

Step counter

# Introduction

In this lesson, we will improve the knowledge of how the motion sensor can be applied and will learn how to create and use variables.

# Necessarry:

* Micro:bit controller
* USB cable
* Micro:bit program or internet link in which to do programming
* Batteries to connect to the micro:bit controller

# How it works:

In the micro:bit controller, we will insert a step counting program that will make the microcontroller respond to the movement of steps. For better effect, attach the microcontroller to the leg and walk with it.

# Process!

1. From the **basic** choice, take the command **on start**
2. In the **variables** choice, make variable **steps** and take the command **set steps to**  and insert it **in On start loop**.

A screenshot of a computer

Description automatically generated

1. **Record** start count of steps, it is zerro, because you haven't gone anywhere yet.
2. From the **input** choice, take the command loop **on shake**
3. In the **variables** choice take the command **change steps by**  and insert it **in On shake loop**
4. **Record** **the number 1,** therefore, to start counting the steps starting with one.
5. From the **basic** choice, take the command **show numbers,** and also insert it **in On shake loop**
6. From the **variable** choice, take the variable **steps,** and insert it **into** command **show number.** This is how we point out that the unit to be counted is the steps

A screenshot of a computer

Description automatically generated

# Challange

Try walking at different speeds. Measure the number of steps of different people at a certain distance. Try or other movements also affect the number of steps counted. Try if cycling or other riding gear affects the number of steps

Now let's write the same thing in the **Python code**:

A screenshot of a computer

Description automatically generated