ПМГ „Академик Боян Петканчин“ – Хасково

НП „Обучение за ИТ кариера“

**Документация**

**Модул 8:** Въведение в операционни системи и вградени системи

**Тема:** *The flags of the world*

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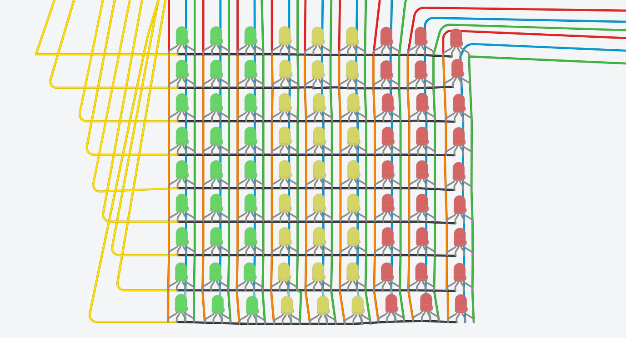
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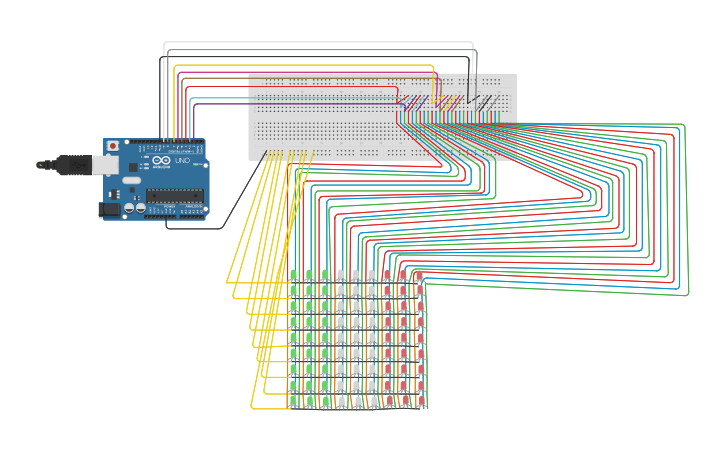


# **Какво представлява проекта?**

***Проектът представлява матрица от RGB LED лампички, в която се изобразяват 7 вида различни знамена – френско, италианско, румънско, ирландско, малийско, нигерийско и гвинейско знаме.***



# **Блок схема**



# **Списък от компоненти**

* ***Arduino Uno R3 – 1***
* ***LED RGB – 81***

# **Сорс код**

//Цветове за последните 3 колони

#define RED\_3 10

#define BLUE\_3 9

#define GREEN\_3 8

//Цветове за средните 3 колони

#define RED\_2 7

#define BLUE\_2 6

#define GREEN\_2 5

//Цветове за първите 3 колони

#define RED 4

#define BLUE 3

#define GREEN 2

void setup()

{

pinMode(RED, OUTPUT);

pinMode(BLUE, OUTPUT);

pinMode(GREEN, OUTPUT);

pinMode(RED\_2, OUTPUT);

pinMode(BLUE\_2, OUTPUT);

pinMode(GREEN\_2, OUTPUT);

pinMode(RED\_3, OUTPUT);

pinMode(BLUE\_3, OUTPUT);

pinMode(GREEN\_3, OUTPUT);

}

void France()

{

digitalWrite(BLUE, HIGH);

digitalWrite(RED\_2, HIGH);

digitalWrite(BLUE\_2, HIGH);

digitalWrite(GREEN\_2, HIGH);

digitalWrite(RED\_3, HIGH);

delay(1000);

digitalWrite(BLUE, LOW);

digitalWrite(RED\_2, LOW);

digitalWrite(BLUE\_2, LOW);

digitalWrite(GREEN\_2, LOW);

digitalWrite(RED\_3, LOW);

}

void Italy()

{

digitalWrite(GREEN, HIGH);

digitalWrite(RED\_2, HIGH);

digitalWrite(BLUE\_2, HIGH);

digitalWrite(GREEN\_2, HIGH);

digitalWrite(RED\_3, HIGH);

delay(1000);

digitalWrite(GREEN, LOW);

digitalWrite(RED\_2, LOW);

digitalWrite(BLUE\_2, LOW);

digitalWrite(GREEN\_2, LOW);

digitalWrite(RED\_3, LOW);

}

void Romania()

{

digitalWrite(BLUE, HIGH);

digitalWrite(RED\_2, HIGH);

digitalWrite(GREEN\_2, HIGH);

digitalWrite(RED\_3, HIGH);

delay(1000);

digitalWrite(BLUE, LOW);

digitalWrite(RED\_2, LOW);

digitalWrite(GREEN\_2, LOW);

digitalWrite(RED\_3, LOW);

}

void Irlandia()

{

digitalWrite(GREEN, HIGH);

digitalWrite(RED\_2, HIGH);

digitalWrite(BLUE\_2, HIGH);

digitalWrite(GREEN\_2, HIGH);

digitalWrite(RED\_3, HIGH);

digitalWrite(GREEN\_3, HIGH);

delay(1000);

digitalWrite(GREEN, LOW);

digitalWrite(RED\_2, LOW);

digitalWrite(BLUE\_2, LOW);

digitalWrite(GREEN\_2, LOW);

digitalWrite(RED\_3, LOW);

digitalWrite(GREEN\_3, LOW);

}

void Mali()

{

digitalWrite(GREEN, HIGH);

digitalWrite(RED\_2, HIGH);

digitalWrite(GREEN\_2, HIGH);

digitalWrite(RED\_3, HIGH);

delay(1000);

digitalWrite(GREEN, LOW);

digitalWrite(RED\_2, LOW);

digitalWrite(GREEN\_2, LOW);

digitalWrite(RED\_3, LOW);

}

void Nigeria()

{

digitalWrite(GREEN, HIGH);

digitalWrite(RED\_2, HIGH);

digitalWrite(BLUE\_2, HIGH);

digitalWrite(GREEN\_2, HIGH);

digitalWrite(GREEN\_3, HIGH);

delay(1000);

digitalWrite(GREEN, LOW);

digitalWrite(RED\_2, LOW);

digitalWrite(BLUE\_2, LOW);

digitalWrite(GREEN\_2, LOW);

digitalWrite(GREEN\_3, LOW);

}

void Gvinea()

{

digitalWrite(RED, HIGH);

digitalWrite(RED\_2, HIGH);

digitalWrite(GREEN\_2, HIGH);

digitalWrite(GREEN\_3, HIGH);

delay(1000);

digitalWrite(RED, LOW);

digitalWrite(RED\_2, LOW);

digitalWrite(GREEN\_2, LOW);

digitalWrite(GREEN\_3, LOW);

}

void loop()

{

France();

Italy();

Romania();

Irlandia();

Mali();

Nigeria();

Gvinea();

}

# **Заключение**

Чрез проекта ми може да се запознаете с различните знамена по света и при желание могат да се добавят и нови. По този начин може да научите различните знамена на държавите по света.

