

Reference

Robot Decision Making

Using Boolean Algebra, we can take a situation where the robot would need to take more than one condition into account, combine them with **logical operators**, and make a decision based on the results of the conditions (*See also Boolean Logic*). The resulting values from the conditions are called **truth values**. This essentially means that the conditions break down to whether or not the condition is true or false.

Branching

Going along with the idea that robots are able to break down conditions into truth values, we can have robots perform a certain task depending on if the conditions are true, or false. This idea of performing a task depending on the outcome of the condition is called **branching**.

Example:

Take, for instance, a robot that has an Ultrasonic sensor attached to it. If we want the robot to move around in a room and avoid obstacles, we would tell it this:

While the Ultrasonic sensor doesn't detect something close

Move forward

```
task main()
{
    while(condition)
    {
        if(condition)
        {
            // commands
        }
        else
        {
            // commands
        }
    }
}
```