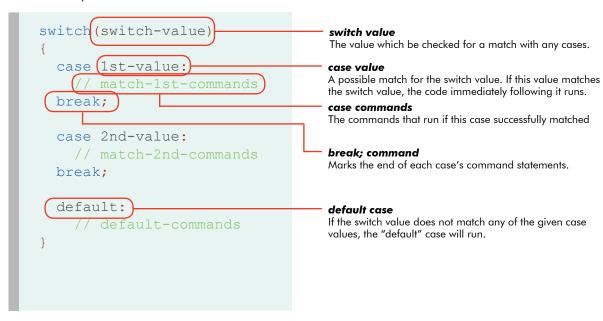# Switch Case

The switch-case command is a **decision-making statement** which chooses commands to run from **a list of separate "cases"**. A single "switch" value is selected and evaluated, and different sets of code are run based on which "case" the value matches.

Below is the pseudocode outline of a switch-case Statement.

```
switch (switch-value)
{
    case 1st-value:
        // match-1st-commands
    break;

    case 2nd-value:
        // match-2nd-commands
    break;

    default:
        // default-commands
}
```

switch value
The value which be checked for a match with any cases.

case value
A possible match for the switch value. If this value matches the switch value, the code immediately following it runs.

case commands
The commands that run if this case successfully matched

break; command
Marks the end of each case's command statements.

default case
If the switch value does not match any of the given case values, the "default" case will run.

Switch Case

The touch sensors are used to set the value of turnVar in the program below. The switch-case statement is then used to determine what to do, based on its value. No sensors pressed will leave turnVar with a value of 0, and the robot will run the "default" case and go straight. Pressing touch1 will give turnVar a value of 1, and make case 1 run (left turn). Pressing touch2 makes turnVar 2, which makes case 2 (right turn) run. Both turns reset turnVar to 0 before ending, to allow fresh input on the next pass of the loop.

```
1   task main()
2   {
3     int turnVar=0;
4
5     while(true)
6     {
7       if(SensorValue(touch1)==1)
8        turnVar=1;
9
10      if(SensorValue(touch2)==1)
11       turnVar=2;
12
13      switch (turnVar)
14      {
15       case 1:
16         motor[motorC]=-100;
17         motor[motorB]=100;
18         turnVar=0;
19         break;
20
21        case 2:
22         motor[motorC]=100;
23         motor[motorB]=-100;
24         turnVar=0;
25         break;
26
27       default:
28         motor[motorC]=100;
29         motor[motorB]=100;
30       }
31     }
32  }
```

Switch statement
The "switch" line designates the value that will be evaluated to see if it matches any of the case values.

Case statement
The first line of a case includes the word "case" and a value. If the value of the "switch" variable (turnVar) matches this case value (1), the code following the "case" line will run.

Commands
These commands belong to the case "1", and will run if the value of the "switch" variable (turnVar) is equal to 1.

Break statement
Each "case" ends with the command **break;**

Default case statement
If the "switch" value above did not match any of the cases presented by the time it reaches this point, the "default" case will run.