Introduction

mBlock is a graphical programming environment that is specially designed for beginners to easily program Arduino projects.

Getting started

mBlock

Download mBlock from http://www.mblock.cc

Arduino kit

Blinking LED

What is an LED?
What is the end result of this experiment?

Required parts

Component Quantity LED 1 Resistor 1 Jumper wires 3

Circuit Diagram

mBlock Code

```
Arduino Program

forever

set digital pin 9 output as HIGHY

wait 1 secs

set digital pin 9 output as LOWY

wait 1 secs
```

Potentiometer

What is a Potentiometer?
What is the end result of this experiment?

Required parts

Components Quantity

Potentiometer 1
LED 1
Resistor 1
Jumper wires 1

Circuit Diagram

mBlock Code



```
Arduino Program

forever

set sensorValue vo read analog pin (A) 0

set digital pin 13 output as HIGH vait sensorValue secs

set digital pin 13 output as LOW vait sensorValue secs
```

RGB LED

What is an RGB LED?
What is hte end result of this experiment?

Required parts

Component Quantity

RGB LED 1
Resistor 3
Jumper wires 6

Circuit Diagram

mBlock Code



Assign variables

```
Arduino Program

set sleep_time v to 1

set red_pin v to 9

set green_pin v to 10

set blue_pin v to 11
```

Turn all the LEDs off

```
set green_pin v to 10

set blue_pin v to 11

forever

set digital pin red_pin output as LOWv

set digital pin green_pin output as LOWv

set digital pin blue_pin output as LOWv

wait sleep_time secs
```

Turn on red

```
set digital pin red_pin output as HIGHT
set digital pin green_pin output as LOWT
set digital pin blue_pin output as LOWT
wait sleep_time secs
```

Turn on green

```
set digital pin red_pin output as LOW set digital pin green_pin output as HIGH set digital pin blue_pin output as LOW wait sleep_time secs
```

Turn on blue

```
set digital pin red_pin output as LOW set digital pin green_pin output as LOW set digital pin blue_pin output as HIGH wait sleep_time secs
```

Red and Green

Red and Blue

Green and Blue