Алгоритмы. Потенциометр. COM - порт

RoboCode

1. 3 тема.
2. **Алгоритмы. Потенциометр.** План урока:
   Работа над ошибками

светодиодная линейка

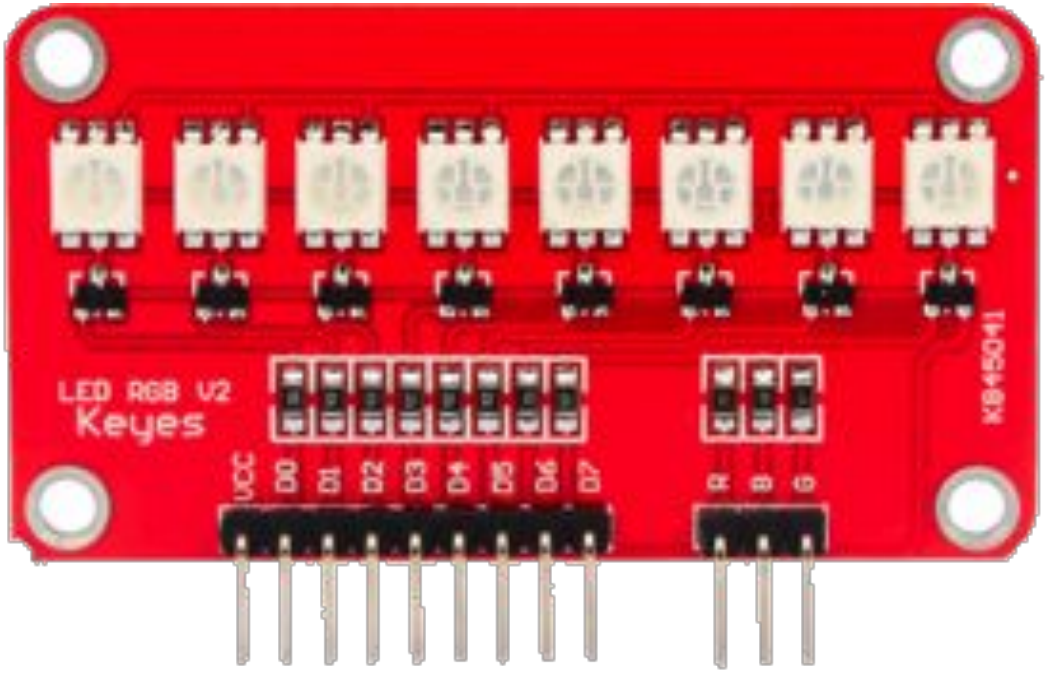
потенциометр

COM порт

4. Ссылка в срм

RoboCode

Какое применение RGB линейки?

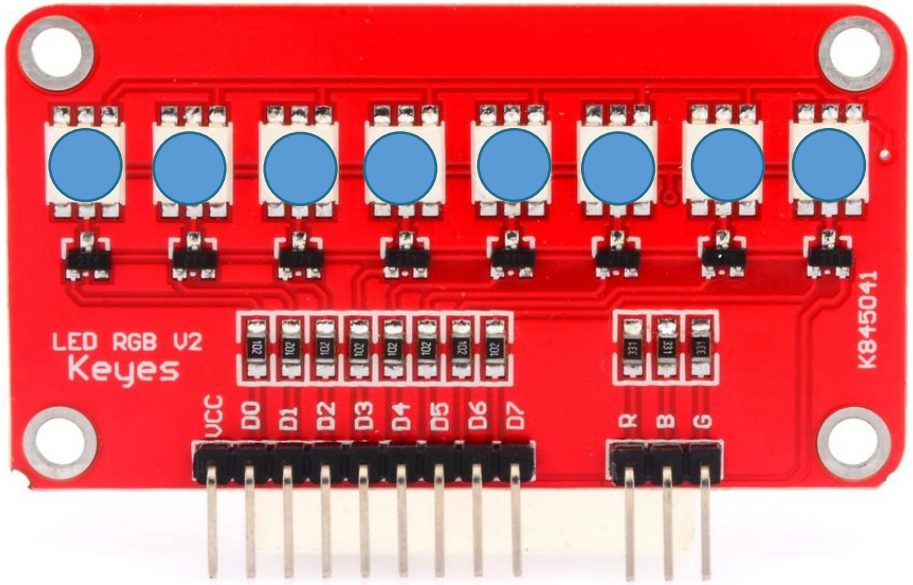


5v (D2-D13) (D2- D13)

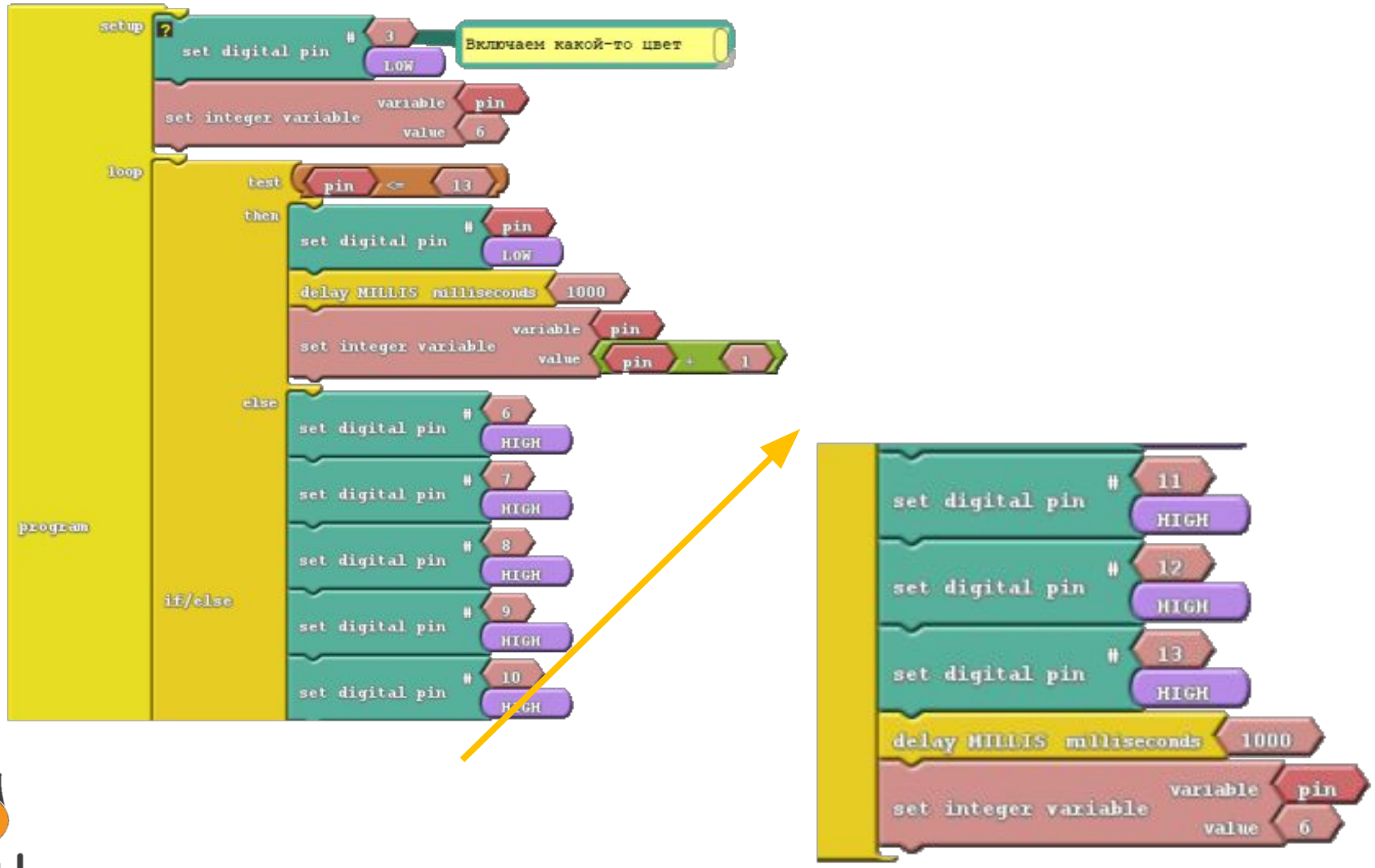
LOW LOW

Задание

Сделать «загрузочную строку». То-есть включать по очереди все светодиоды на светодиодной линейке, когда включится последний, начать заново.



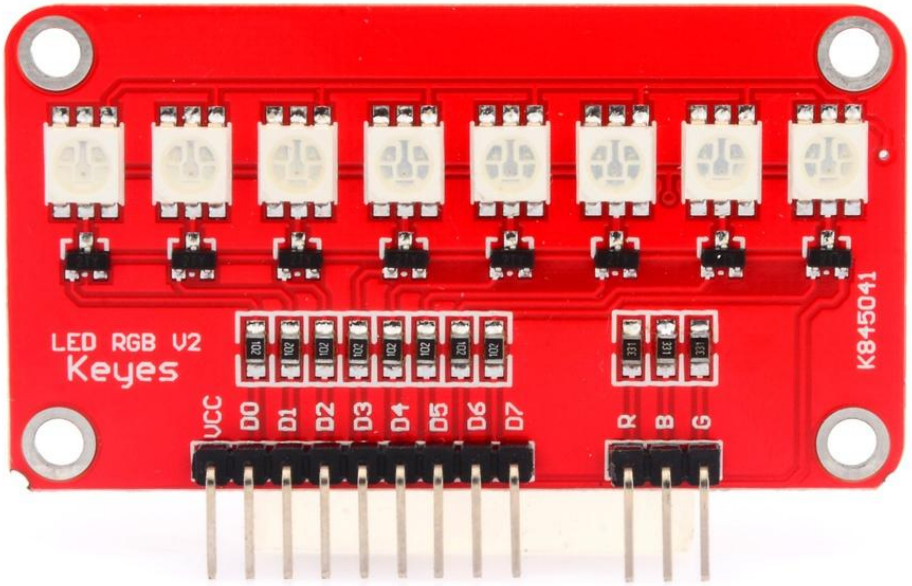
RoboCode


setup
set digital pin # 3 LOW
Включаем какой-то цвет
set integer variable variable pin value 6
loop
test pin <= 13
then
set digital pin # pin LOW
delay MILLIS milliseconds 1000
set integer variable variable pin value pin + 1
else
set digital pin # 6 HIGH
set digital pin # 7 HIGH
set digital pin # 8 HIGH
set digital pin # 9 HIGH
set digital pin # 10 HIGH
program
if/else
set digital pin # 11 HIGH
set digital pin # 12 HIGH
set digital pin # 13 HIGH
delay MILLIS milliseconds 1000
set integer variable variable pin value 6

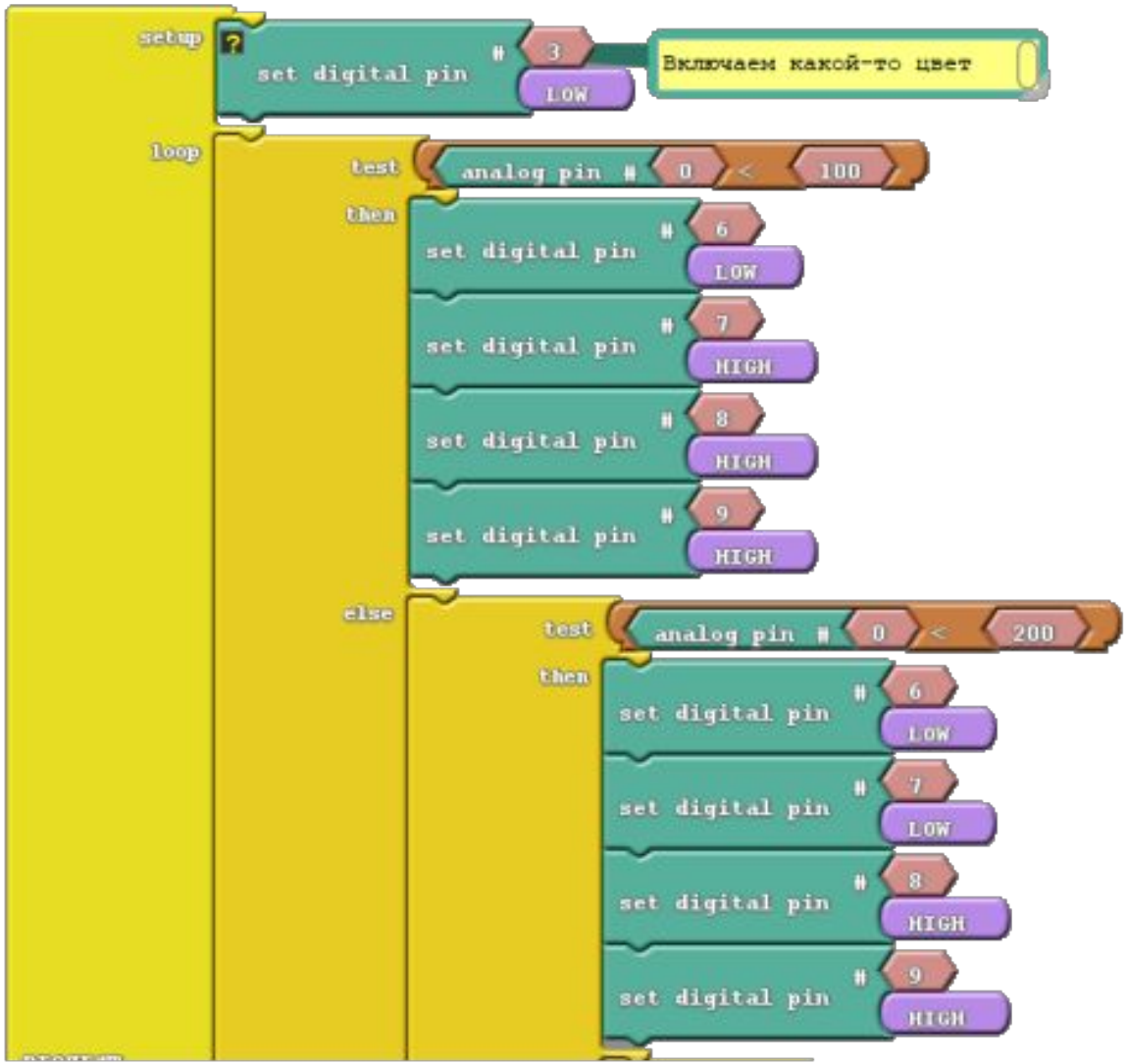
RoboCode

Задание

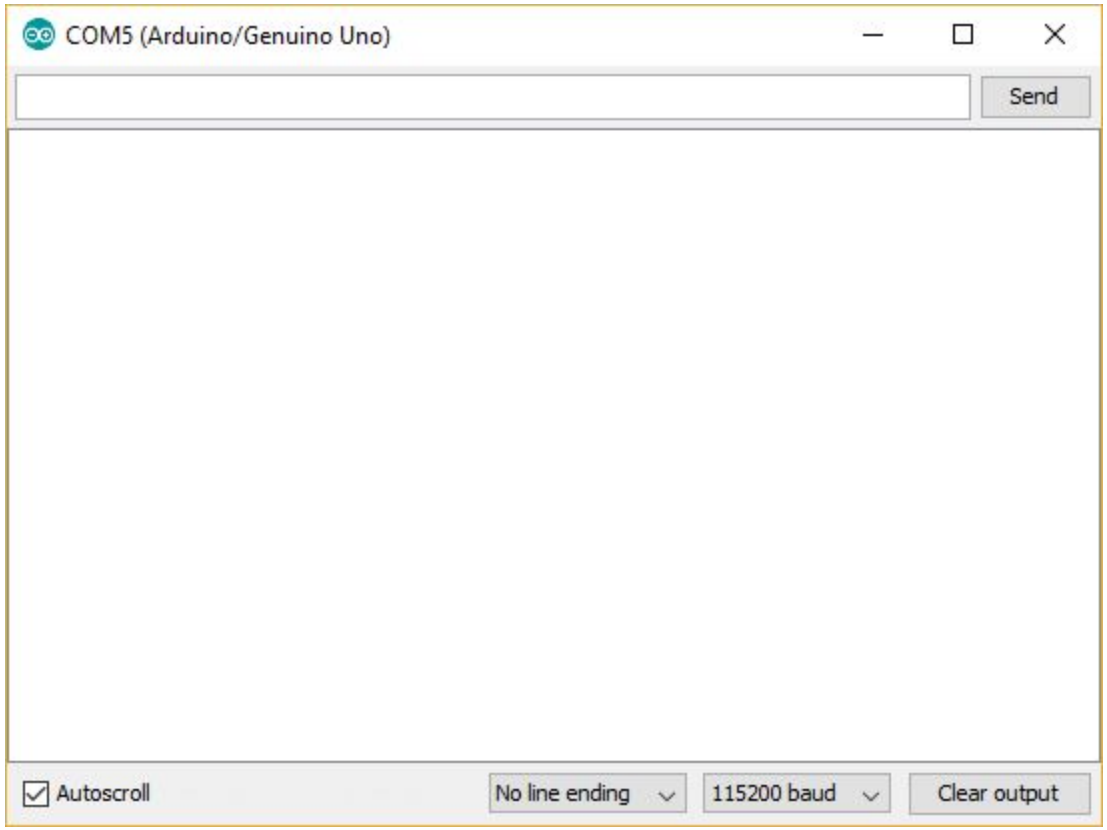
Управлять количеством засвеченных светодиодов с помощью потенциометра.

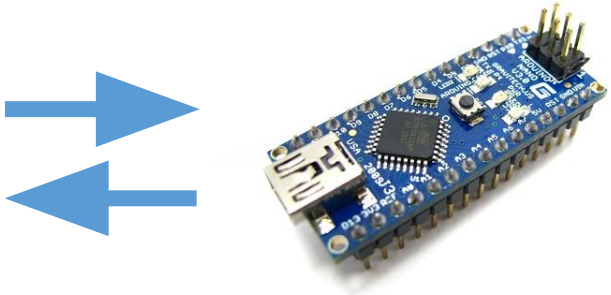


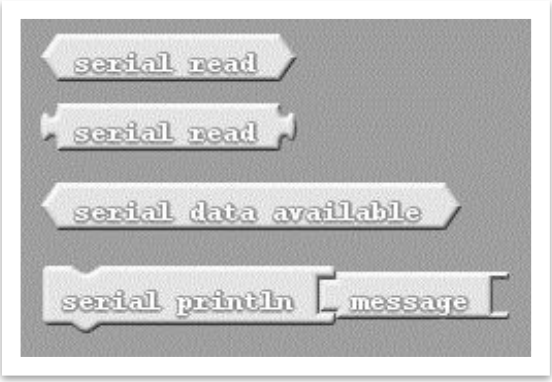
RoboCode


setup
set digital pin # 3 LOW
Включаем какой-то цвет
loop
test
analog pin # 0 < 100
then
set digital pin # 6 LOW
set digital pin # 7 HIGH
set digital pin # 8 HIGH
set digital pin # 9 HIGH
else
test
analog pin # 0 < 200
then
set digital pin # 6 LOW
set digital pin # 7 LOW
set digital pin # 8 HIGH
set digital pin # 9 HIGH

RoboCode


COM5 (Arduino/Genuino Uno)
Send
Autoscroll
No line ending
115200 baud
Clear output




serial read
serial read
serial data available
serial println
message

NO SIGNAL

RoboCode

Задание

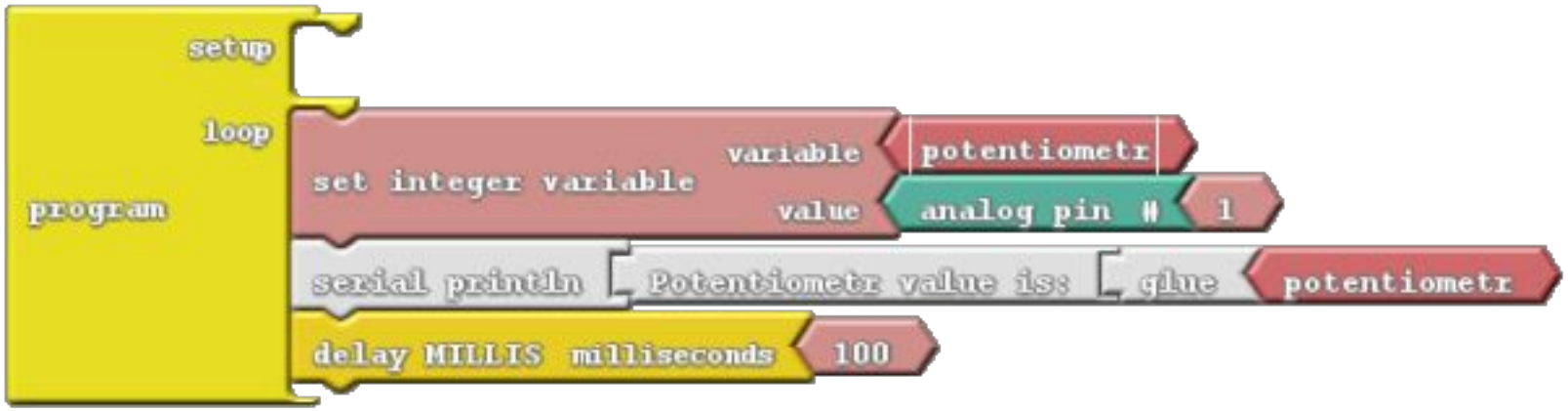
- Задание 1
  Вывести на экран компьютера значения потенциометра;

- Задание 2
  Управлять цветом светодиодной линейки с помощью компьютера;

- Задание 3
  Засветить все светодиоды на линейке разными цветами.

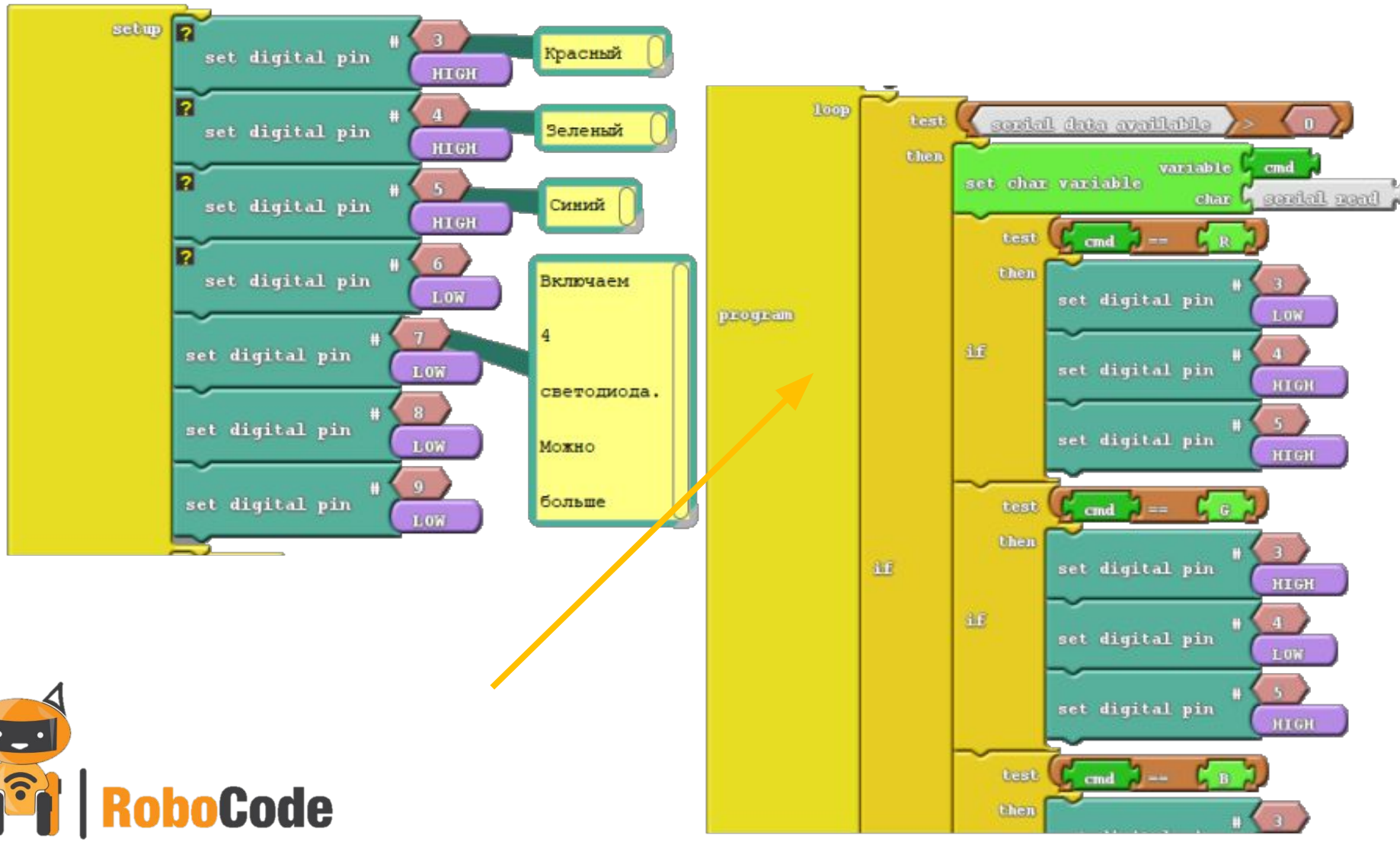
RoboCode

1


setup
loop
program
set integer variable
variable
potentiometr
value
analog pin #
1
serial println
Potentiometr value is:
glue
potentiometr
delay MILLIS milliseconds
100

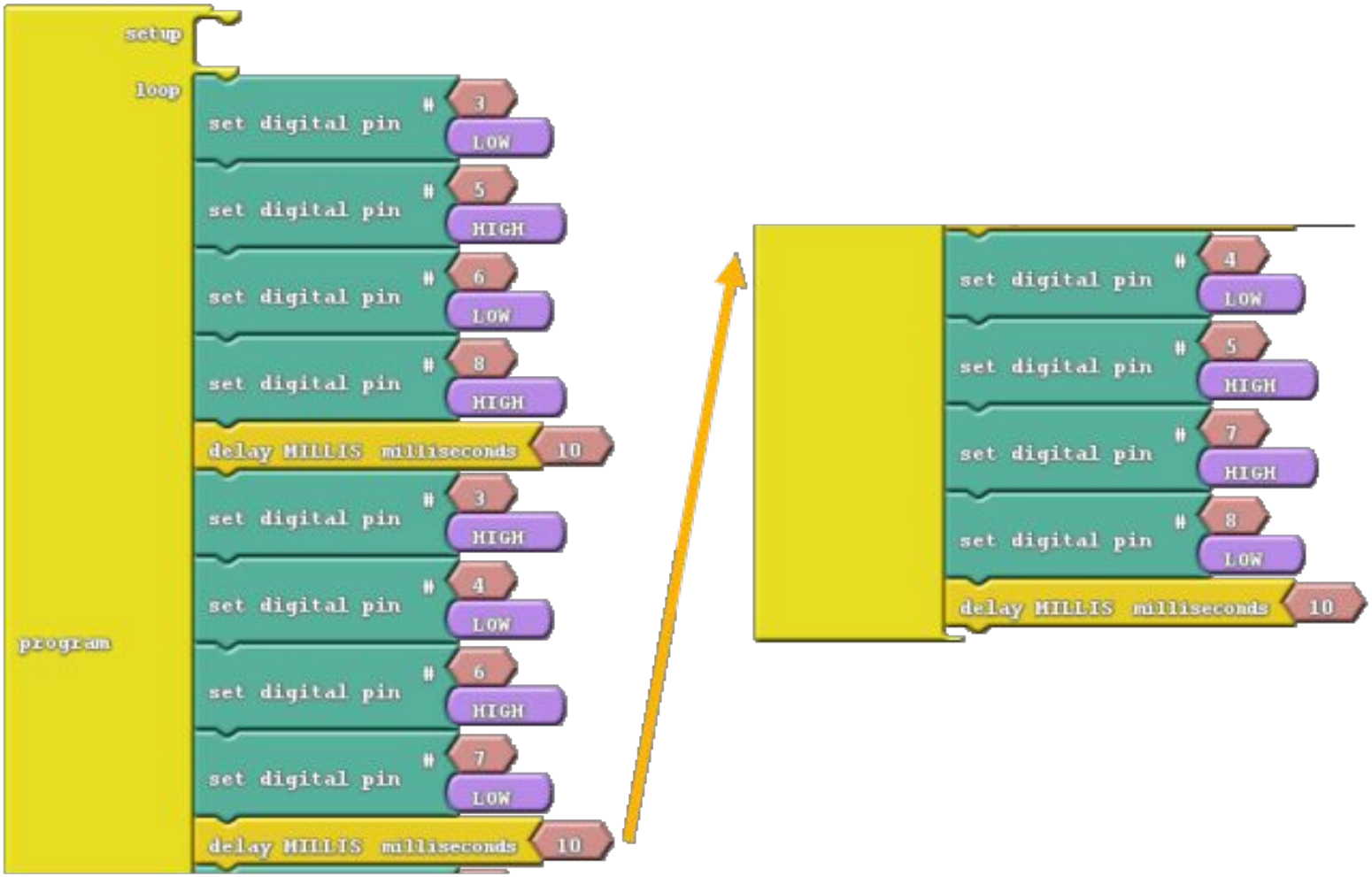
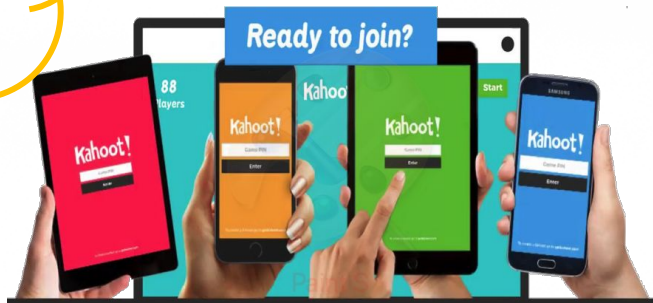
RoboCode

2


setup
set digital pin # 3 HIGH
Красный
set digital pin # 4 HIGH
Зеленый
set digital pin # 5 HIGH
Синий
set digital pin # 6 LOW
set digital pin # 7 LOW
set digital pin # 8 LOW
set digital pin # 9 LOW
Включаем 4 светодиода. Можно больше
program
loop
test serial data available > 0
then
set char variable variable cmd char serial read
test cmd == R
then
set digital pin # 3 LOW
set digital pin # 4 HIGH
set digital pin # 5 HIGH
if
test cmd == G
then
set digital pin # 3 HIGH
set digital pin # 4 LOW
set digital pin # 5 HIGH
if
test cmd == B
then
if

RoboCode

3


setup
loop
program
set digital pin # 3 LOW
set digital pin # 5 HIGH
set digital pin # 6 LOW
set digital pin # 8 HIGH
delay MILLIS milliseconds 10
set digital pin # 3 HIGH
set digital pin # 4 LOW
set digital pin # 6 HIGH
set digital pin # 7 LOW
delay MILLIS milliseconds 10
set digital pin # 4 LOW
set digital pin # 5 HIGH
set digital pin # 7 HIGH
set digital pin # 8 LOW
delay MILLIS milliseconds 10

Kahoot!