0.1 BARRIER GATE CONSTRUCTION

0.1.1 Tasks:

1. Construct the barrier gate according to video instructions.

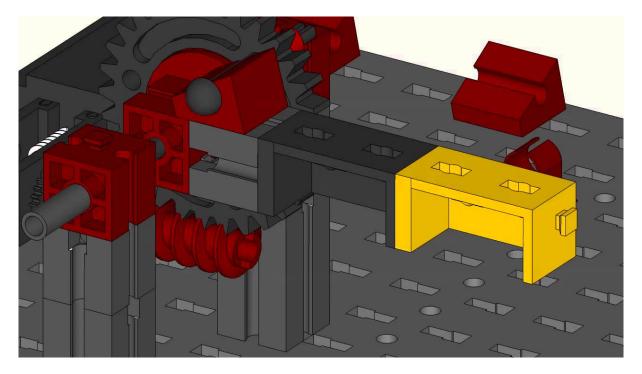


Figure 1: Constracting a barrier gate.

- 2. Connect the motor to digital outputs D7 and D6,
 - · declare meaningful constants for output pins,
 - write a function setIOpins() for settig output pins and
 - include it in setup() function.
- 3. Write 3 time controlled functions for essential control of the barrier gate:
 - moveGateUp();
 - moveGateDown();
 - stopTheGate(); and test this actions in setup() function.
- 4. Put this action of lifting and lowering the gate in For-loop and repeat it several times (e.g. 15 times).

Some sample code can be found in next example:

dr. David Rihtaršič

```
1
      const int MOTOR_PIN_1 = 7;
2
      const int MOTOR_PIN_2 = 6;
3
       [-] void setup() {
4
               pinMode(MOTOR_PIN_1, OUTPUT); //declaration of I/O pins
5
               pinMode(MOTOR_PIN_2, OUTPUT);
6
7
              moveGateUp();
                                             // Lift the barrier.
8
9
               delay(3000);
                                            // Wait a bit...
10
              moveGateDown();
                                            // Lower the barrier.
          }
11
       [+] void loop() {
12
       [+] void stopTheGate(){
13
14
       [-] void moveGateUp() {
15
               digitalWrite(MOTOR_PIN_1, HIGH);
               digitalWrite(MOTOR_PIN_2, LOW);
16
17
               delay(1000);
18
               stopTheGate();
19
       [+] void moveGateDown() {
```

0.1.2 Questions:

- 1. What is the time for raising and lowering the barrier? Compare it to your colleague's value.
- 2. What is the disadvantage of time controlled loop?

0.1.3 Summary

0.1.3.1 <++> <++>

0.1.4 Issues:

0.1.4.1 <++> <++>

dr. David Rihtaršič