

Fiche n° 5 - PROF



Thymio II :

La programmation en ligne de commande – partie 1 – Le VPL & Aseba Studio :

L'utilisation du VPL permet de créer un code très facilement, mais pour pouvoir le modifier plus finement ou créer des codes plus complexes, il est nécessaire de passer ce bout de code à Aseba Studio.

Voir la vidéo sur la méthode sur le site roboTIC : <https://edu.ge.ch/site/robotic/>

Activité n° 10 - En Avant – en Arrière – à droite – à gauche :



```
Mots clés | var if elseif else onevent while for sub callsub
1 # reset outputs
2 call sound.system(-1)
3 call leds.top(0,0,0)
4 call leds.bottom.left(0,0,0)
5 call leds.bottom.right(0,0,0)
6 call leds.circle(0,0,0,0,0,0,0,0)
7
8 onevent buttons
9   when button.center == 1 do
10     motor.left.target = 0
11     motor.right.target = 0
12     emit pair_run 0
13   end
14   when button.forward == 1 do
15     motor.left.target = 200
16     motor.right.target = 200
17     emit pair_run 1
18   end
19
20   when button.backward == 1 do
21     motor.left.target = -200
22     motor.right.target = -200
23   end
24   when button.right == 1 do
25     motor.left.target = 200
26     motor.right.target = 0
27   end
28   when button.left == 1 do
29     motor.left.target = 0
30     motor.right.target = 200
31   end
```

Activité n° 11 - Éviter les obstacles :

a)

```
Mots clés | var | if | elseif | else | onevent | while | for | sub | callsub
1 # reset outputs
2 call sound.system(-1)
3 call leds.top(0,0,0)
4 call leds.bottom.left(0,0,0)
5 call leds.bottom.right(0,0,0)
6 call leds.circle(0,0,0,0,0,0,0,0)
7
8 onevent buttons
9   when button.center == 1 do
10     motor.left.target = 0
11     motor.right.target = 0
12     emit pair_run 0
13   end
14
15   when button.forward == 1 do
16     motor.left.target = 55
17     motor.right.target = 55
18   end
19
20 onevent prox
21   when prox.horizontal[2] >= 2000 do
22     motor.left.target = 0
23     motor.right.target = 0
24     emit pair_run 1
25   end
```

b)

```
Mots clés | var | if | elseif | else | onevent | while | for | sub | callsub
1 # reset outputs
2 call sound.system(-1)
3 call leds.top(0,0,0)
4 call leds.bottom.left(0,0,0)
5 call leds.bottom.right(0,0,0)
6 call leds.circle(0,0,0,0,0,0,0,0)
7
8 onevent buttons
9   when button.center == 1 do
10     motor.left.target = 0
11     motor.right.target = 0
12     emit pair_run 0
13   end
14
15   when button.forward == 1 do
16     motor.left.target = 55
17     motor.right.target = 55
18   end
19
20 onevent prox
21   when prox.horizontal[2] >= 2000 do
22     motor.left.target = 0
23     motor.right.target = 0
24     emit pair_run 1
25   end
26
27   when prox.horizontal[0] > 2000 do
28     motor.left.target = 100
29     motor.right.target = 0
30   end
31
32   when prox.horizontal[4] > 2000 do
33     motor.left.target = 0
34     motor.right.target = 100
35   end
```

c)

```
Mots clés | var | if | elseif | else | onevent | while | for | sub | callsub
1 # reset outputs
2 call sound.system(-1)
3 call leds.top(0,0,0)
4 call leds.bottom.left(0,0,0)
5 call leds.bottom.right(0,0,0)
6 call leds.circle(0,0,0,0,0,0,0,0)
7
8 onevent buttons
9   when button.center == 1 do
10     motor.left.target = 0
11     motor.right.target = 0
12     emit pair_run 0
13   end
14
15   when button.forward == 1 do
16     motor.left.target = 55
17     motor.right.target = 55
18   end
19
20 onevent prox
21   when prox.horizontal[2] >= 2000 do
22     motor.left.target = 0
23     motor.right.target = 0
24     emit pair_run 1
25   end
26
27   when prox.horizontal[0] > 2000 do
28     motor.left.target = 100
29     motor.right.target = 0
30   end
31
32   when prox.horizontal[4] > 2000 do
33     motor.left.target = 0
34     motor.right.target = 100
35   end
36
37   when prox.horizontal[0] < 1000 do
38     motor.left.target = 55
39     motor.right.target = 55
40   end
41
42   when prox.horizontal[4] < 1000 do
43     motor.left.target = 55
44     motor.right.target = 55
45   end
```



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