

4.2 Pass Through the Maze with Tactics.

Intro

Mike No.1 is in the maze now. However, it requires carefulness and tactics to pass through since it's an ultra complicated maze.


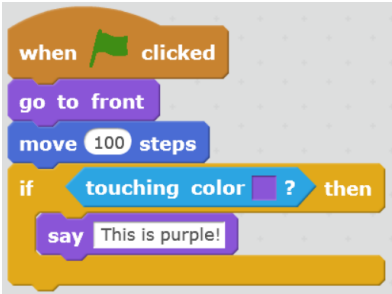

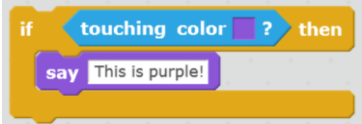
Task

1. Never touch the walls of the maze
2. Avoid the bat-guardians in the maze
3. Don't get struck by the lightning
4. Any issue mentioned above happens, Mike No.1 needs to get back to the starting point.

Start Learning

1. Single Branch

It's required that Mike No.1 shouldn't touch any walls of the maze, but how do we know whether Mike No.1 has touched the wall or not?

Block	Explanation	Example
	Single Branch Conditional-Block. If it matches the condition, then the script contained will be activated.	
	Condition	
	If the sprite touches purple, it will say a set sentence.	


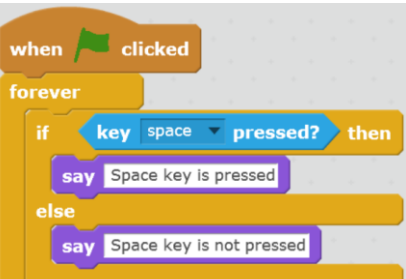
★ Practice


If Mike touches black lines, he will say "It's black".

☆ Explore

When Mike No.1 is on the edge of the stage, it will say "There's no place to go."

2. Dual Branch

Block	Explanation	Example
	Dual Branch Conditional Block. If it matches the condition, then the script contained will	

	be activated. Otherwise, the script in the "Else" block will be activated.
	Condition: Whether the space key has been pressed.







★ Practice

Check whether the Up Key has been pressed.

☆ Explore

Press the Right Arrow key to draw a straight line.


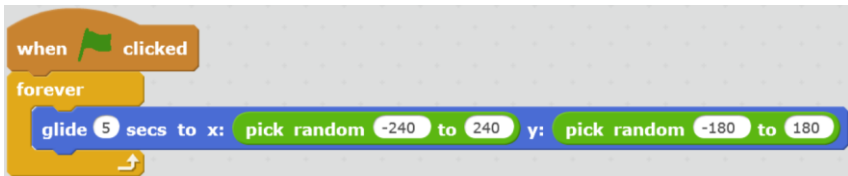
3. Operators

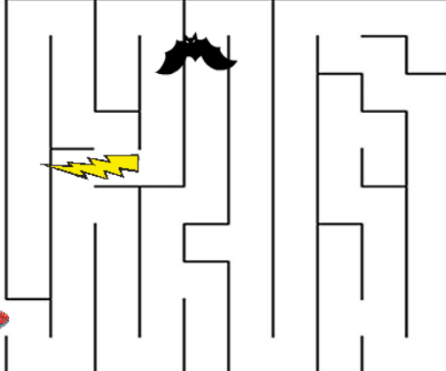


Block	Explanation	Example
	"..and.." block means both of the two requirements must be met.	
	"..or.." block means either of the 2 requirements must be met.	
	"not.." block means the condition it contains should not be met.	

Achieve

While Mike No.1 is moving in the maze, if it touches a black wall, a bat, or a lightning, it will have to get back to its starting point.

Import "Bat2" and "Lightning" from the Sprite Library. (Lightning needs to be adjusted to be in horizontal direction)

Sprite	Program	Effect
 Bat2		

	<pre> when green flag clicked forever loop next costume wait 0.1 secs </pre>	
 <p>Lightning</p>	<pre> when green flag clicked go to x: 80 y: 20 point in direction 90 set rotation style left-right forever loop move 8 steps if on edge, bounce </pre>	
 <p>Transformation</p>	<pre> when green flag clicked go to x: -217 y: -116 point in direction 90 forever loop if touching Bat2 ? then go to x: -217 y: -116 if touching Lightning ? then go to x: -217 y: -116 if touching color black ? then go to x: -217 y: -116 </pre>	

Tips

Regarding the "touch or not" condition, we can use another simple way:

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when green flag clicked
  go to x: -217 y: -116
  point in direction 90
  forever loop
    if touching Bat2 ? or touching Lightning ? or touching color black ? then
      go to x: -217 y: -116

```

Homework

Challenge yourself to make an even more complicated maze with more obstacles.

What You've Learnt?

Adventure Diary (Self-Assessment)

Gas Station (Other's Assessment)