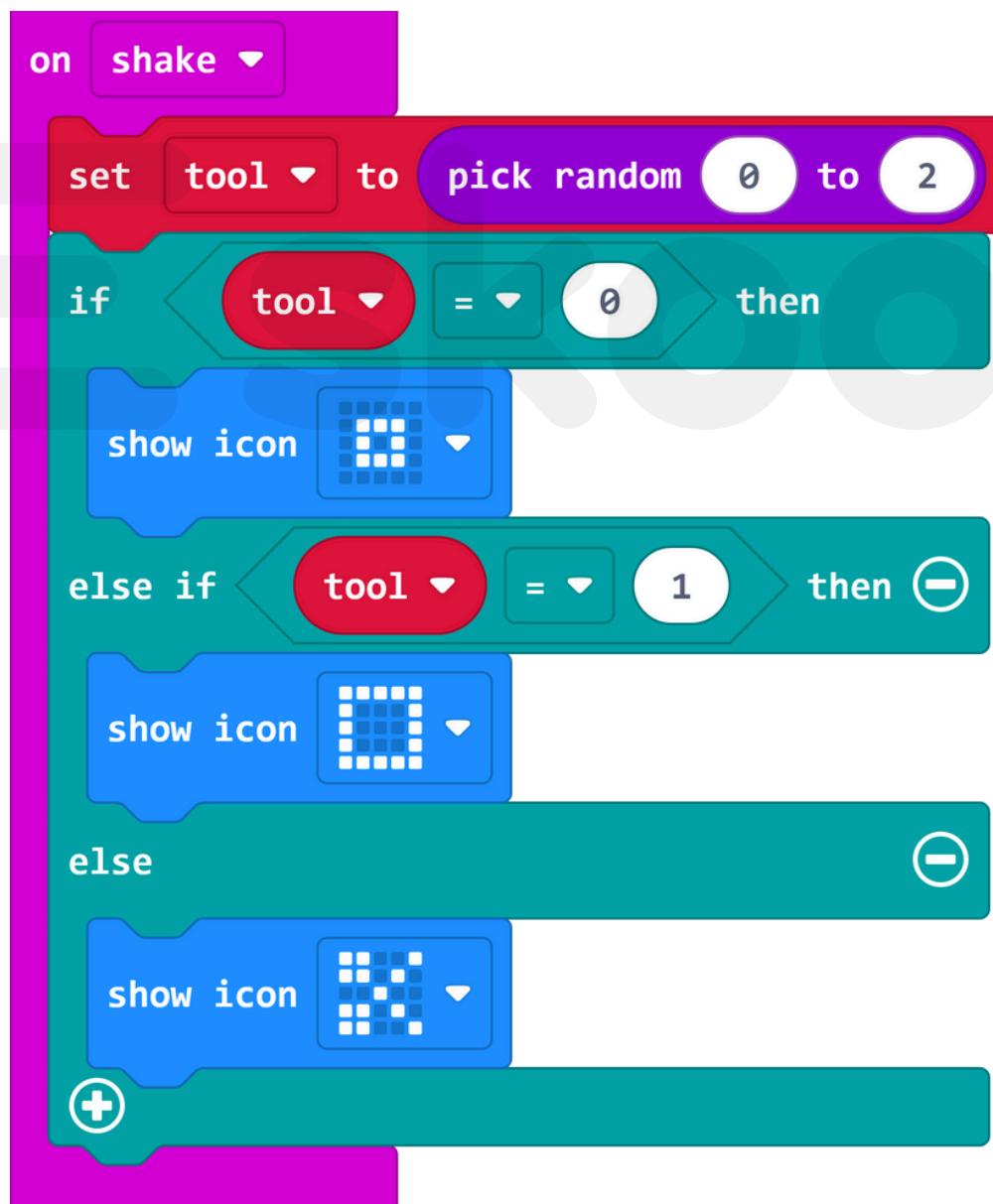
## Project 5: Accelerometer - Rock, paper, scissors

**Aim:** Play this classic game with two microbits and learn about selection, variables, and random numbers at the same time.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



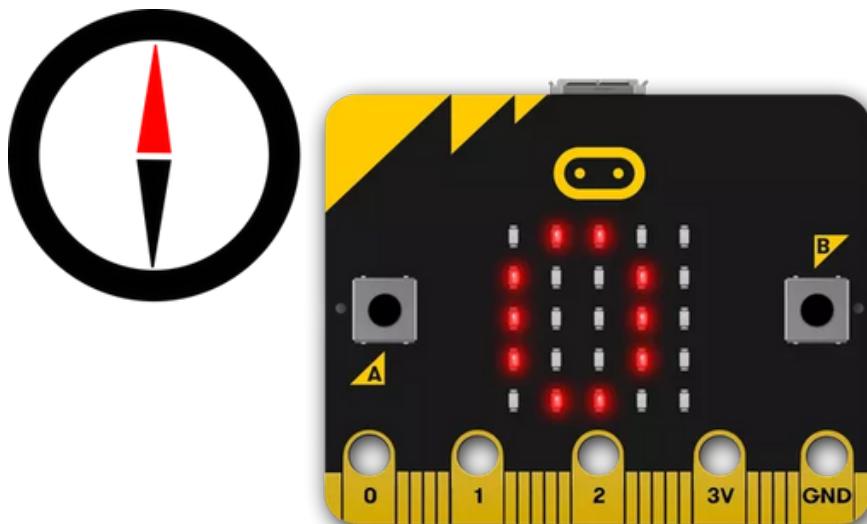
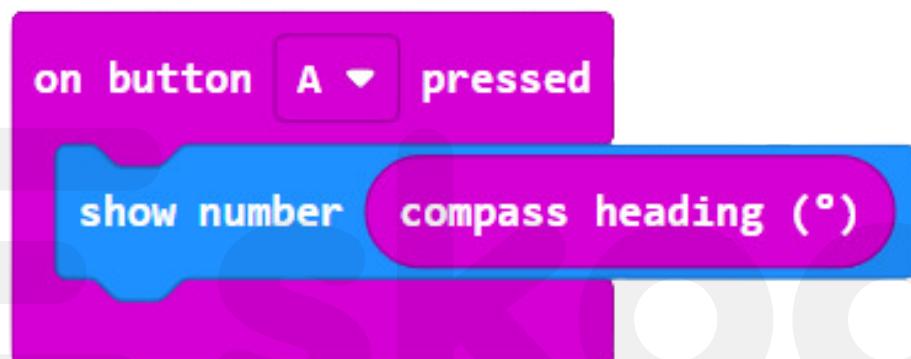
## Project 6: Magnetometer

**Aim:** Turn your microbit into a simple compass that shows its bearing from magnetic North in degrees.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



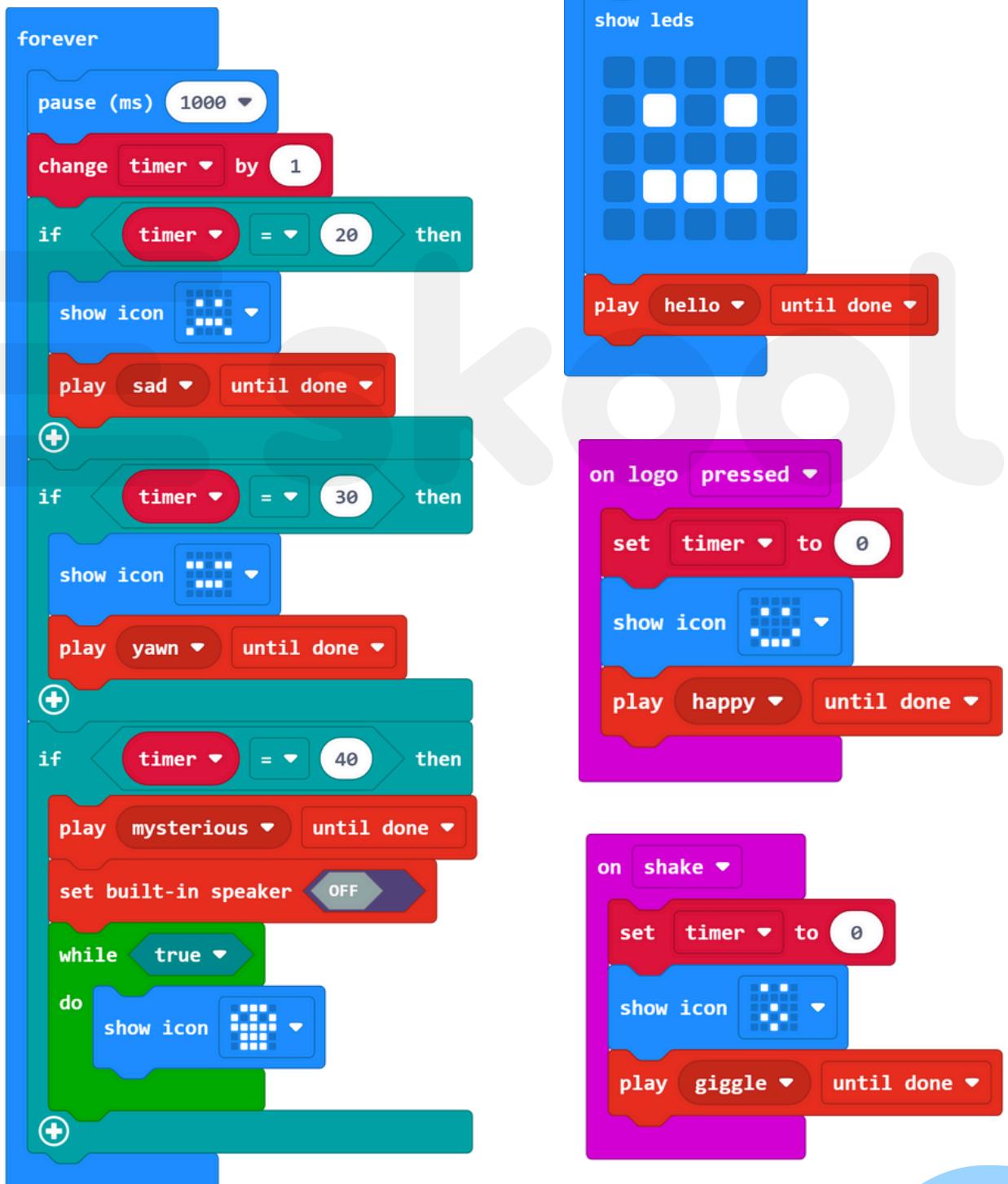
## Project 7: Microbit Pet

**Aim:** Code your own electronic pet and customise it to make it your own. The micro:bit's built-in speaker makes it even more fun with its expressive sounds.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



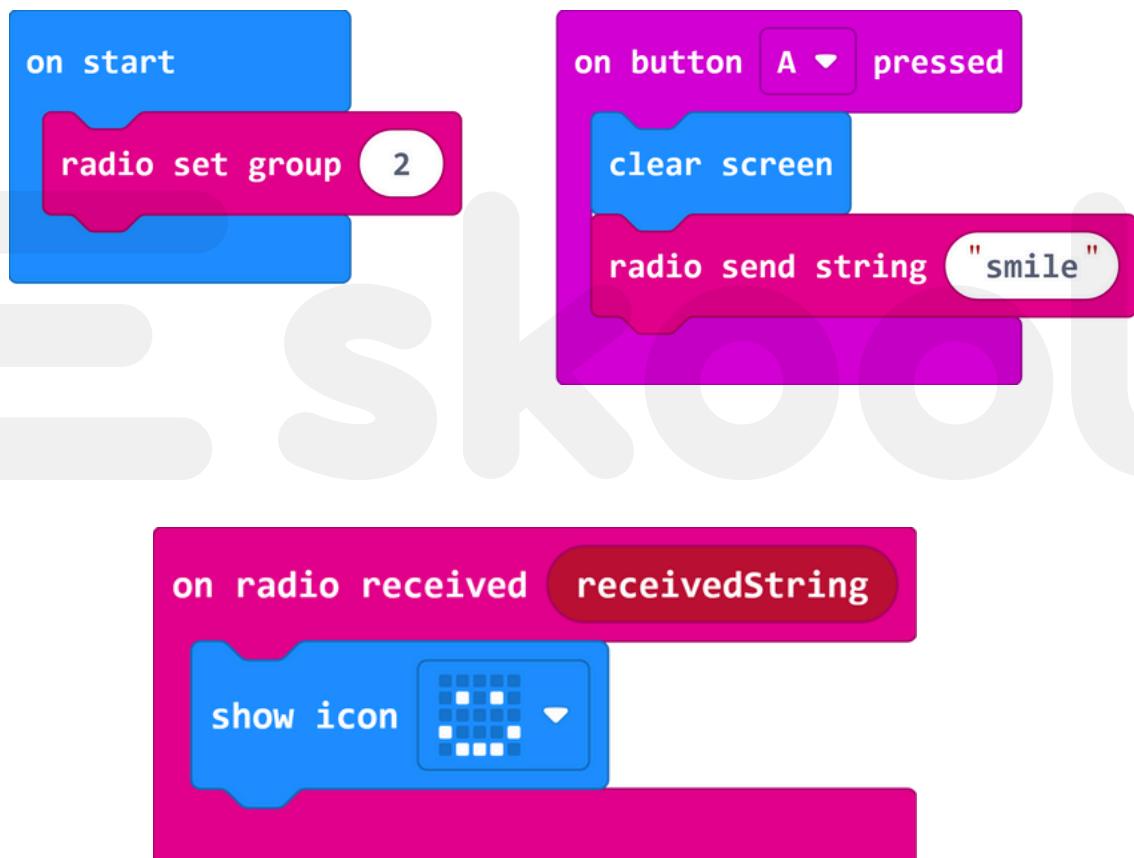
## Project 8: Radio - Transmission

**Aim:** Create a program using radio to send a smile from one microbit to another to support a friend.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



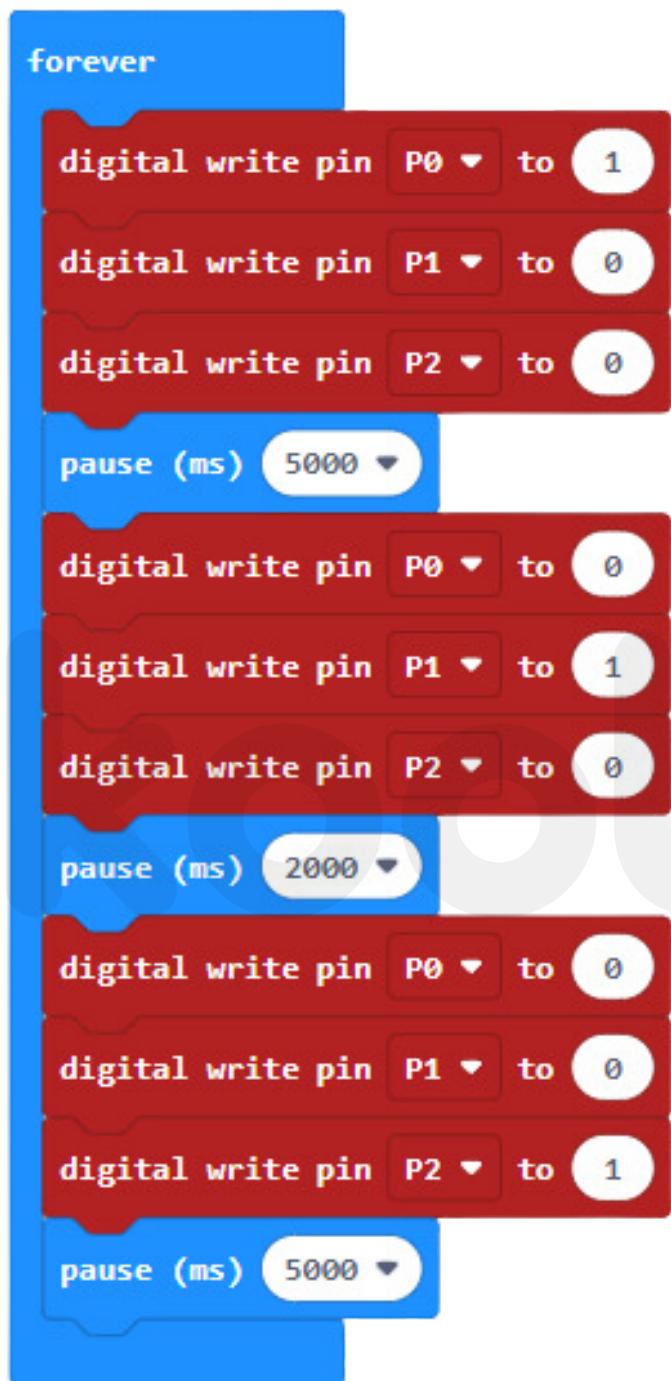
## Project 9: Digital Pin - Traffic Light System

**Aim:** In this challenge we are going to create and program a traffic light using leds and the BBC micro bit.

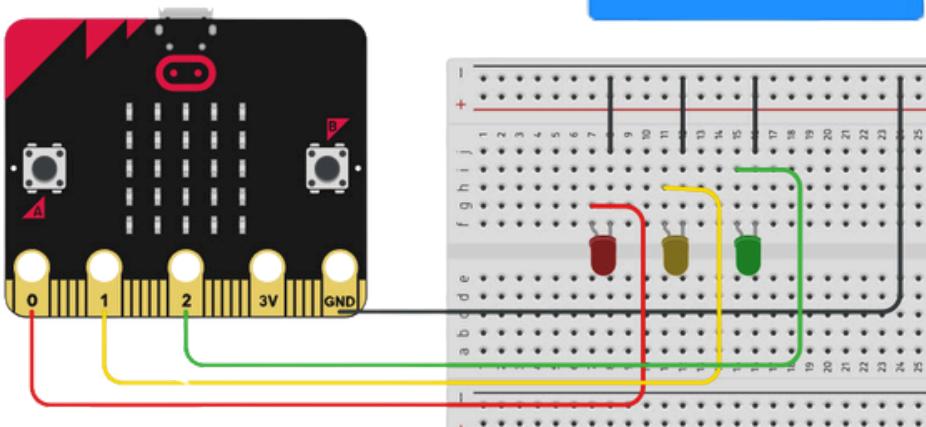
### Materials Required:

- Microbit
- Power source
- USB cable
- LEDs (Green, Yellow and Red)
- Breadboard
- Crocodile clips
- Jumper cables

### Block code:



### Circuit Diagram:



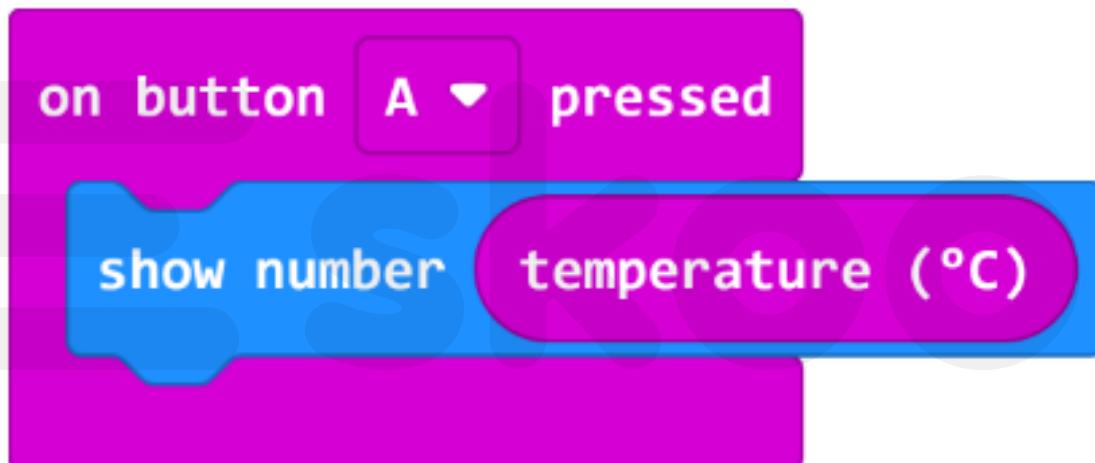
## Project 10: Temperature Sensor

**Aim:** In this challenge, we are going to show how hot or cold your microbit is using the built-in temperature sensor.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



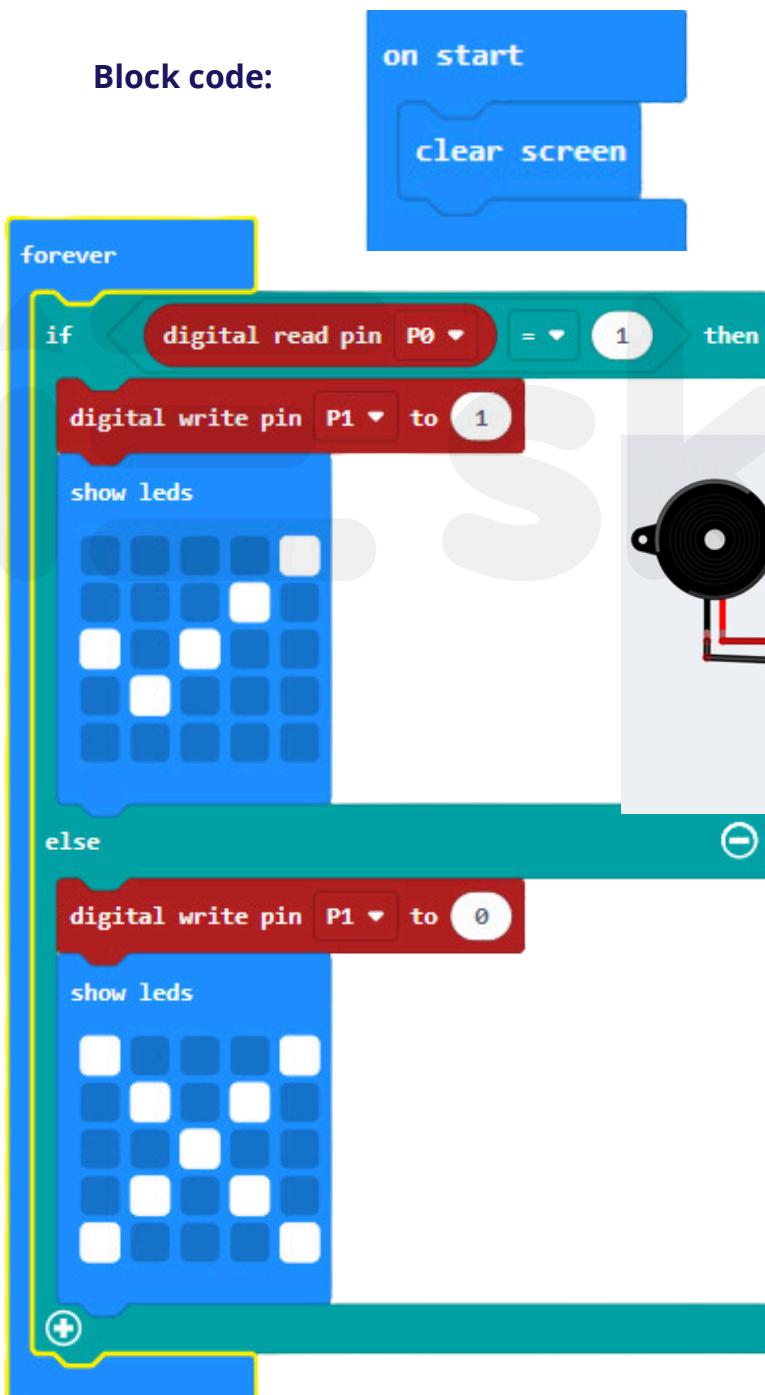
## Project 11: PIR

**Aim:** In this challenge, we are going to build a wireless intruder alarm using a movement detector.

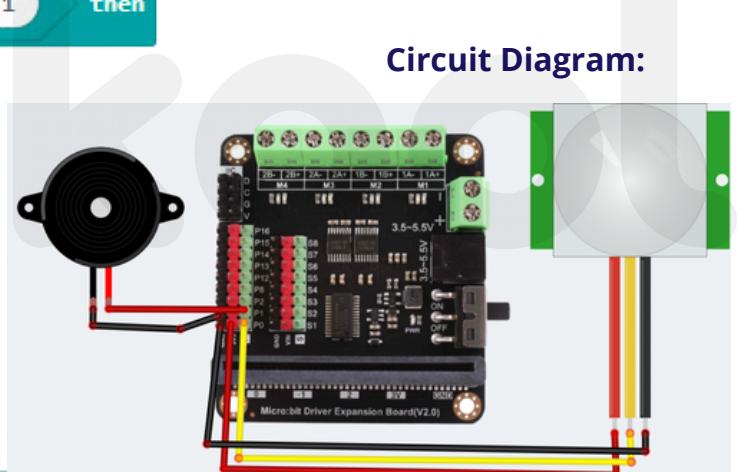
### Materials Required:

- Microbit
- Power source
- USB cable
- PIR (passive infrared) sensor
- Driver board
- Optional headphones, buzzer or speaker and crocodile clip

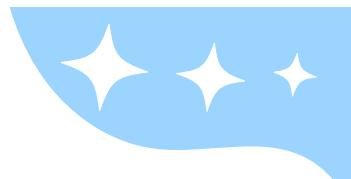
### Block code:



### Circuit Diagram:



## Part 5



### Project 1: Light up

**Aim:** Light up your microbit

#### Materials Required:

- Microbit
- Power source
- USB cable

#### Block code:



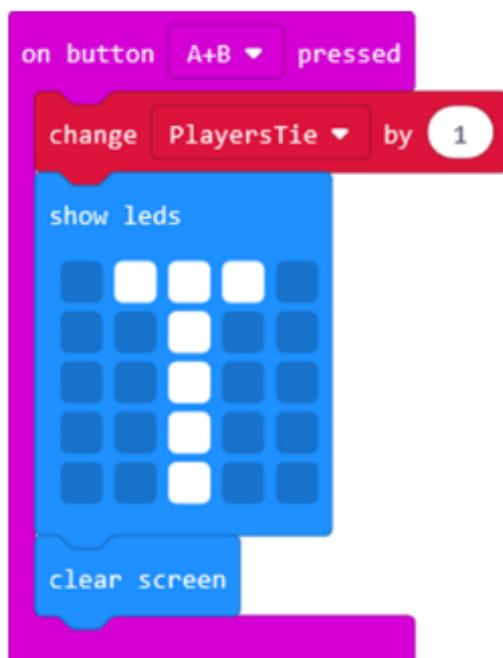
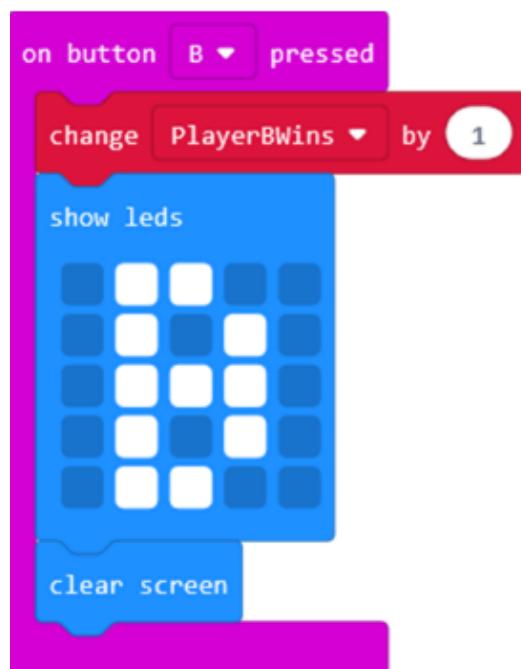
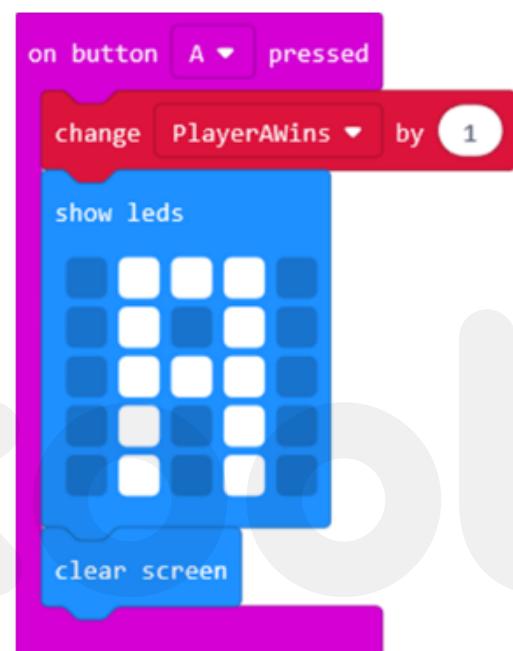
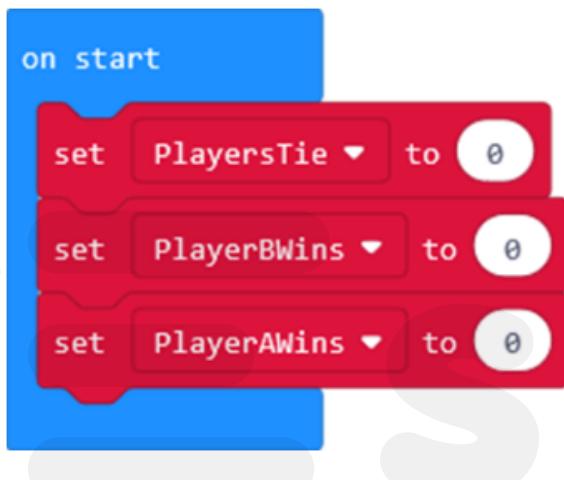
## Project 2: Variables

**Aim:** Creating a Scorekeeper using Microbit Make Code.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



# Project 3: Arithmetic and Assignment Operators

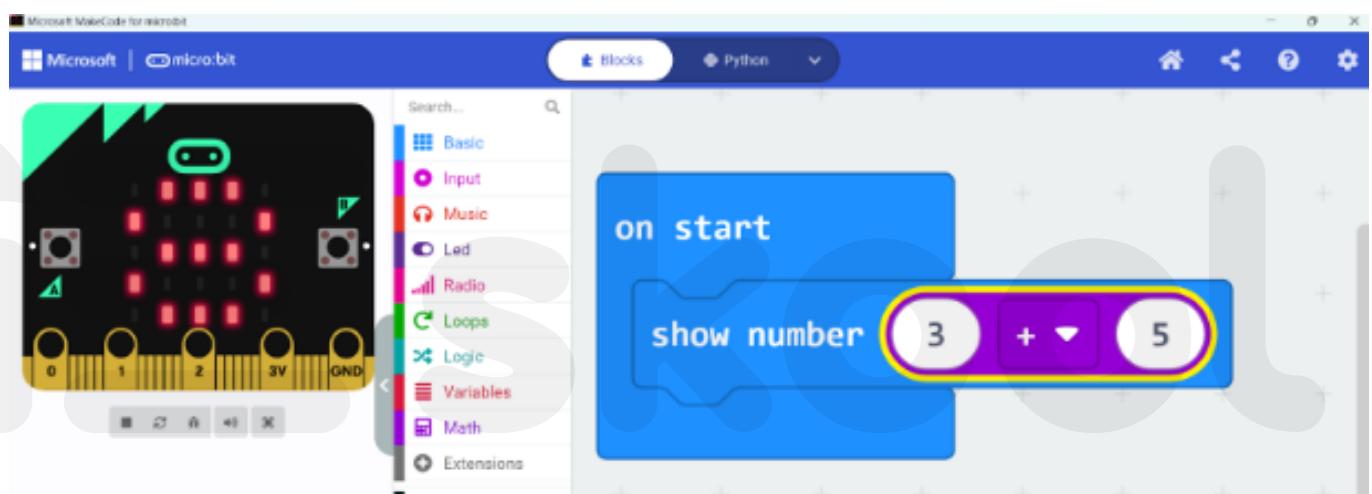
**Aim:** Creating a Simple calculator using Microbit Make Code.

## Materials Required:

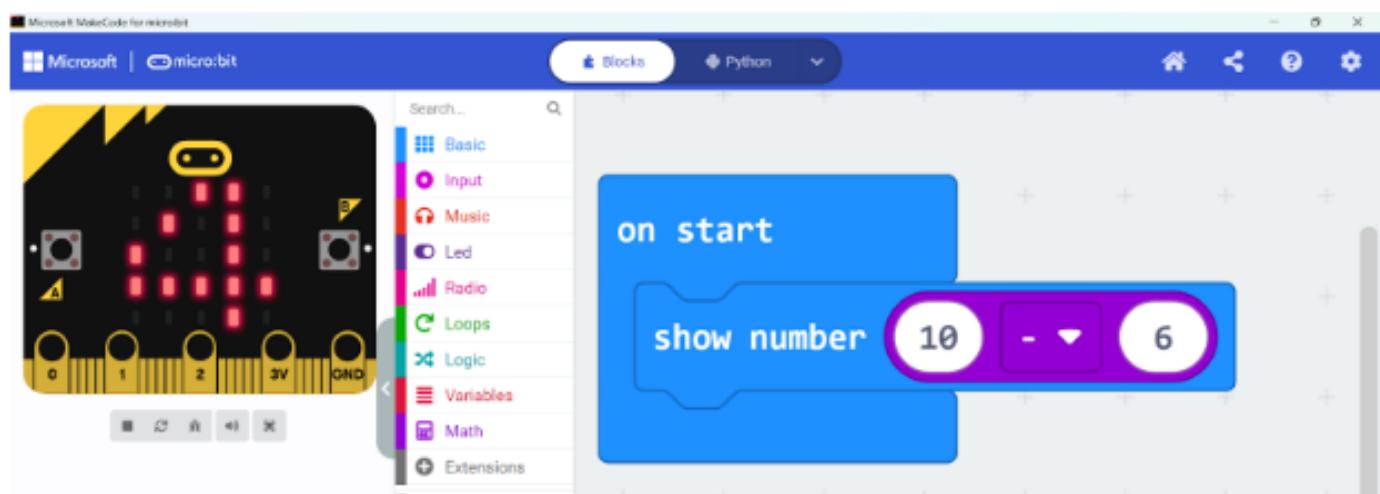
- Microbit
- Power source
- USB cable

## Block code:

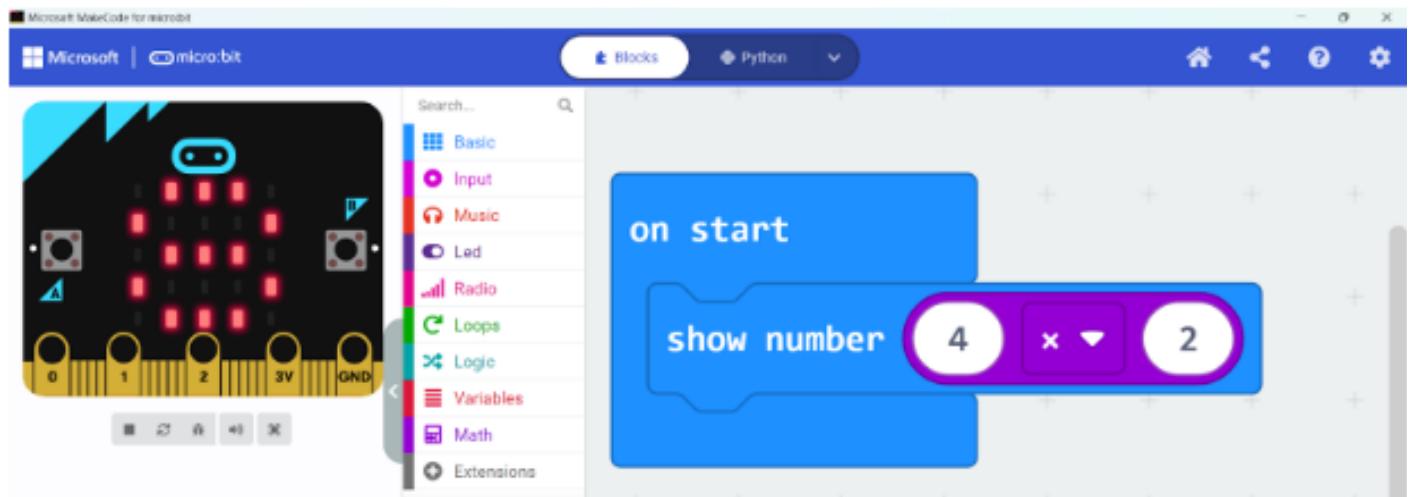
### Addition



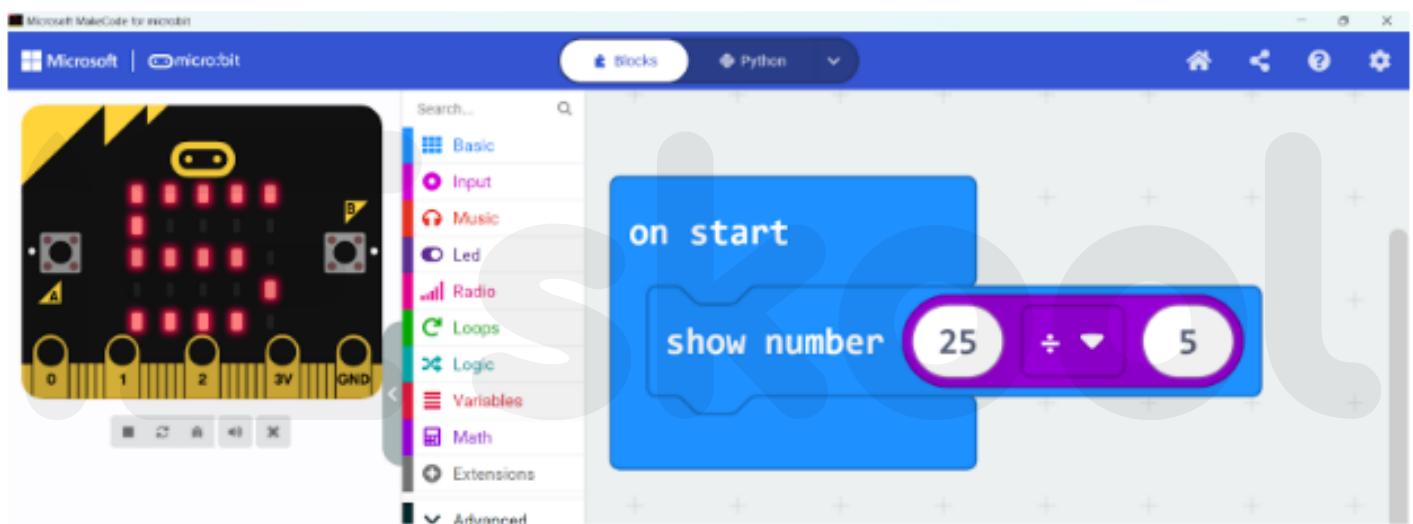
### Subtraction



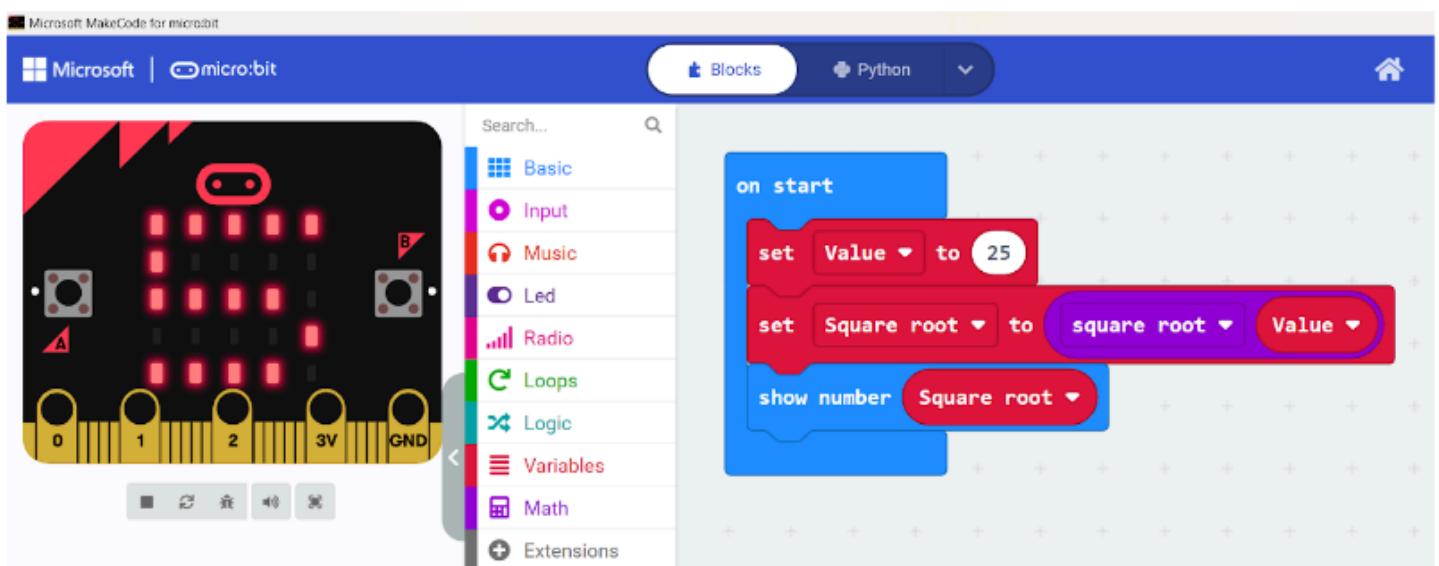
## Multiplication



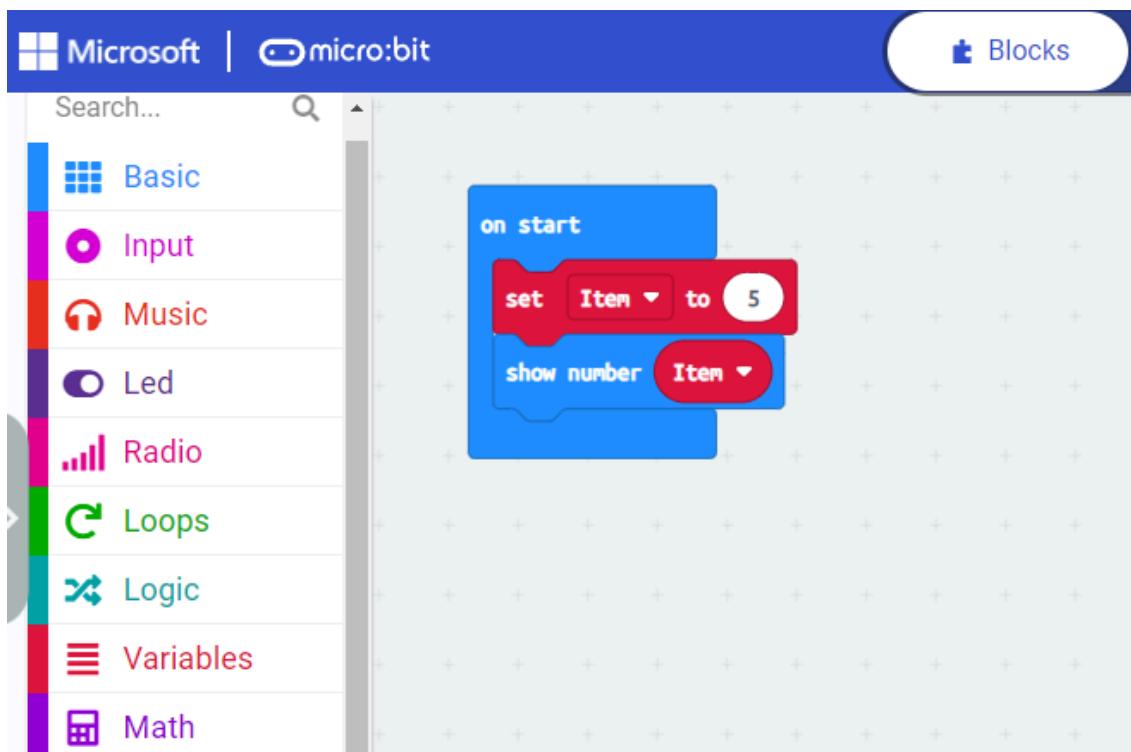
## Division



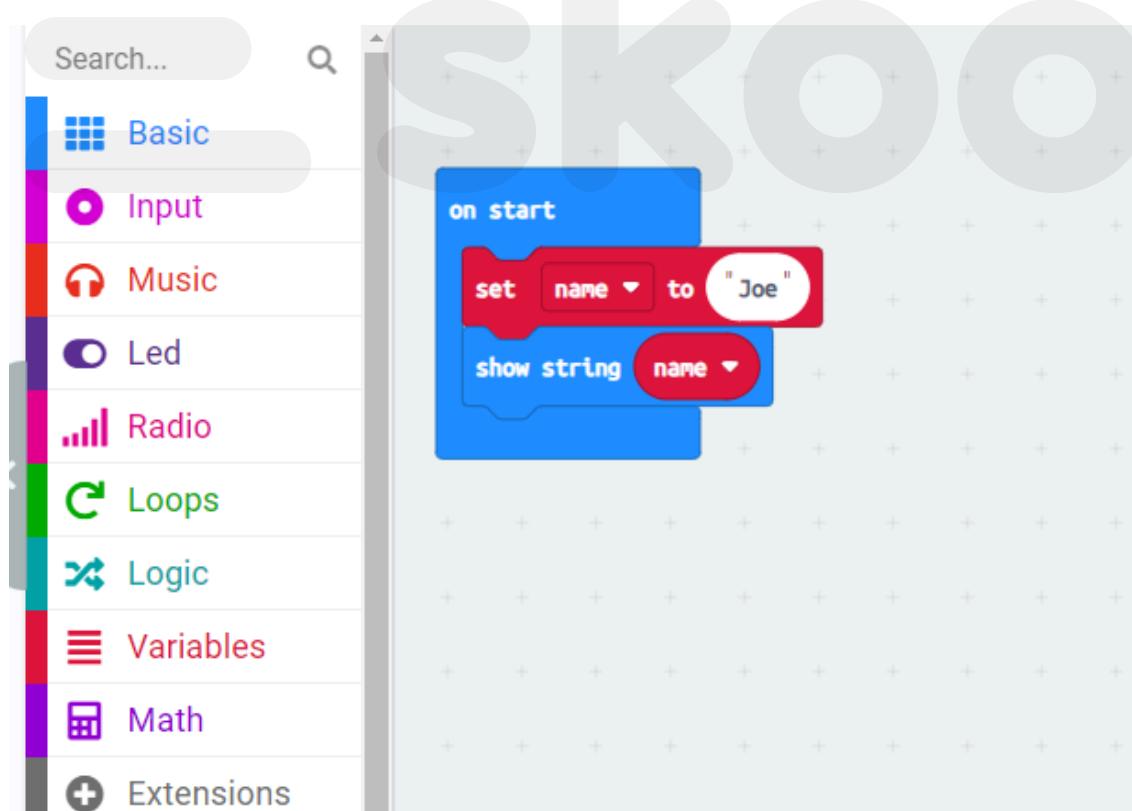
## calculator for square root



## Storing numbers in variables



## Storing strings in variables



## Project 4: Motor Driver - LEDS control

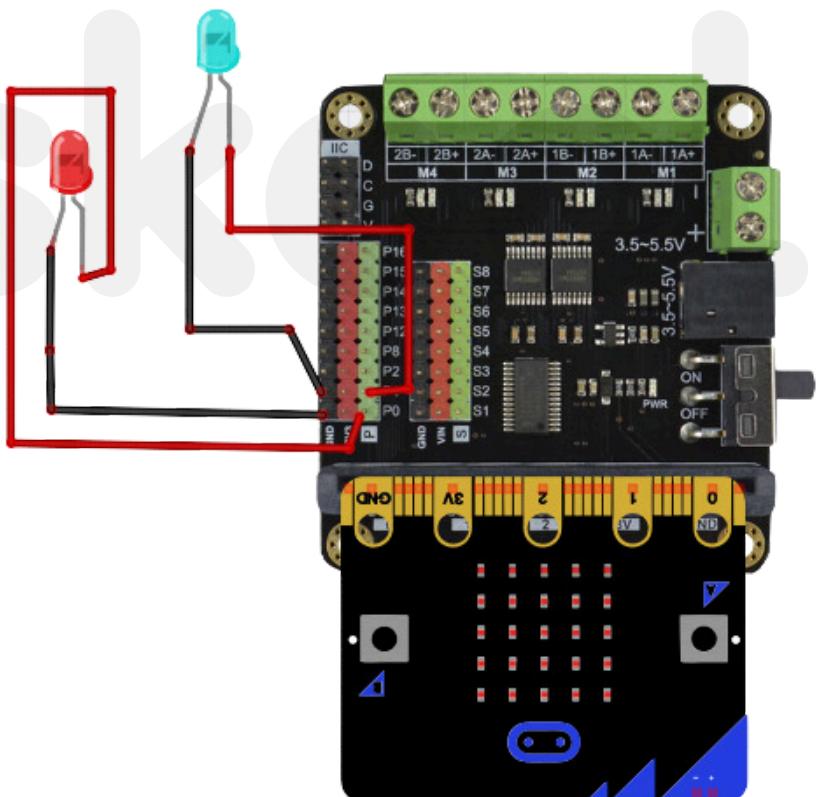
**Aim:** We will control the lighting of an LEDs using microbit driver board.

### Materials Required:

- Microbit
- Power source
- USB cable
- Two LEDs
- Jumper wires (Male to Male)

### Block code:

### Circuit Diagram:



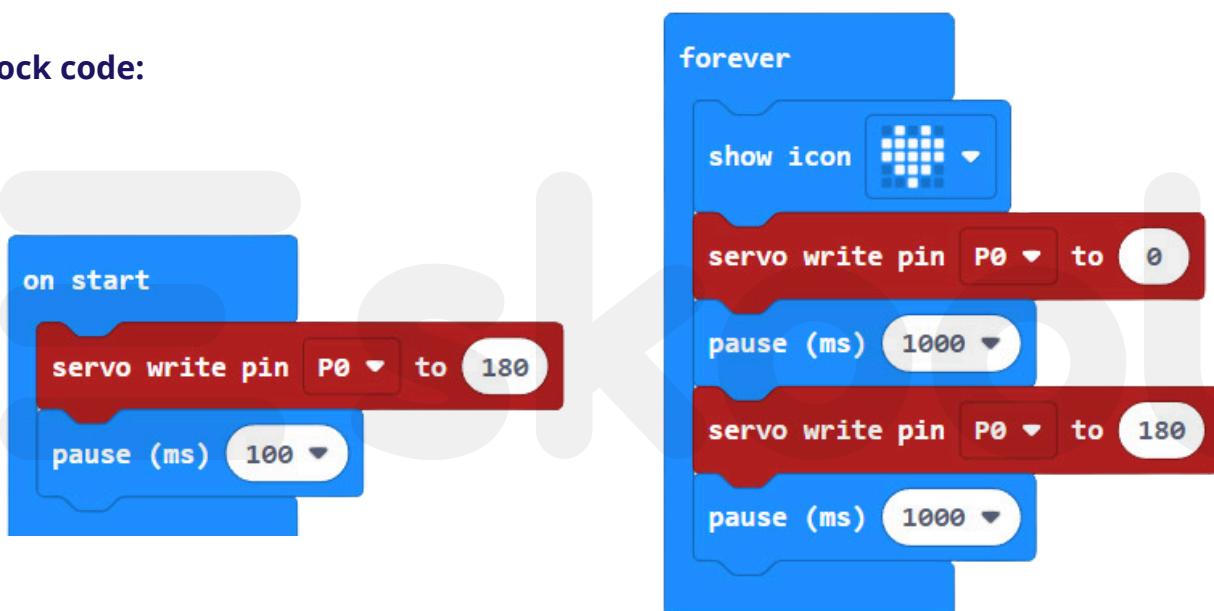
## Project 5: Microbit with Servo Motor

**Aim:** In this activity we are going to see how to control servo motor using BBC microbit.

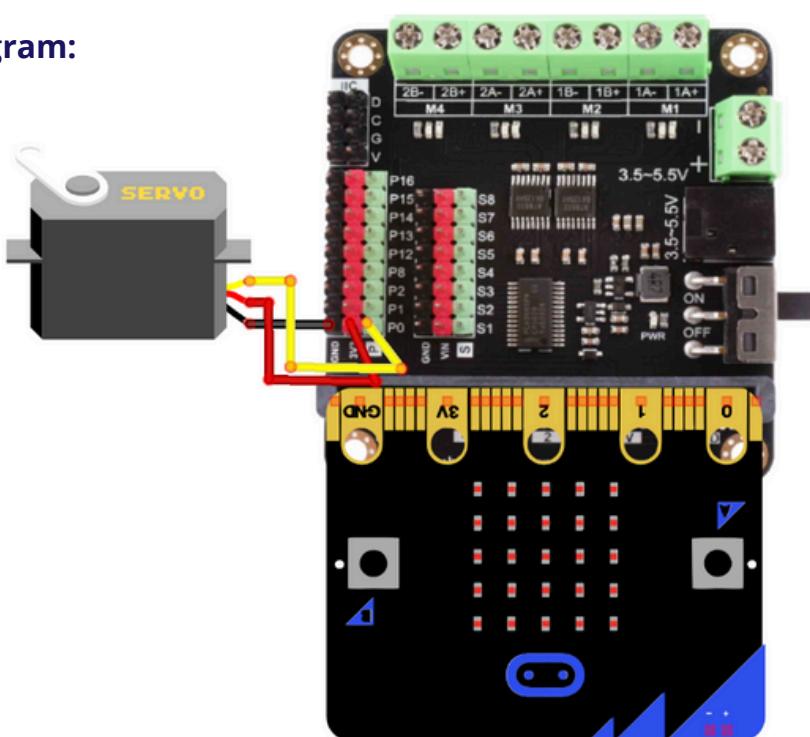
### Materials Required:

- Microbit
- Power source
- USB cable
- Servo Motor
- Driver board
- Jumper cables(M to F)
- Powerbank with connecting cable

### Block code:



### Circuit Diagram:



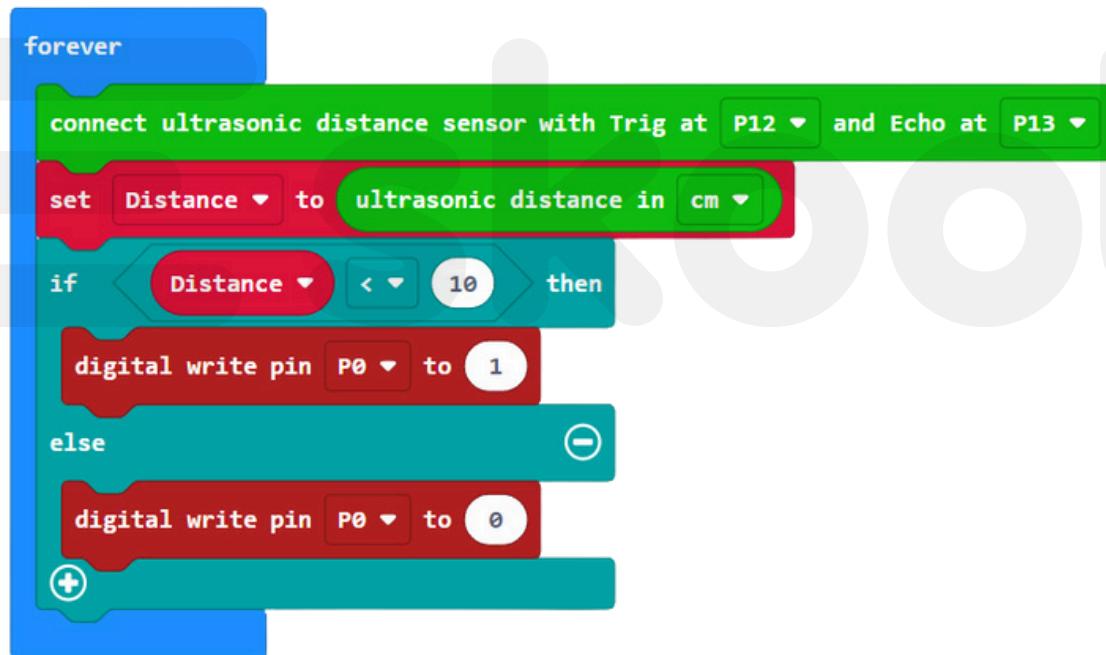
## Project 6: Alarm System using ultrasonic sensor

**Aim:** In this activity, we are going to see how to make an alarm system using an ultrasonic sensor.

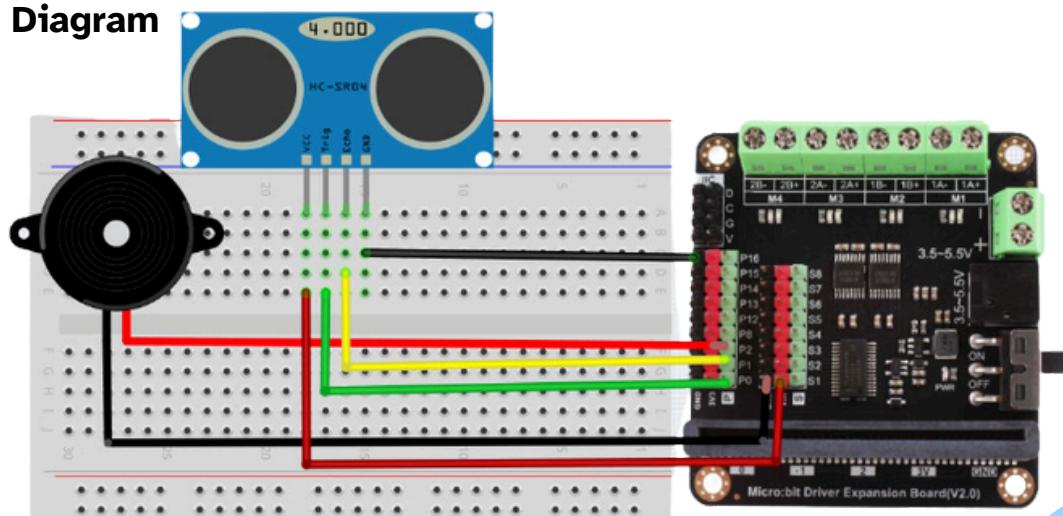
### Materials Required:

- Microbit
- Power source
- Micro-bit driver board
- Ultrasound sensor
- connecting wires
- Buzzer
- Breadboard

### Block code:



### Circuit Diagram



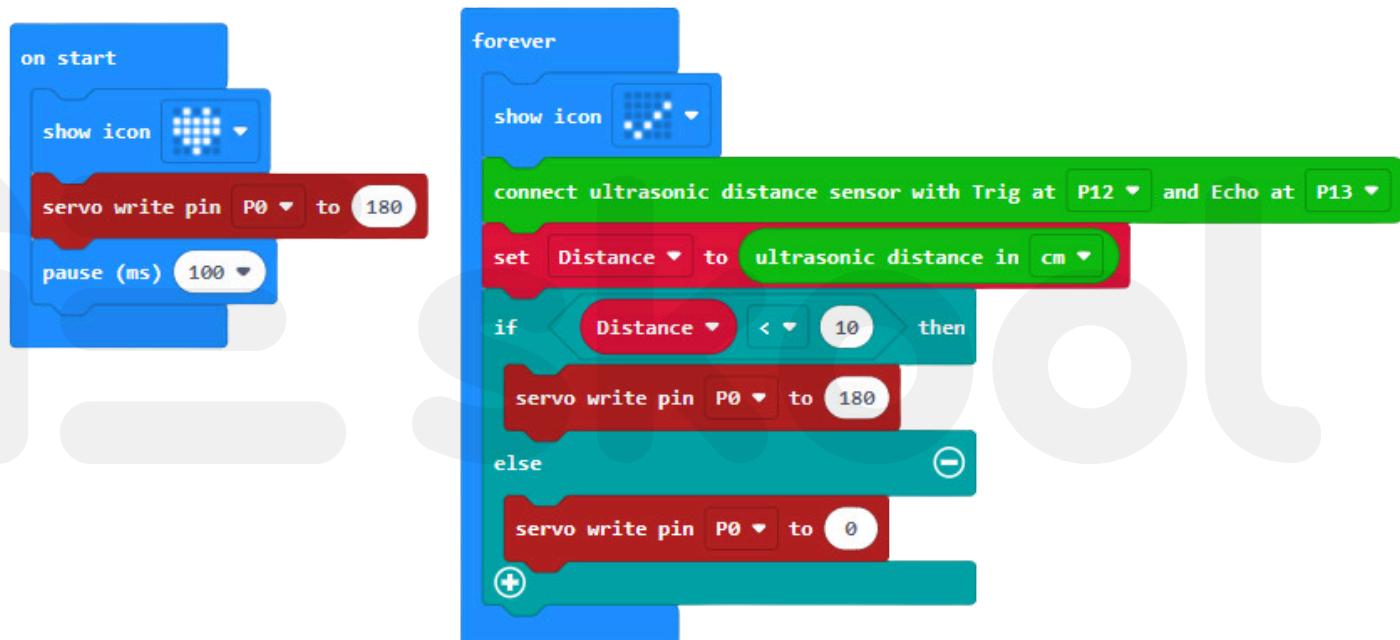
# Project 7: Smart Dustbin

**Aim:** In this activity, we are going to make a smart dustbin.

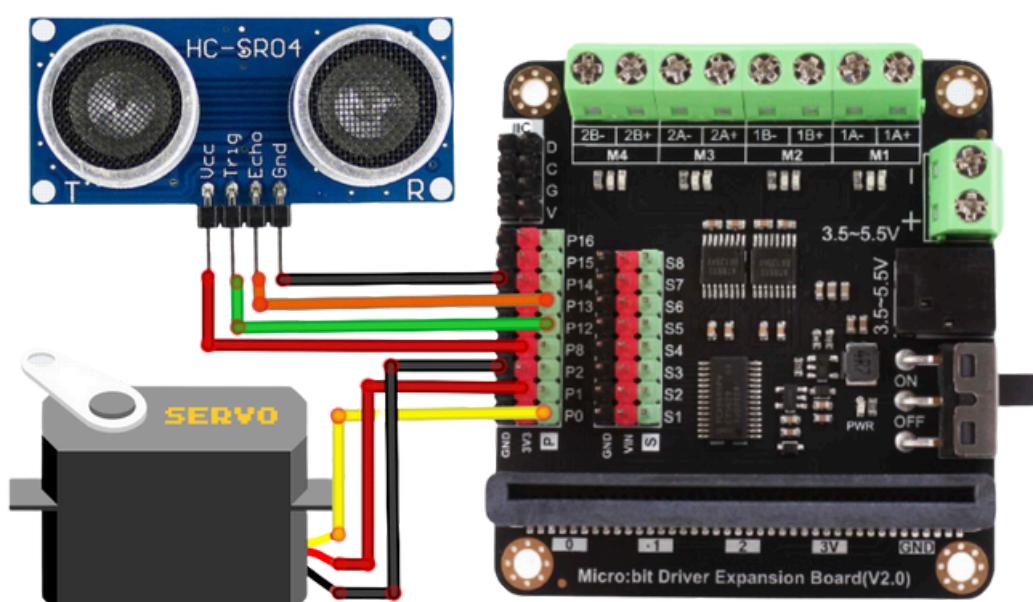
## Materials Required:

- Microbit
- Power source
- USB cable
- Ultrasound sensor
- Buzzer
- Servomotor

## Block code:



## Circuit Diagram



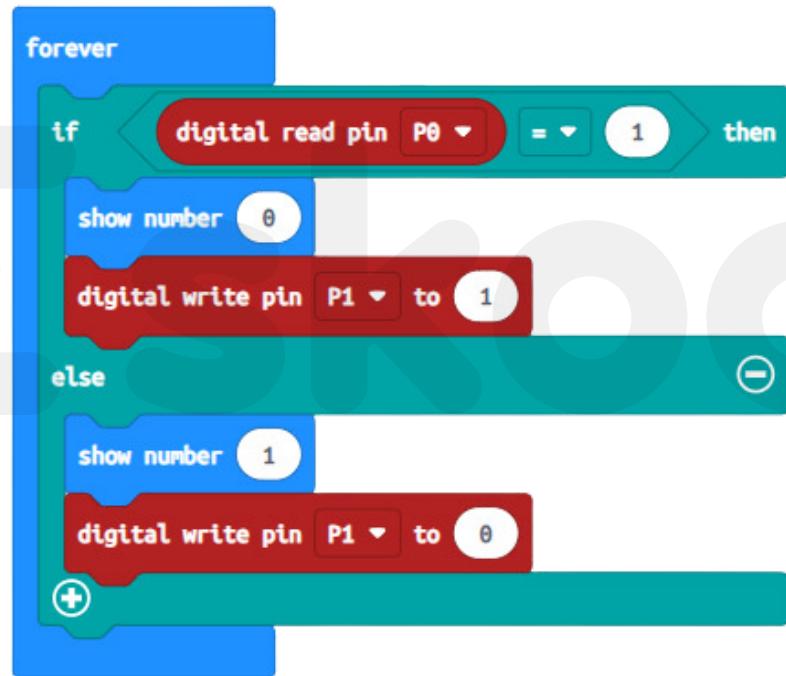
## Project 8: IR sensor with Microbit

**Aim:** In this activity, we are going to see how to control led using an IR sensor

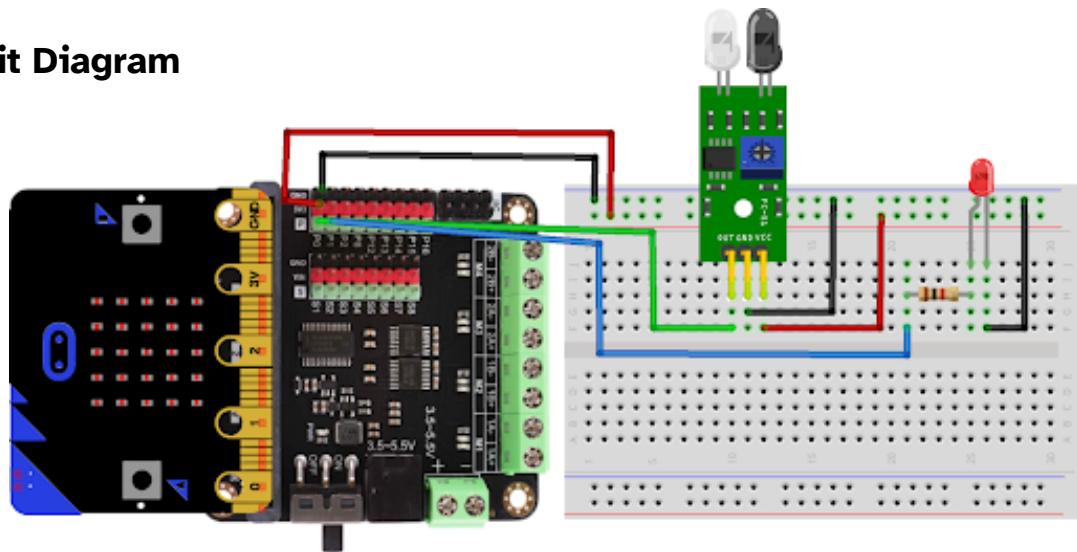
### Materials Required:

- Microbit
- Power source
- USB cable
- IR Sensor
- connecting wires
- LED
- Breadboard

### Block code:



### Circuit Diagram



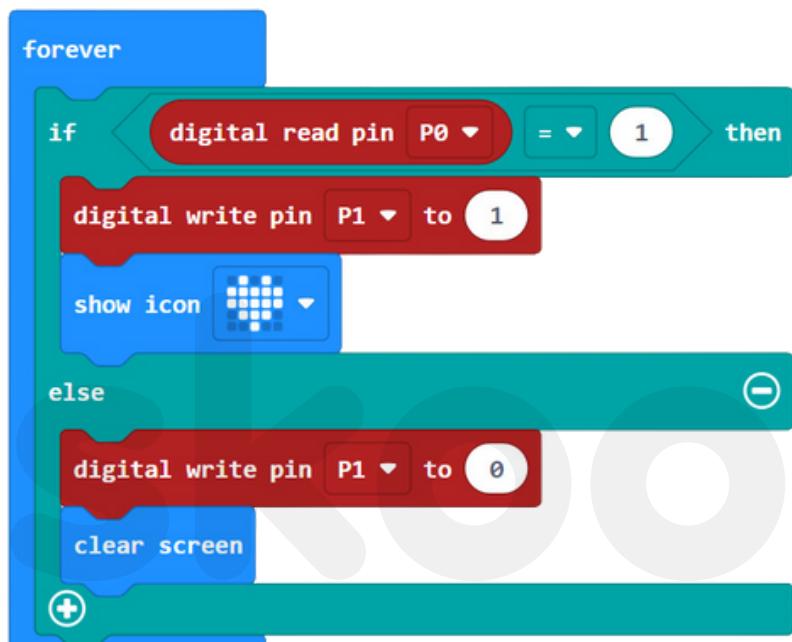
# Project 9: Automatic Light system using LDR

**Aim:** In this activity, we will create an automatic light system using the LDR module.

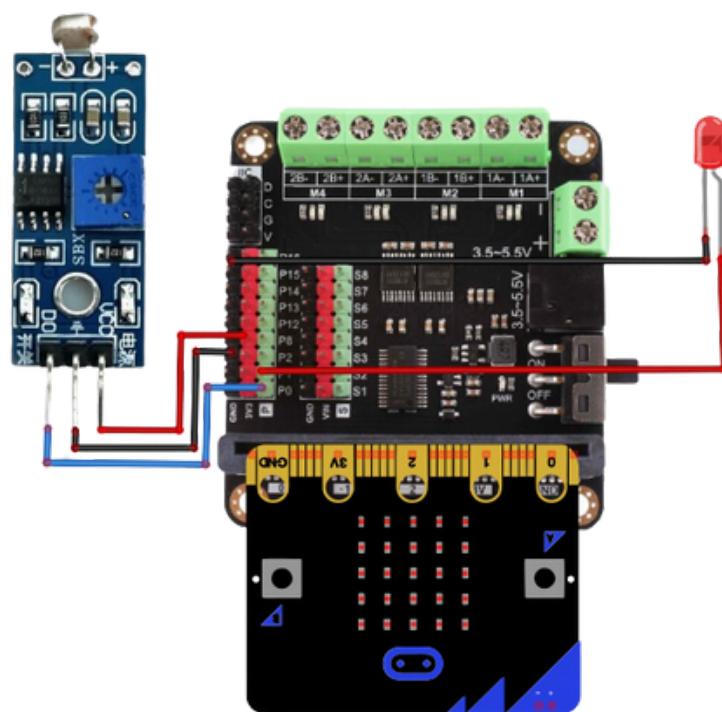
## **Materials Required:**

- Microbit
  - Power source
  - USB cable
  - Microbit driver board
  - LDR Module
  - LED

## Block code:



## Circuit Diagram



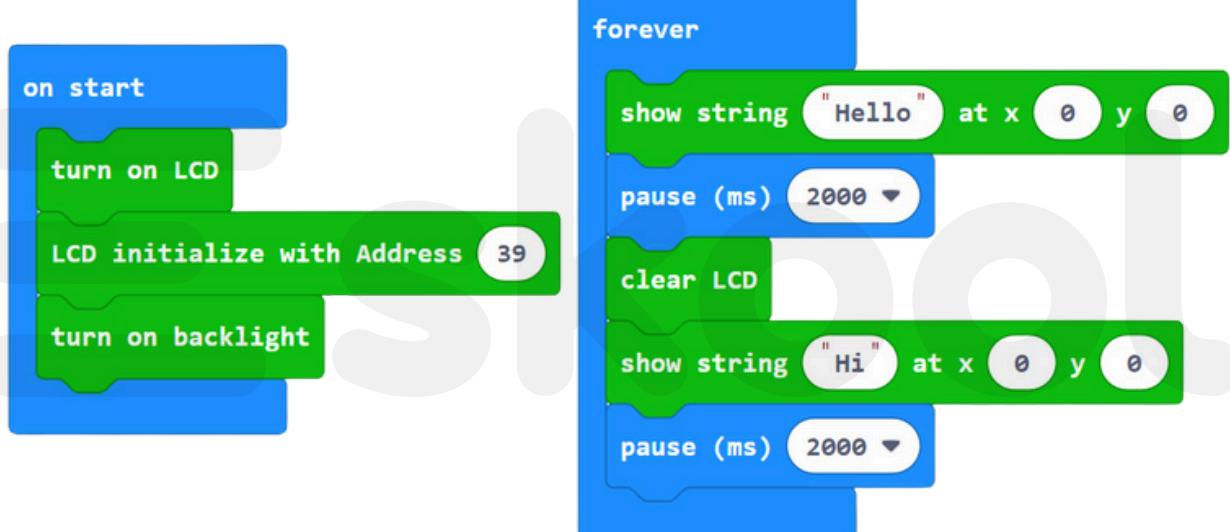
## Project 10: LCD Display with I2c Module

**Aim:** To design and implement an LCD display system using an I2C module, enabling efficient and reliable communication for text-based display applications

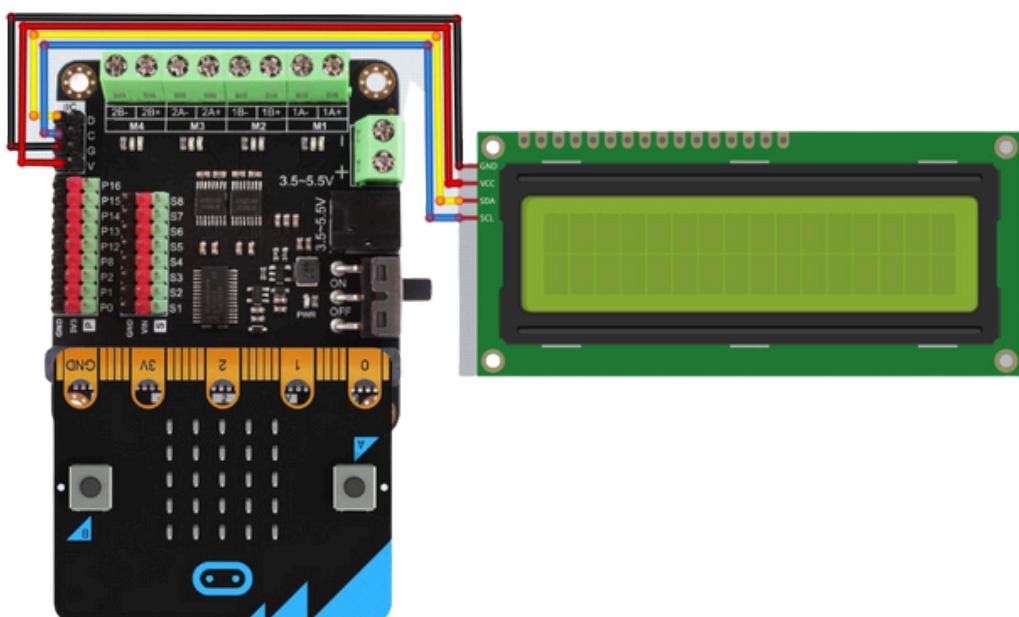
### Materials Required:

- Microbit
- Power source
- USB cable
- LCD Display 16x2 with I2C module
- Jumper wires
- Power bank with cable

### Block code:



### Circuit Diagram



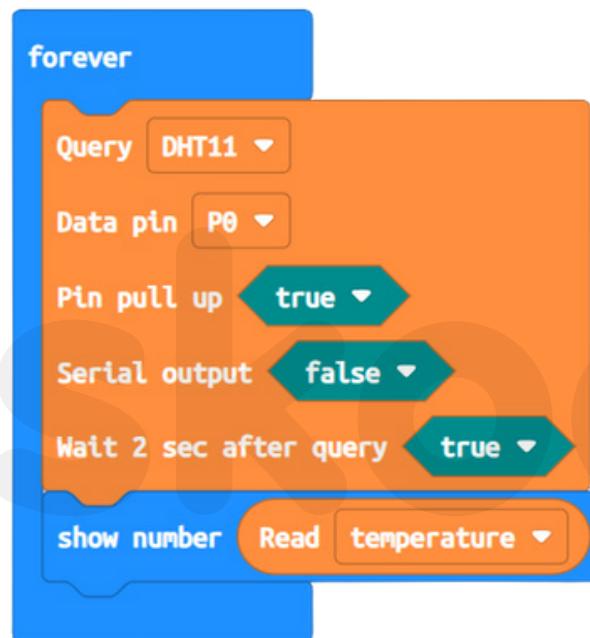
## Project 11: Real Time Temperature module

**Aim:** We are going to learn about how to build the Real-Time Temperature module  
DHT11 Sensor & microbit

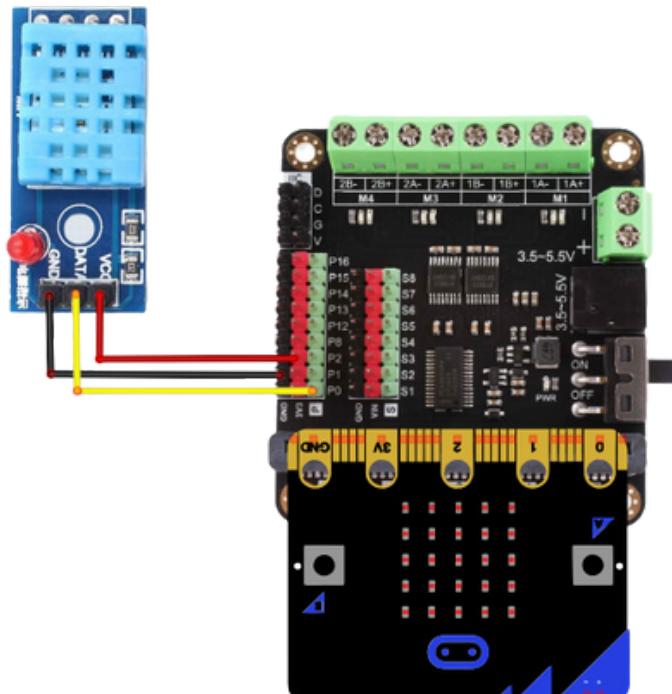
### Materials Required:

- Microbit
- Power source
- USB cable
- Micro-bit driver board
- DHT11 Sensor Module
- Connecting wires

### Block code:



### Circuit Diagram



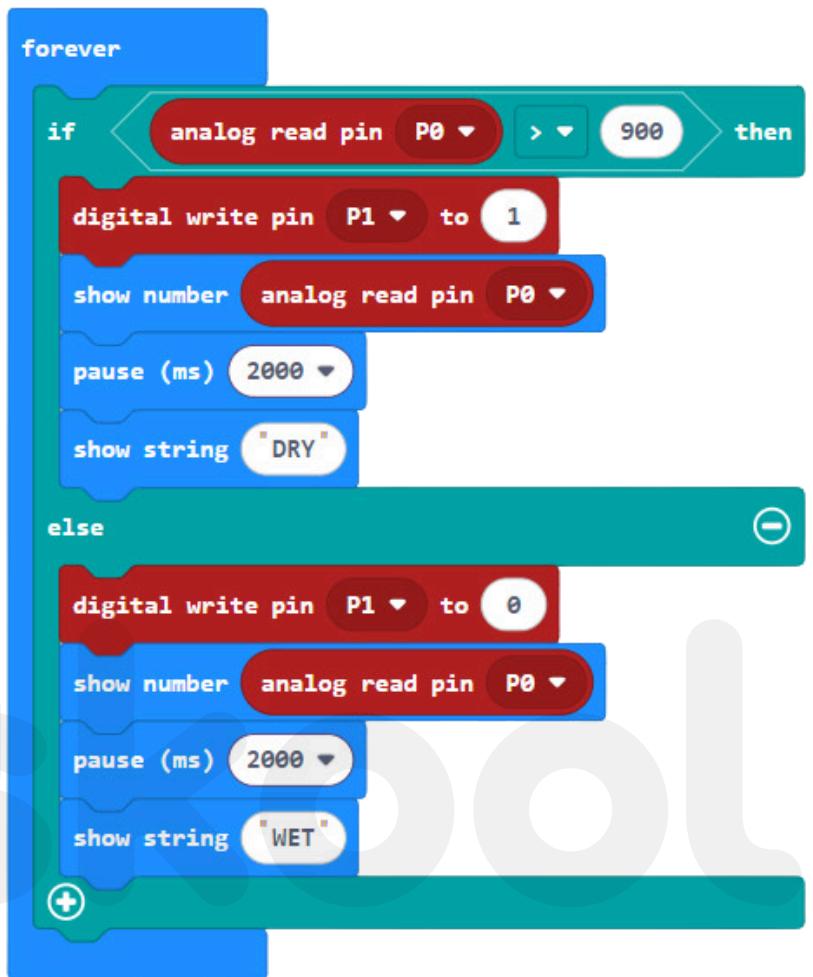
## Project 12: Automatic water system for Plants

**Aim:** In this activity, we are going to create an automatic water system for plants

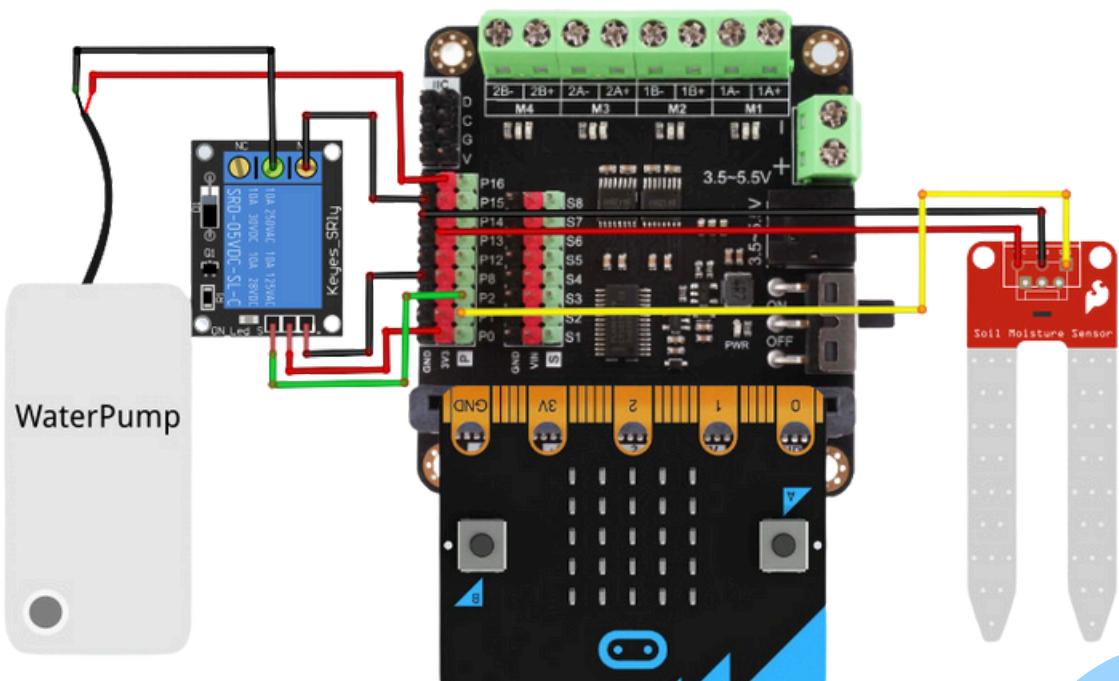
### Materials Required:

- Microbit
- Power source
- USB cable
- Soil Moisture Sensor
- Water Pump Module
- Relay
- soil and water

### Block code:



### Circuit Diagram



## Part 6

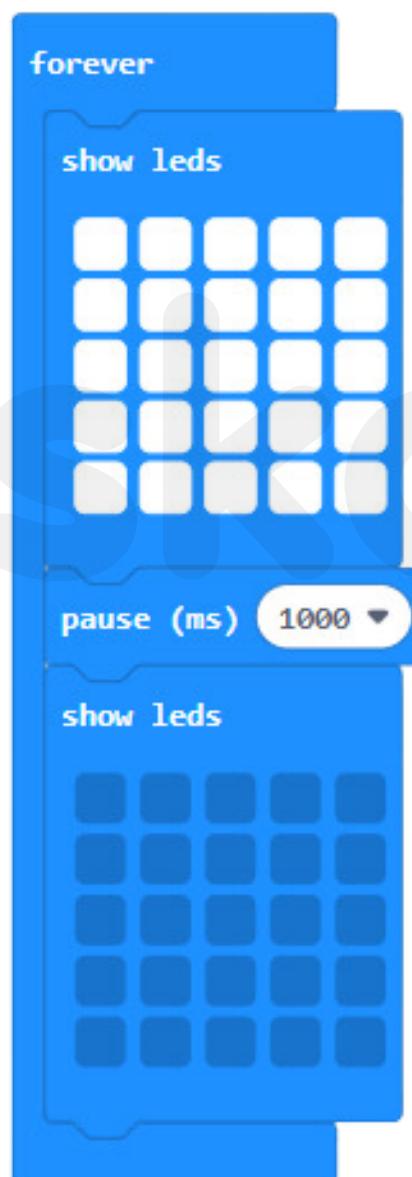
### Project 1: Light up

**Aim:** Light up your microbit

#### Materials Required:

- Microbit
- Power source
- USB cable

#### Block code:



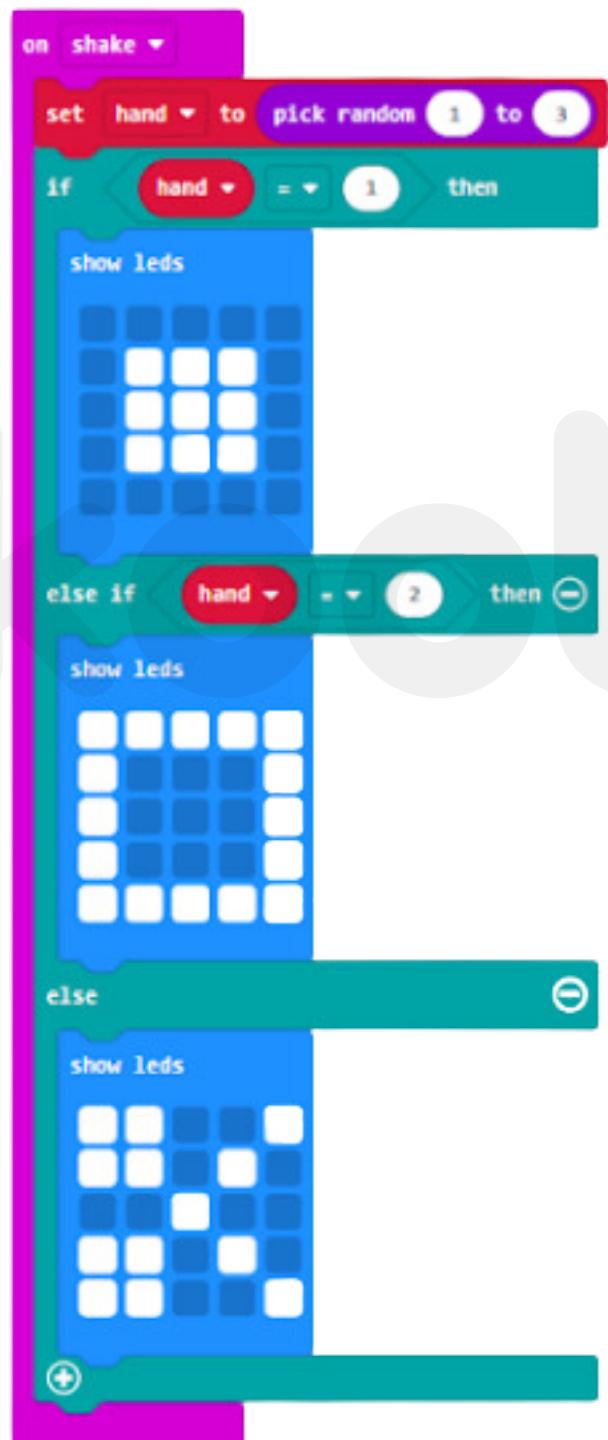
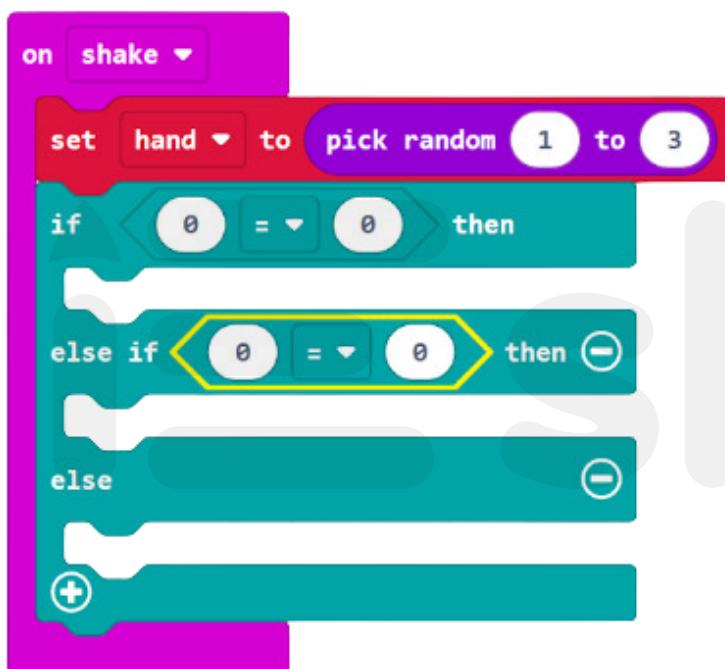
## Project 2: Conditional Statement

**Aim:** Create a Game Rock, Paper, and Scissors.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



# Project 3: Logical operators

## Activity - AND Operator

**Aim:** In this activity, we are going to see how to control the LED matrix using an AND operator.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



### Output Truth Table

set Inputs to array of false false
set Inputs to array of false true
set Inputs to array of true false
set Inputs to array of true true

A	B	$A \cdot B$
false	false	show icon grid
false	true	show icon plus
true	false	show icon plus
true	true	show icon grid

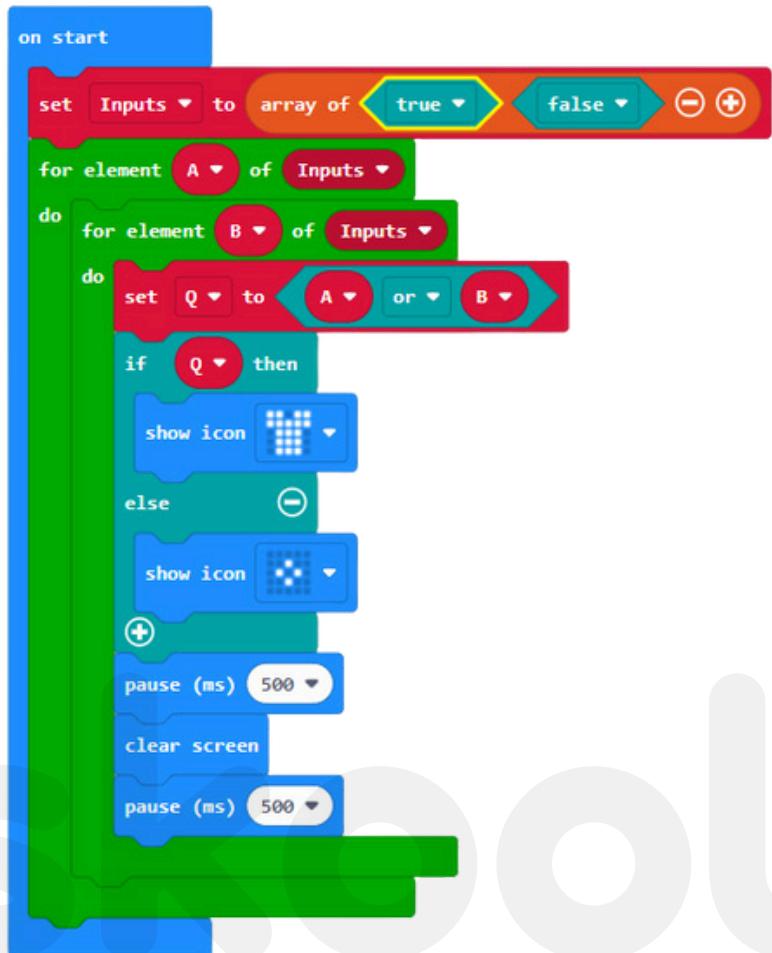
## Activity - OR Operator

**Aim:** In this activity, we are going to see how to control the LED matrix using an OR operator.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



### Output Truth Table

--	--	--	--

A	B	A + B
false	false	
false	true	
true	false	
true	true	

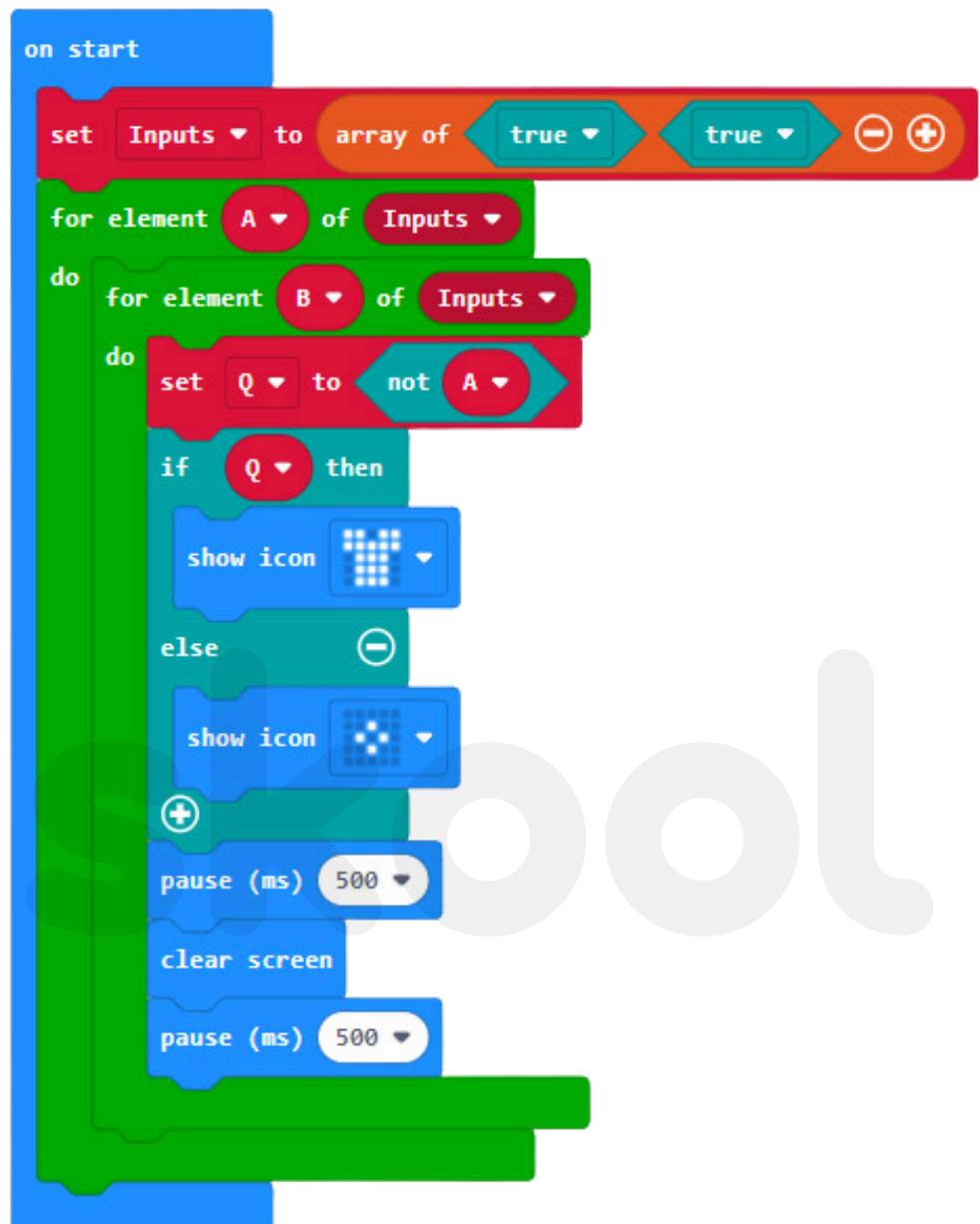
## Activity - NOT Operator

**Aim:** In this activity, we are going to see how to control the LED matrix using an NOT operator.

### Materials Required:

- Microbit
- Power source
- USB cable

### Block code:



### Output Truth Table

Two separate Scratch blocks are shown for setting the 'Inputs' array. The top block sets it to [true, true] using the 'set [Inputs v] to [array of <true v> <true v> - +]' block. The bottom block sets it to [false, false] using the same block with different values.

A	$\sim A$
false	
true	

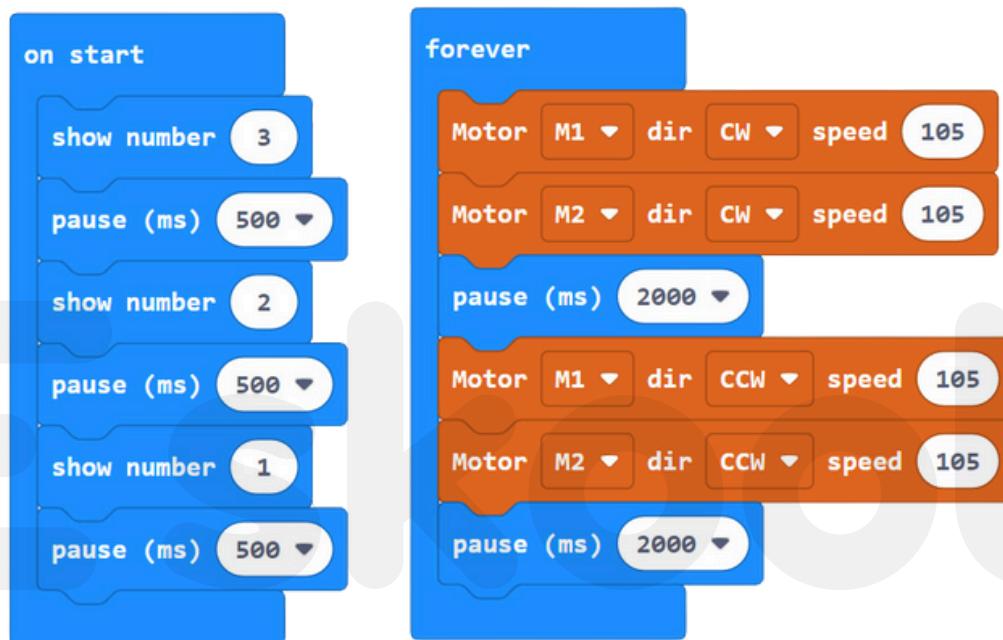
## Project 4: Auto Directional Robot

**Aim:** This activity will show how to control a DC motor using a micro-bit driver board.

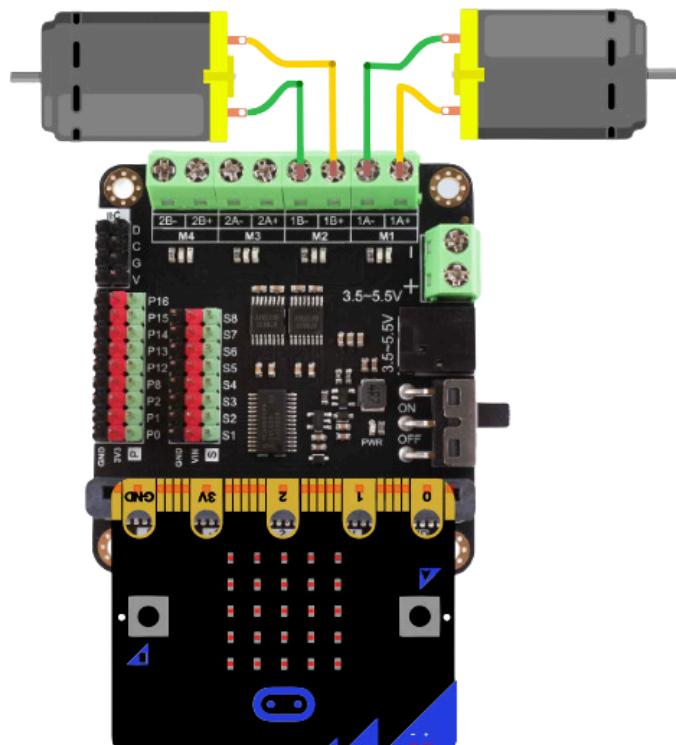
### Materials Required:

- Microbit
- Power source
- USB cable
- Microbit driver board
- BO DC Motor & connecting wires

### Block code:



### Circuit Diagram



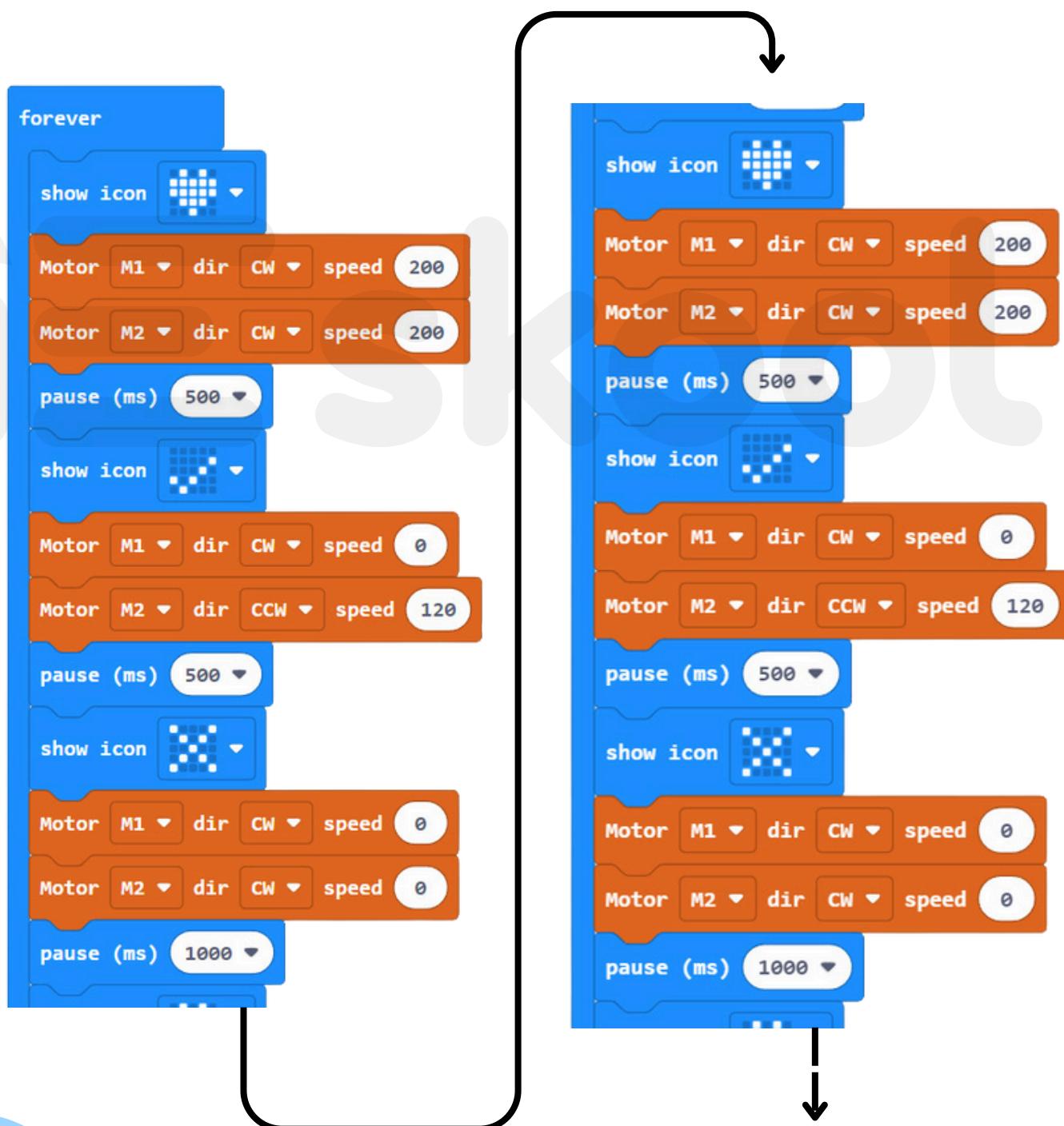
## Project 5: Go in the path robot

**Aim:** To design an autonomous path-following robot with obstacle avoidance capabilities

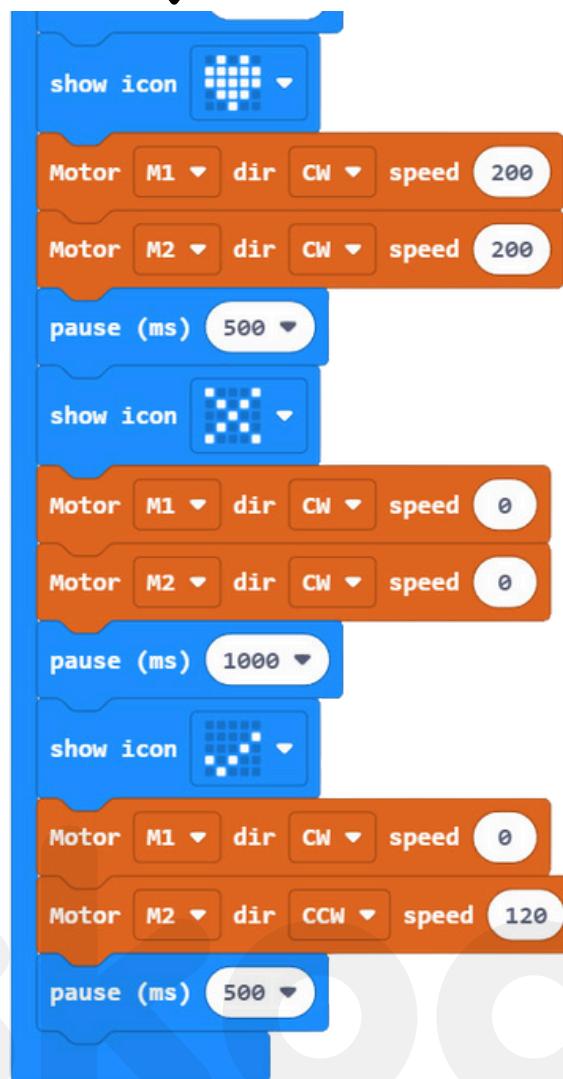
### Materials Required:

- Microbit
- Power source
- USB cable

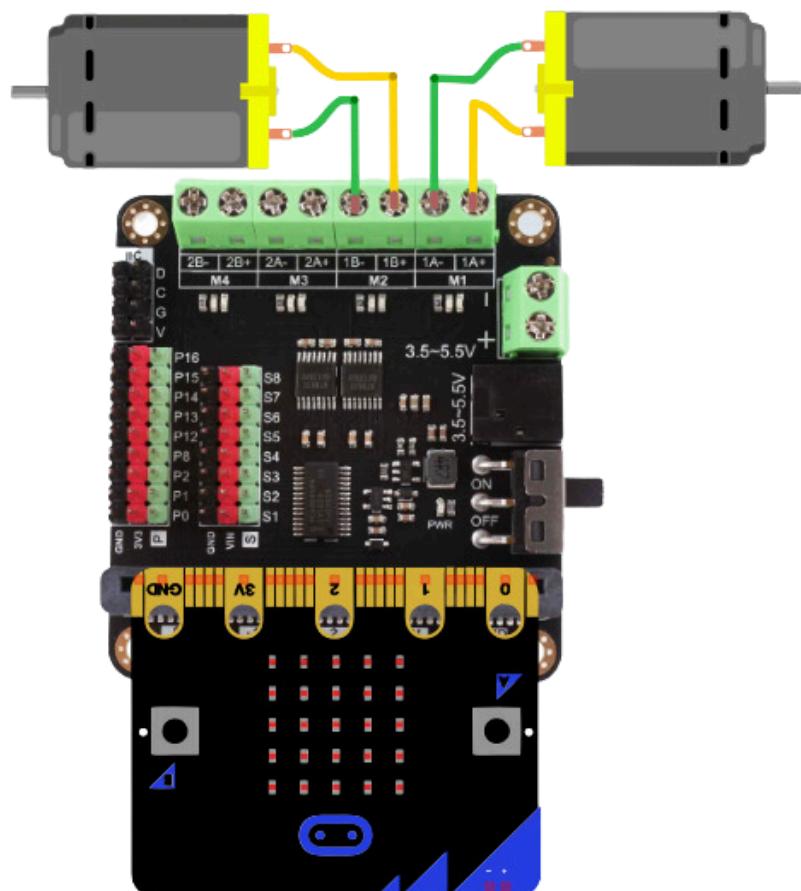
### Block code:



Block code:



Circuit Diagram



## Project 6: Obstacle avoider robot

**Aim:** In this activity, we are going to see how to make an obstacle avoider robot

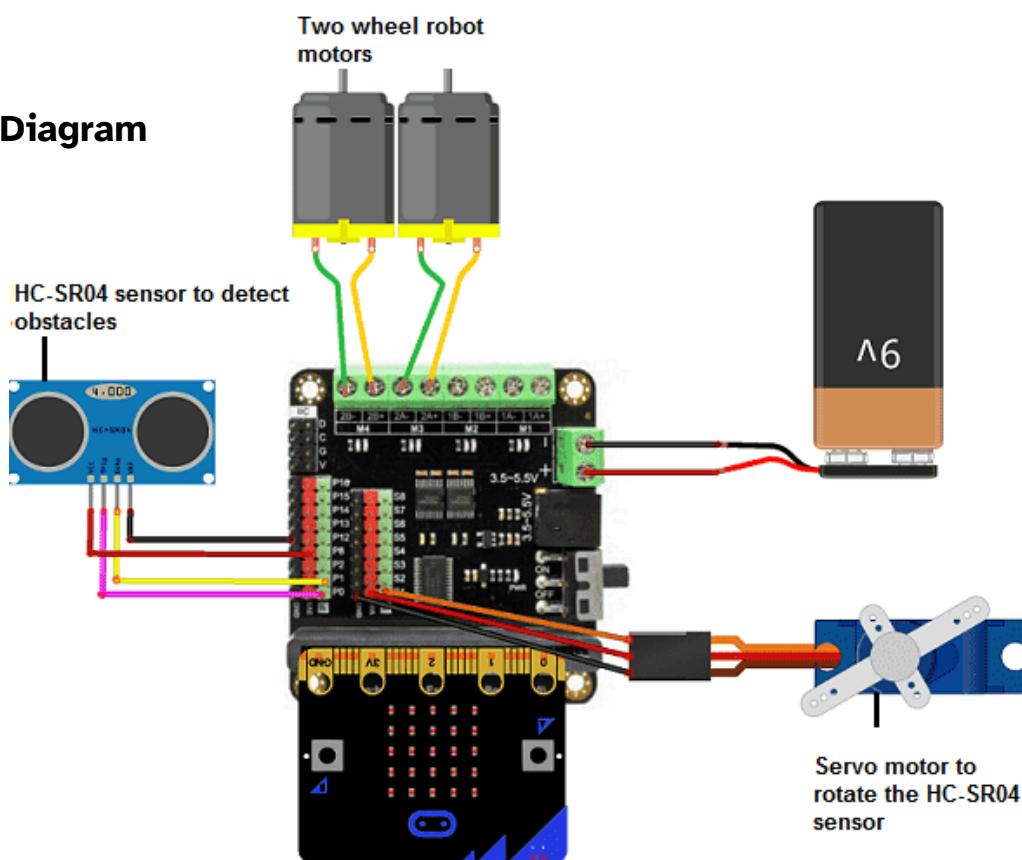
### Materials Required:

- Microbit
- Power source
- USB cable
- Micro-bit driver board
- BO DC Motor
- 2-wheel chassis
- Ultrasonic sensor
- Servo motor with connecting wires

### Block code:



### Circuit Diagram



## Block code:



## Project 7: Advance Obstacle avoider robot

**Aim:** In this activity, we are going to see how to make an advanced obstacle avoider robot

### Materials Required:

- Microbit
- Power source
- USB cable
- Micro-bit driver board
- BO Motor & 2-wheel chassis
- Ultrasonic sensor
- Servo motor & connecting wires
- Power bank with cable

### Block code:



## Block code:

The Scratch script consists of the following blocks:

- A green **for** loop (index from 0 to 80) containing:
  - An orange **Servo S1 degree** block set to 90, with a purple **Index** control.
  - A blue **pause (ms)** block set to 50.
  - A blue **pause (ms)** block set to 500.
- A red **set [right\_distance v] to** block with:
  - A black **ping trig P0** block.
  - A black **echo P1** block.
  - A black **unit cm** block.
- A blue **pause (ms)** block set to 500.
- A green **for** loop (index from 0 to 170) containing:
  - An orange **Servo S1 degree** block set to Index.
  - A blue **pause (ms)** block set to 50.
  - A blue **pause (ms)** block set to 500.
- A red **set [left\_distance v] to** block with:
  - A black **ping trig P0** block.
  - A black **echo P1** block.
  - A black **unit cm** block.
- A blue **pause (ms)** block set to 500.
- A green **for** loop (index from 0 to 80) containing:
  - An orange **Servo S1 degree** block set to 170, with a purple **Index** control.
  - A blue **pause (ms)** block set to 50.
  - A blue **pause (ms)** block set to 500.
- A teal **if** block with conditions **left\_distance < right\_distance** followed by a **then** branch:

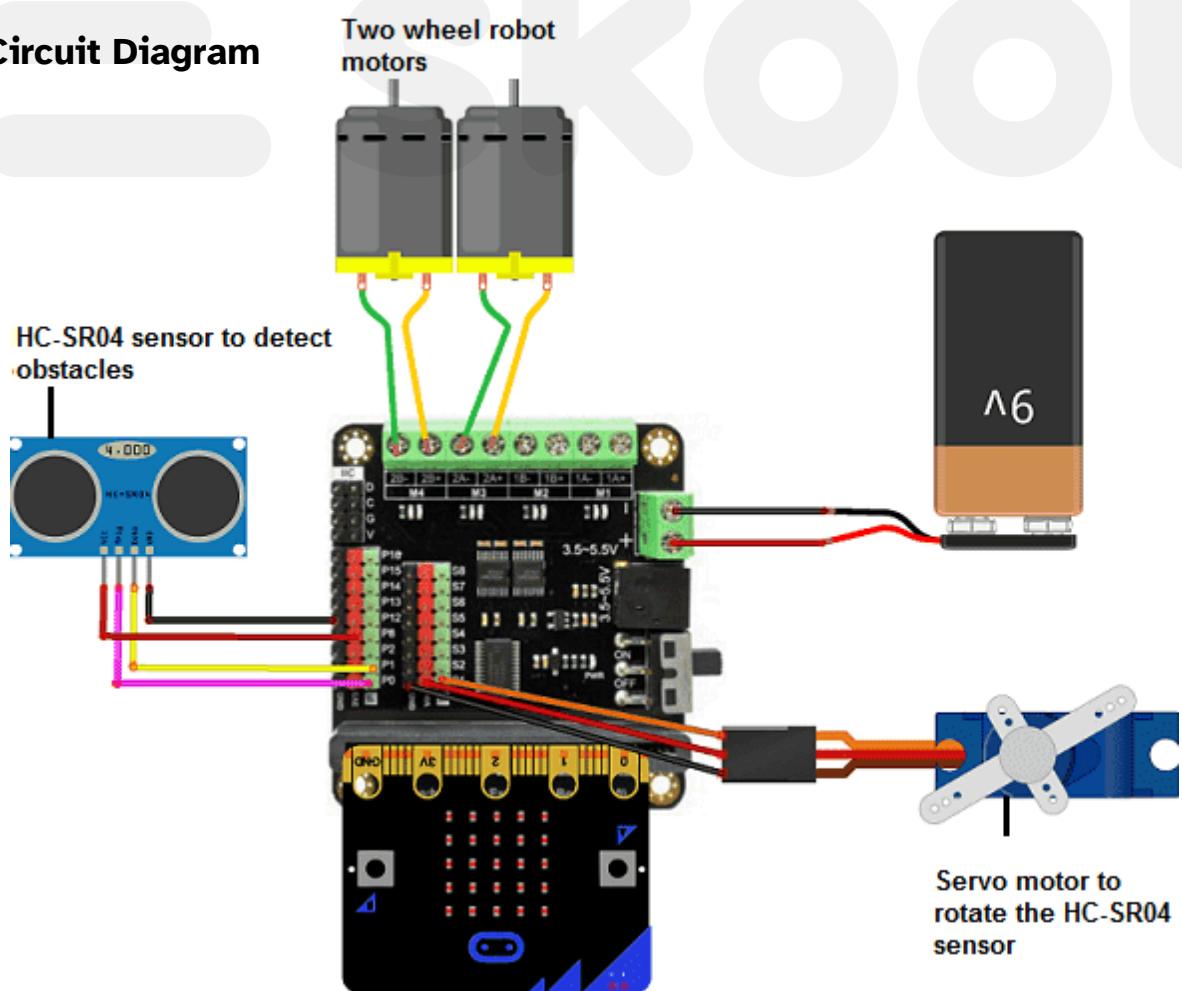
  - An orange **Motor M3 dlr CW speed 80** block.
  - A blue **pause (ms)** block set to 1000.

```

when green flag clicked
    forever
        if then
            Motor stop [M3 v]
        else
            Motor [M4 v dlr CW v speed 80]
            pause (1000 ms)
            Motor stop [M4 v]
        end
        else
            Motor [M3 v dlr CW v speed 80]
            Motor [M4 v dlr CW v speed 80]
            pause (1000 ms)
        end
    end

```

## Circuit Diagram



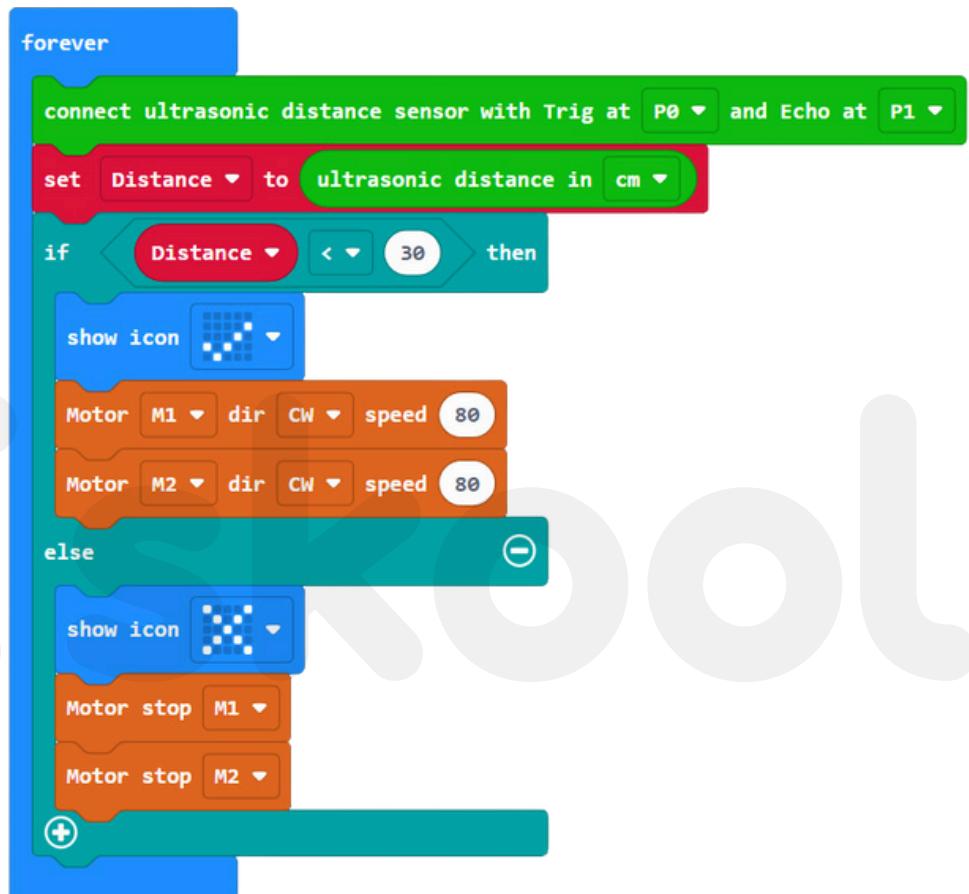
## Project 8: Human Follower Robot

**Aim:** In this activity, we are going to see how to make an Human follower robot.

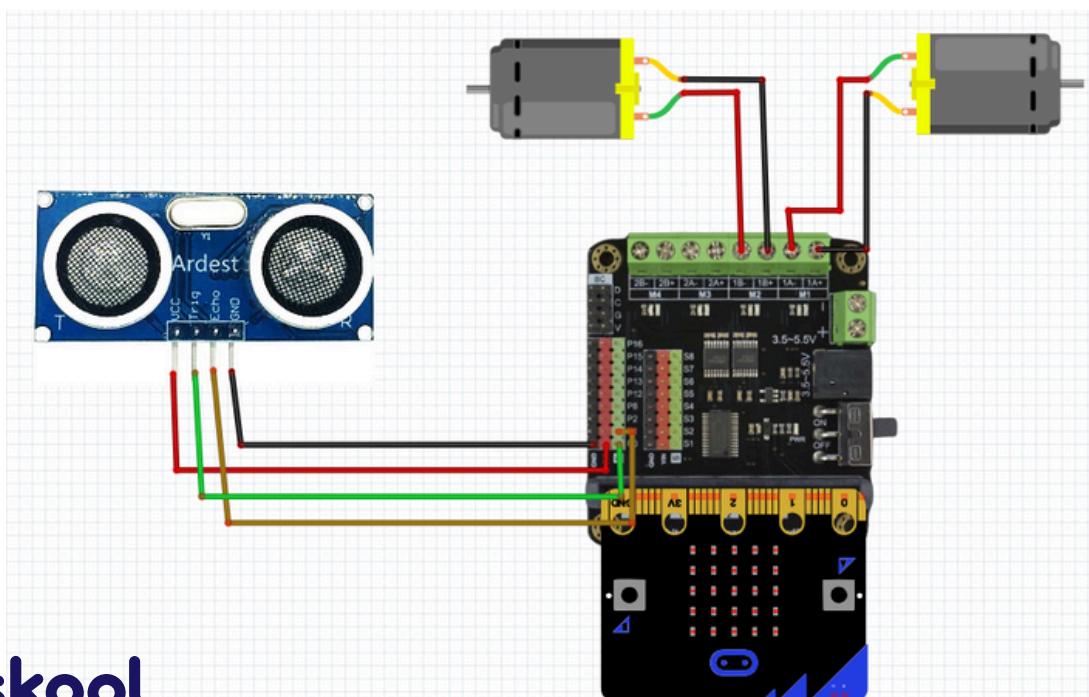
### Materials Required:

- Microbit
- Power source
- USB cable
- Micro-bit driver board
- 2-BO DC Motors
- 2-wheels chassis
- Ultrasonic sensor
- connecting wires
- Power bank
- Caster wheel

### Block code:



### Circuit Diagram



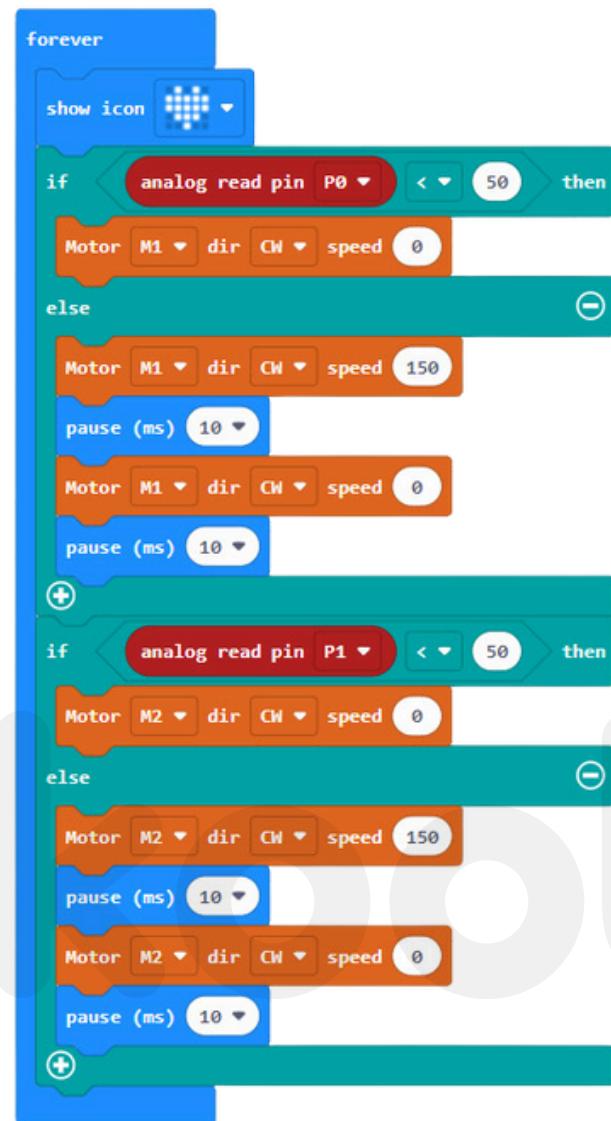
# Project 9: Line Follower Robot

**Aim:** In this activity, we are going to see how to make an line follower robot

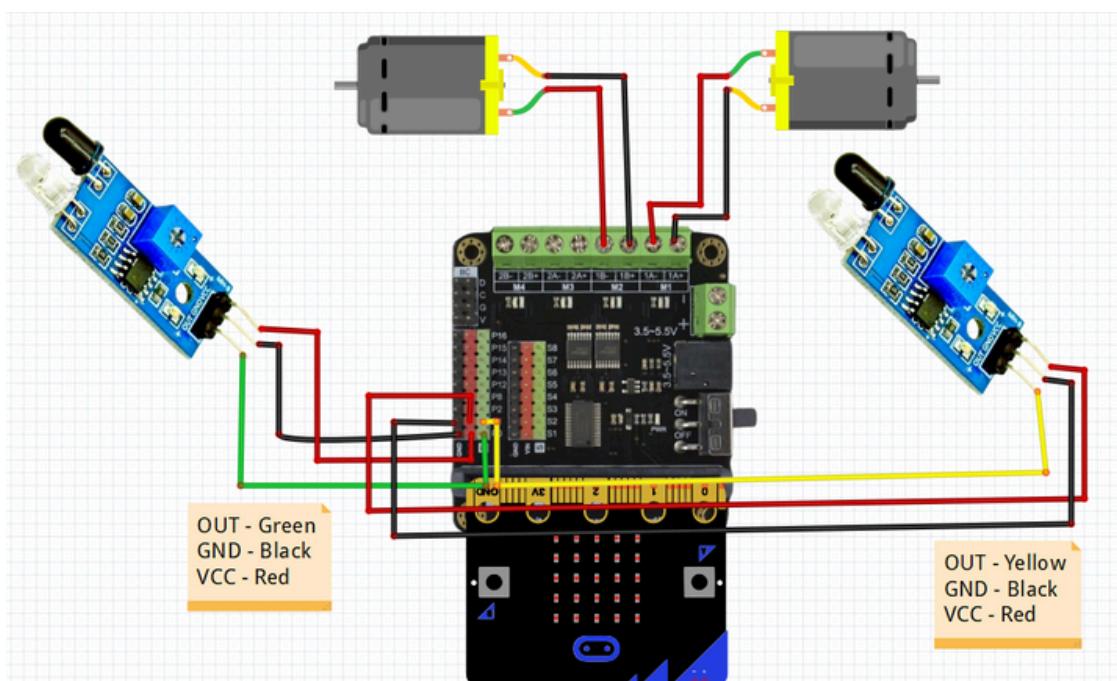
## Materials Required:

- Microbit
- Power source
- USB cable
- Micro-bit driver board
- 2-BO DC Motors
- 2-wheels chassis
- 2-IR Sensor
- connecting wires
- Power bank with cable
- Caster wheel

## Block code:



## Circuit Diagram



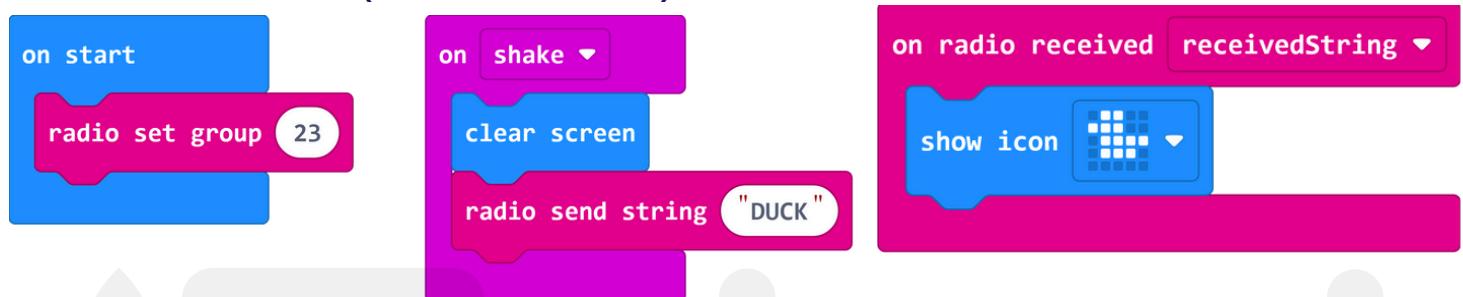
# Project 10: Microbit Radio Control

**Aim:** Make a duck fly invisibly through the air from one microbit to another.

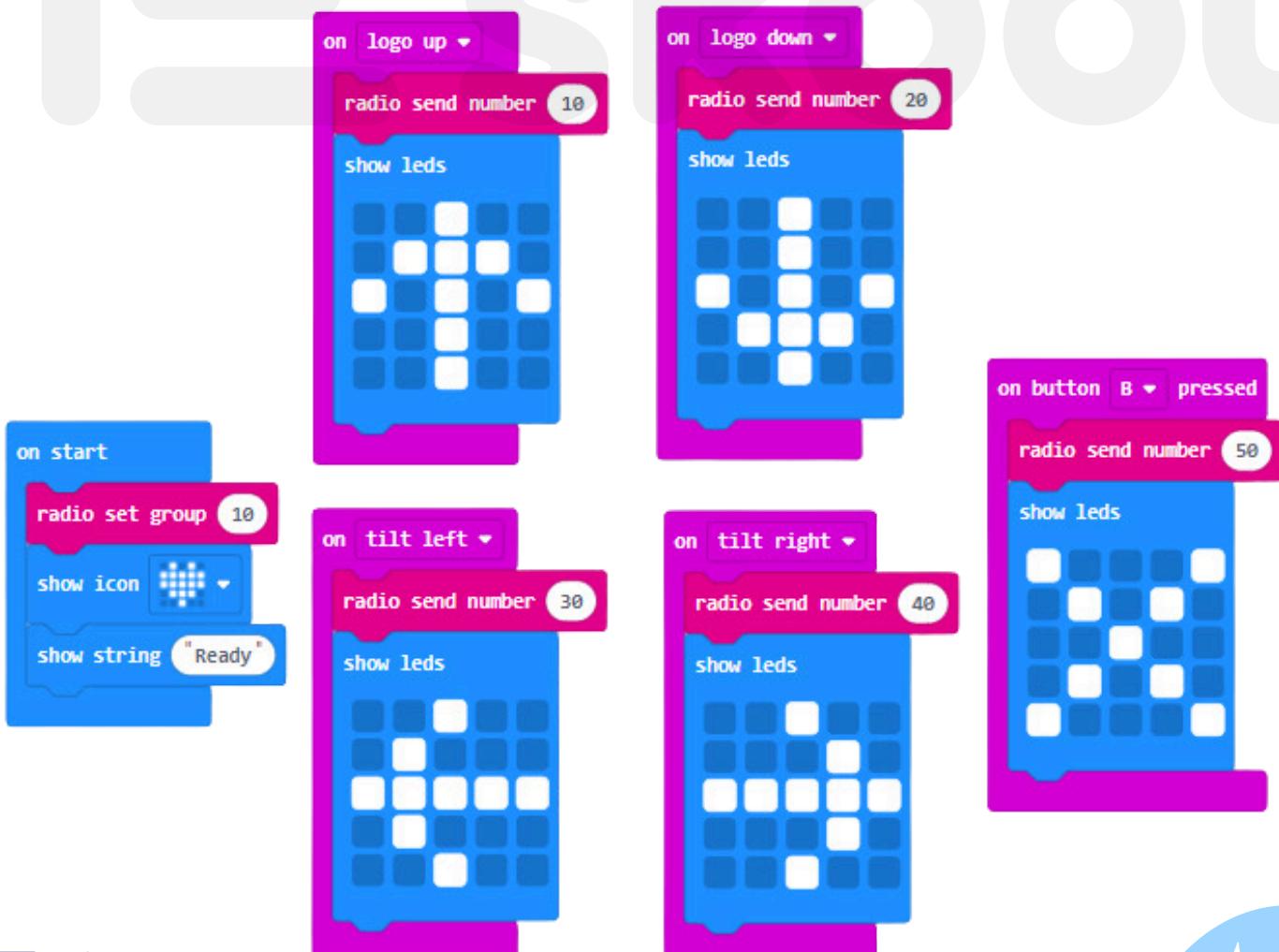
## Materials Required:

- Power source
- 2 - Micro bits
- USB cable
- AA battery with Battery holder (Optional)
- Robot chassis and materials

## Block code: (For radio function)



## Block: RC Robot (Transmitter)

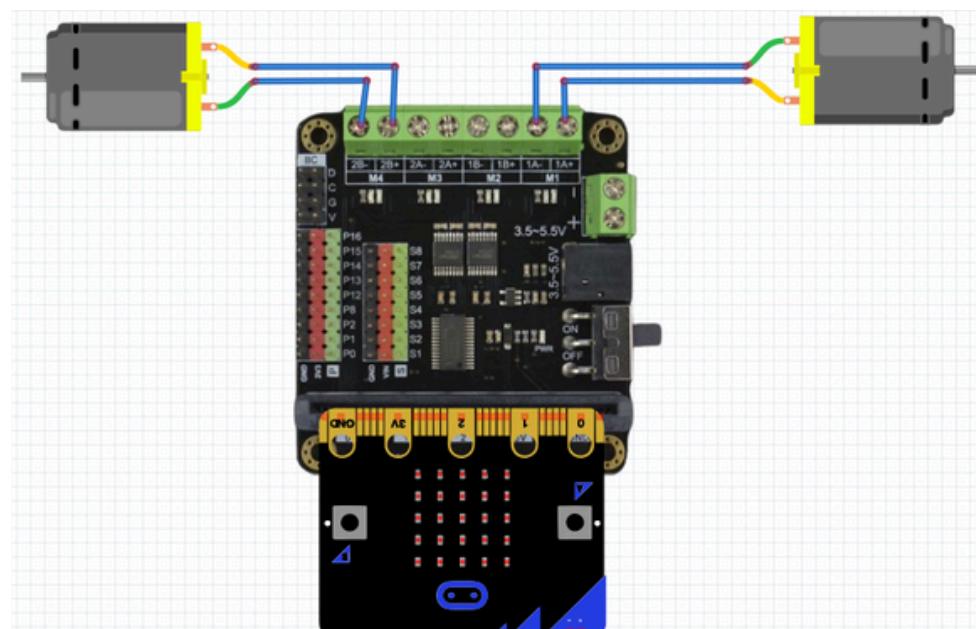


## Block: RC Robot (Receiver)

```
on start
  show icon [grid]
  radio set group 10
```

```
on radio received receivedNumber
  if receivedNumber = 10 then
    Motor M1 dir CW speed 150
    Motor M4 dir CW speed 150
  else if receivedNumber = 20 then
    Motor M1 dir CCW speed 150
    Motor M4 dir CCW speed 150
  else if receivedNumber = 30 then
    Motor M1 dir CW speed 150
    Motor M4 dir CCW speed 150
  else if receivedNumber = 40 then
    Motor M1 dir CCW speed 150
    Motor M4 dir CW speed 150
  else
    Motor Stop All
```

Circuit Diagram



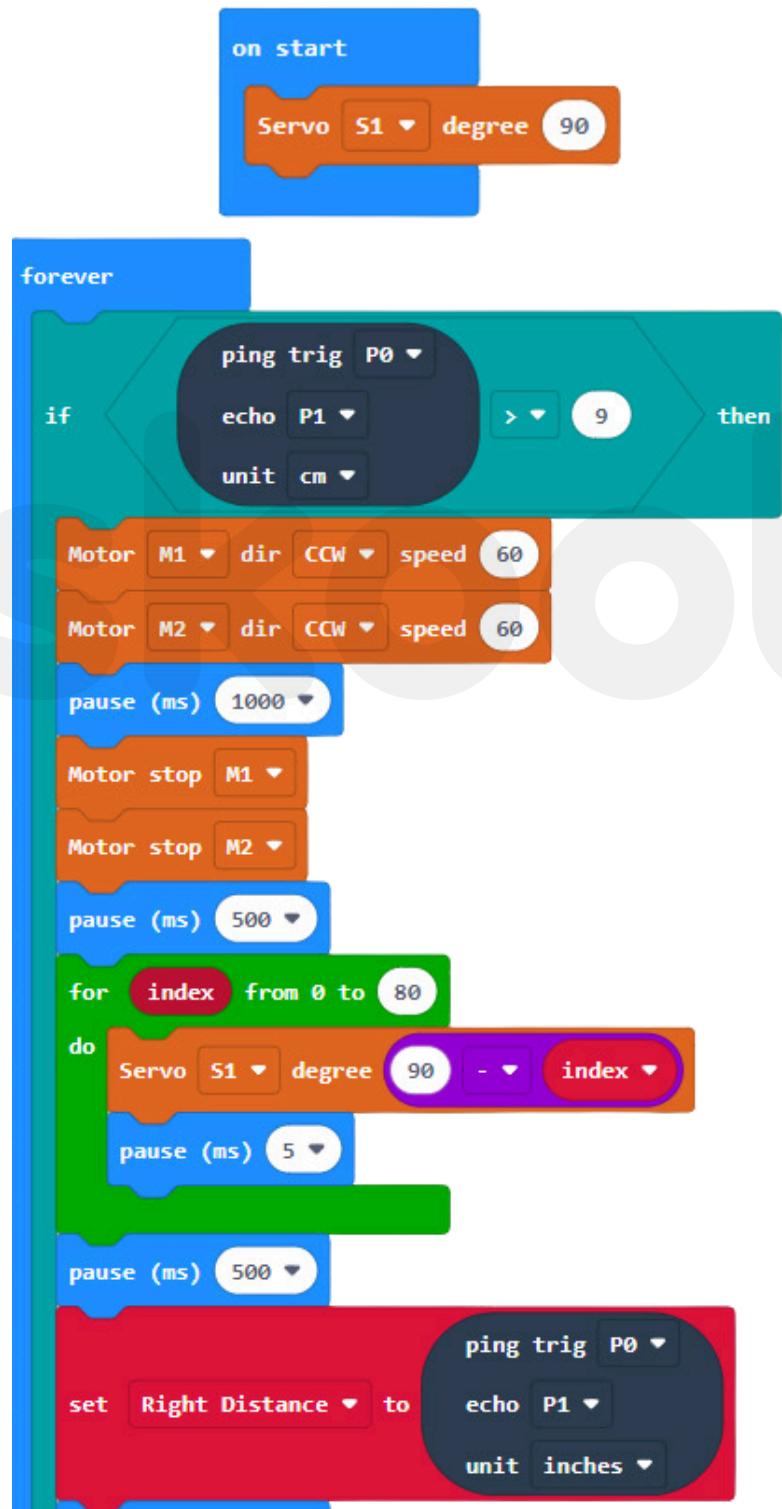
## Project 11: Edge Follower Robot

**Aim:** In this activity, we are going to see how to make an Edge follower robot

### Materials Required:

- Power source
- Micro bits
- USB cable
- Micro-bit driver board
- 2-BO DC Motor
- 2-wheel chassis
- Ultrasonic sensor
- Servo motor
- connecting wires
- Power bank with cable
- Caster wheel

### Block code:



The Scratch script consists of the following blocks:

- A red **repeat** loop with a green **end** block.
- Inside the loop:
  - A blue **pause (ms)** block with value 500.
  - A green **for [index v] from 0 to [170]** loop with a blue **end** block.
  - Inside the green loop:
    - An orange **do [servo S1 v degree index v]** loop with a blue **end** block.
    - A blue **pause (ms)** block with value 5.
  - A blue **end** block for the green loop.
  - A blue **pause (ms)** block with value 500.
  - A red **set [Left Distance v] to [ping trig P0 v echo P1 v unit cm v]** block.
  - A blue **pause (ms)** block with value 500.
  - A green **for [index v] from 0 to [80]** loop with a blue **end** block.
  - Inside the green loop:
    - An orange **do [servo S1 v degree 170 - v index v]** loop with a blue **end** block.
    - A blue **pause (ms)** block with value 5.
  - A blue **end** block for the green loop.
  - A blue **end** block for the red loop.
  - An orange **else** block.
  - Inside the orange **else** block:
    - A teal **if [Left Distance v] < [Right Distance v] then** block.
    - Inside the teal **if** block:
      - An orange **motor M1 dir CW speed 60** block.
      - A blue **pause (ms)** block with value 1000.
      - An orange **motor stop M1** block.
    - A teal **else** block with a blue **end** block.
    - Inside the teal **else** block:
      - An orange **motor M2 dir CW speed 60** block.
      - A blue **pause (ms)** block with value 1000.
      - An orange **motor stop M2** block.
    - A teal **+ [Motor M1 dir CW speed 60 v]** block with a blue **end** block.
    - A teal **+ [Motor M2 dir CW speed 60 v]** block with a blue **end** block.
    - A blue **pause (ms)** block with value 100.
    - A teal **+ [Motor M1 dir CW speed 60 v]** block with a blue **end** block.

## Circuit Diagram

