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**EXERCISES
CHAPTER 3**

VCZ

EXERCISE 1

Fill the missing words in the following sentences:

1. Each turtle in Logo has name, position, _____, shape, color and pen width.
2. To make a turtle execute a set of commands, we should _____ on it.
3. When we _____ on a turtle we can open its menu.
4. To change a turtle's direction, we should drag its _____ in order to rotate it.
5. A turtle always moves to the direction it is _____.
6. To stop a moving turtle, we should click on it, or we select the Stop All button or we press the _____ button on the keyboard.
7. In _____ palette we can change the color and the pen width of a turtle.
8. When we create a turtle, its pen is up. To make the turtle put the pen down, we should type the command _____.
9. In _____ tab we can see all the existent turtles of the page as well as their names and command sets.
10. With the _____ tool, a turtle can stamp its copy to the background of the page.
11. In the _____ field of the turtle's backpack we can see the set of commands that has been given to be executed by the turtle once or multiple times.
12. To change the size of a turtle we use the _____ command.
13. Inside the Painting/Clipart palette there are two different collections of shapes: Singles and _____.
14. To change the color of a turtle, we first select the color, then we select the _____ tool and finally we click on it.
15. To add a set of shapes (animation) in a turtle, we should select the shapes in the Painting/Clipart palette by holding simultaneously the _____ button of the keyboard.
16. In the _____ field of turtle's backpack we can program the turtle to react when it detects a specific color of the color palette.
17. When we select the _____ command from the turtle's menu, we make the turtle start moving on the page.
18. When we type the command rt _____ we make a turtle bounce (change its heading to the opposite direction).
19. In the _____ field of the turtle's backpack, we can program the turtle to react when it touches another turtle on the page.
20. In the _____ field of the turtle's backpack, we can make a turtle execute a set of commands repeatedly after a preset interval, based on a clock built into MicroWorlds.

Evangelos C. Zioulas (IT Teacher)

EXERCISE 2

A) Describe the steps we must follow to **create 3** turtles on a page.
Which **command** can be used alternatively to create a turtle?

B) How can we **rename** the previous turtles with the following names: **x1**, **x2** and **x3**.

C) **Explain** each one of the following **instructions**:

```
x1, pd bk 150
x2, setsize 100
x3, rt 90
x2, ht
x2, fd 200 st
```

EXERCISE 3

Given the next dialogue box, try to answer the following questions:

```
○ Once          fd 10 wait 5
● Forever
```

A) Explain what do these **commands** cause to the turtle.
B) How can we open this **dialogue box**?
C) What happens, if we change the mode to **Once** in this dialogue box?
D) How can we make the turtle to **move faster** inside the page?

EXERCISE 4

Given the next set of instructions in the command center, try to answer the following commands:

```
maria, pd fd 100
george,
rt 90 setc 55
nick, setc "red
thomas bk 50
jenny,
fd 50 ht
```

A) How many turtles exist on the page?

B) What are the names of the existent turtles?

C) Which turtles change their colors and what are the colors?

D) Which of the turtles become invisible?

E) Where do we have a syntax error inside the commands?

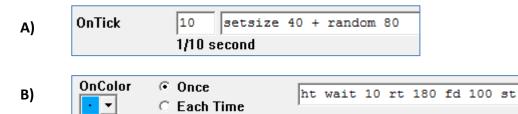**F)** What kind of error message does the system display?

EXERCISE 5

Explain the steps we should follow in order to create a turtle inside the page. The turtle should have the "bird" shape and it should move its feathers staying in the same position without moving.

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Given the next dialogue boxes that are parts of a turtle's backpack, try to explain each of their command sets:

A)

OnTick	10	setsize 40 + random 80

1/10 second

B)

OnColor   ⦿ Once
▪ ▾   ◯ Each Time   ht wait 10 rt 180 fd 100 st

C)

OnTouching	setc 15 stopAll