Using Waits, Loops and Switches

I am in a loop!

WAIT please!
1. In programming, what is a loop? When is a loop useful?

2. How can you control the duration for which a loop repeats?

3. In programming, what is a switch?
1. In programming, what is a loop? When is a loop useful?
   A loop is an operator that allows us to repeat a set of commands indefinitely. Loops are useful when you need to repeat a set of commands multiple times.

2. How can you control the duration for which a loop repeats?
   You can control how many times a loop repeats by clicking the dropdown arrow next to “Control” on the loop block and setting it to forever, time, sensor, count or logic.

3. In programming, what is a switch?
   In programming, a switch is an object that gives different commands depending on the state it is in.
Wait Block Activity

**Objective:** Combine wait blocks, loops and switches to perform a task

**Do This:** First, attach 2 touch sensors (name them A and B)

Then program the robot to perform the following task:

- Stay at rest and display “Ready” on the screen.
- Move left and display “Forward” whenever touch sensor 4 is pressed.
- Move right and display “Reverse” whenever touch sensor 1 is pressed
- Stay at rest and display “Stop” when no buttons are pressed.

***Hint: Click on the icon, drag the block into the program, and select “Text” from the dropdown menu to display text on screen.***
Wait Block Activity Solution
Wait Block Activity Solution

1

2

3

4

various settings
Wait Block Activity Solution

various settings (continued)
Wait Block Activity Solution

various settings (continued)

8

9
Wait Block Activity Solution

various settings (continued)

10

11
Wait Block Activity Solution

various settings (continued)
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1. In programming, what is a loop? When is a loop useful?

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Vocabulary

**brainstorming:** Thinking of ideas as a group.

**iteration:** Doing something again, especially with the intent to make improvements.

**loop:** An operator that repeats a set of commands.

**switch:** In programming, a switch is an object that gives different commands, depending on the state it is in.
Images Sources


Screen captures, diagrams and drawings by author