ALGORITHM EXAM #2
1h

SCORE	/ 100
COMMENT	

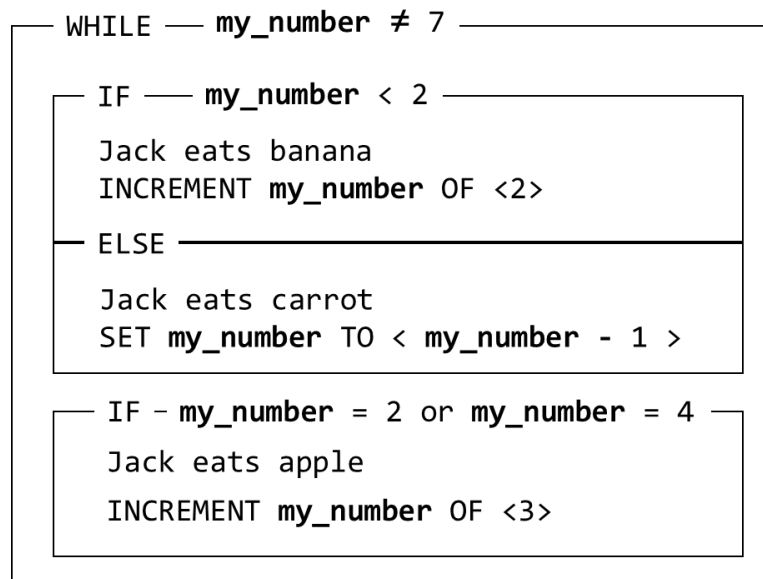| WARNING /!\ |
|---|
| **YOU NEED TO CHECK CAREFULLY STEP BY STEP THAT YOUR CODE WORKS**
If you code does not work, you will get a 0 score
DO NOT USE INSTRUCTION OR CONDITION THAT ARE NOT ALLOWED |

Exercise 1 (15 POINTS)

Complete the table. Use a new line every time my_number changes

```
SET <my_number> to < 0 >

WHILE —— my_number ≠ 7
    IF —— my_number < 2
    Jack eats banana
    INCREMENT my_number OF <2>
    ELSE
    Jack eats carrot
    SET my_number TO < my_number - 1 >

    IF – my_number = 2 or my_number = 4
    Jack eats apple
    INCREMENT my_number OF <3>
```

my_number	What Jack eats?
0	Banana
1	Carrot
5	Apple

Exercise 2 (15 POINTS)

Draw the path of Jack (with arrows ⟶ ↓)

```
SET <my_variable> to < 0 >

WHILE ── my_variable < 3

    REPEAT <my_variable> times
    Go down

    REPEAT <my_variable + 1> times
    Go left
    Go up

    INCREMENT <my_variable> OF  <1>
```
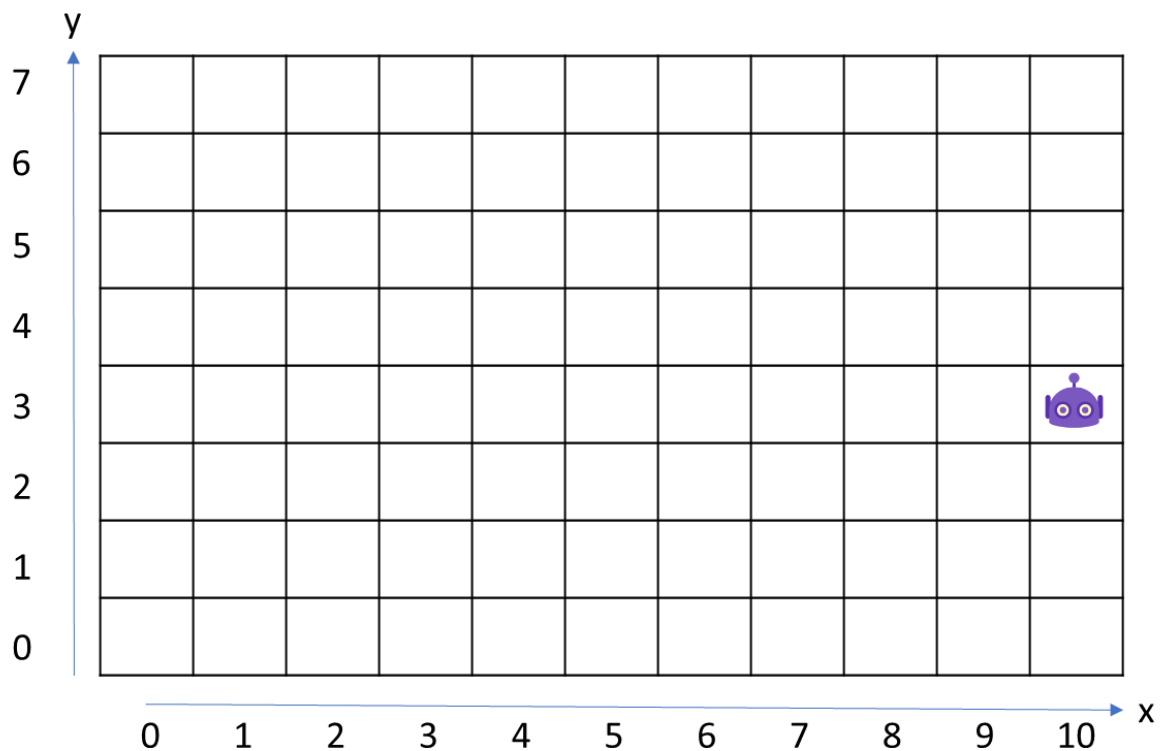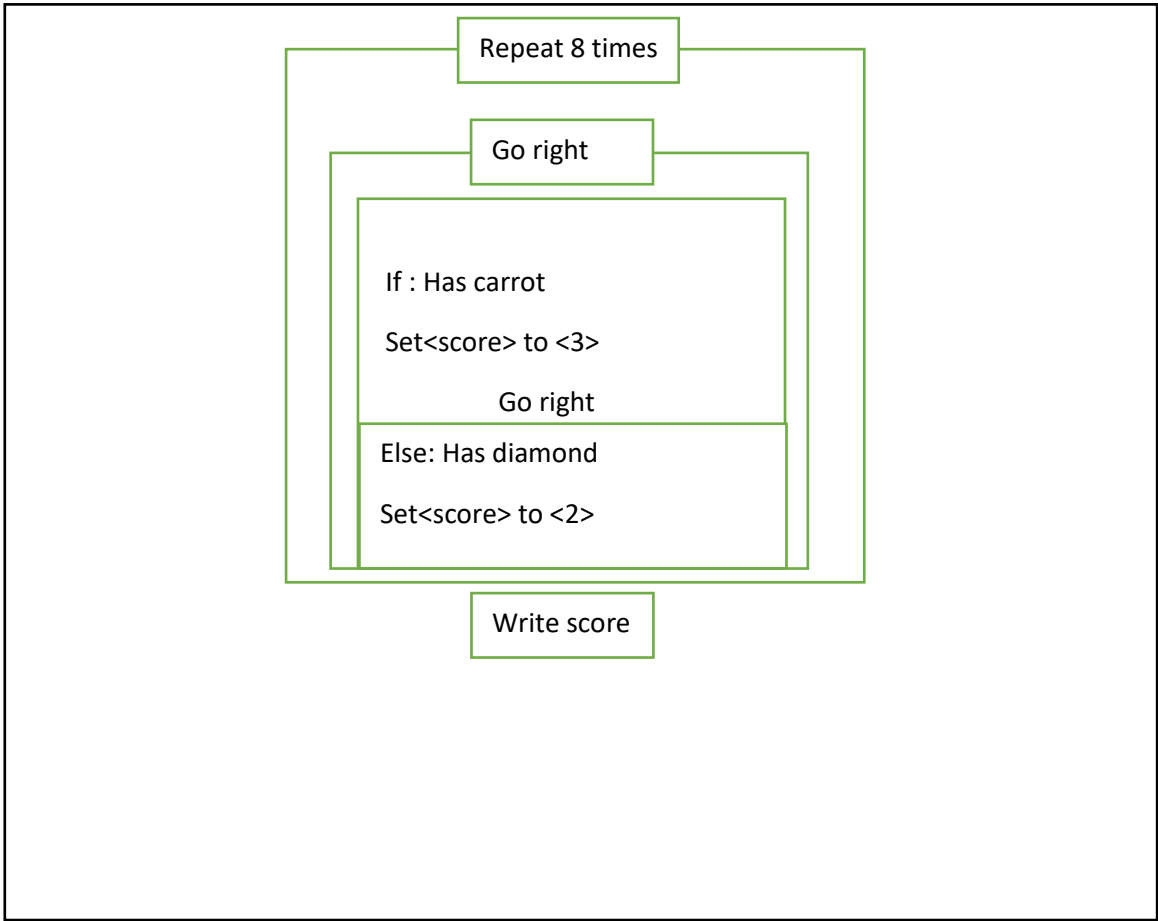
Exercise 3 (25 POINTS)

Objective	• Count the score: If has cell diamond: +2 points If has cell carrot: +3 points • Write the score on the last cell **Warning: your code must work for the 2 cases!!!!**
Maximum number of instructions	10
Allowed instructions	GO-RIGHT IF <CONDITION> SET <**score**> TO < > IF <CONDITION> ELSE INCREMENT <**score**> OF < > REPEAT < > TIMES WRITE <**score**> <**score**>
Allowed conditions	<HAS CARROT> <HAS DIAMOND>

CASE 1

CASE 2

Repeat 8 times

    Go right

        If : Has carrot

        Set<score> to <3>

          Go right

        Else: Has diamond

        Set<score> to <2>

Write score

Exercise 4 (20 POINTS)

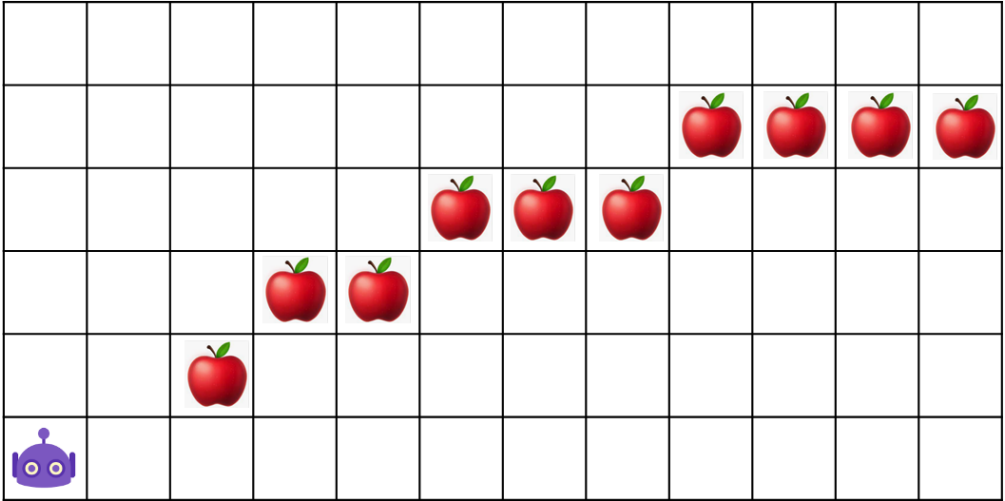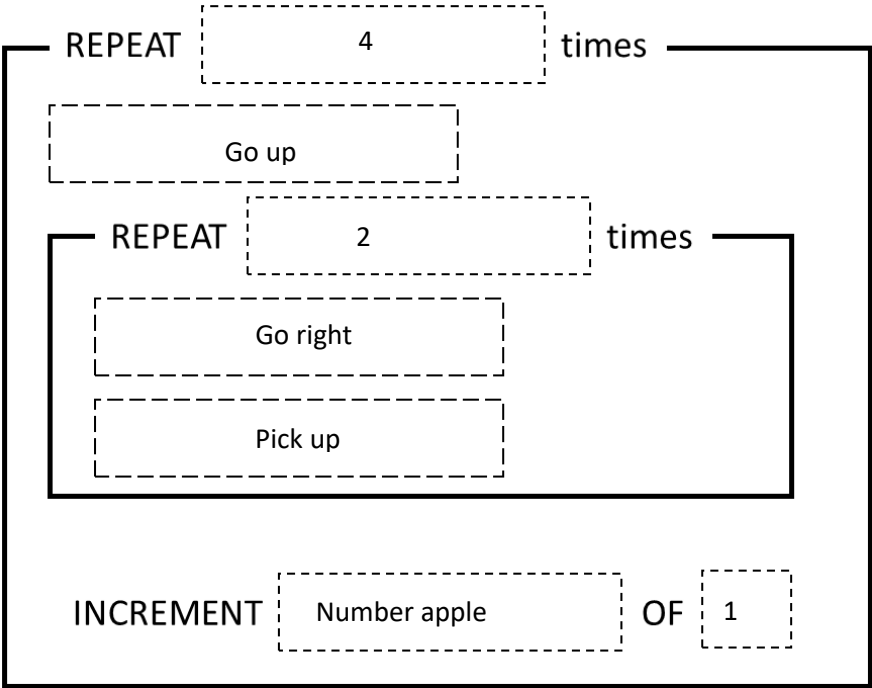| Objective	• Pick up all apples
Allowed instructions	GO-RIGHT GO-UP PICK-UP IF <CONDITION> SET <**number_apple**> TO < > IF <CONDITION> ELSE INCREMENT <**number_apple**> OF < > REPEAT < > TIMES WRITE < **number_apple** > < **number_apple** > WHILE <CONDITION>
Allowed conditions	***NO CONDITION ALLOWED***

SET **number_apple** to [10]

Write <number of apple>

REPEAT [4] times

    Go up

    REPEAT [2] times

        Go right

        Pick up

INCREMENT [Number apple] OF [1]

Exercise 5 (25 POINTS)

Objective	- For each lines: there is a number N. Paint N cells on the right side this number - But if cell has a cross, do not pain the cell *For instance , for case 1 , the result will be :* **Warning: your code shall work for the 2 cases!!!!**
Max number of instructions	10
Allowed instructions	GO-RIGHT GO LEFT REPEAT < > TIMES GO DOWN GO UP PAINT Variables: SET <**number_of_paint**> TO < > <**number_of_paint**> <VALUE ON CELL>
Allowed conditions	***NO CONDITION ALLOWED***

CASE 1

	4					
	2					
	5					
	6					

CASE 2

	3							
	1							
	8							
	4							