# INTRO TO *PROGRAMMING*: IF STATEMENTS

In the previous subsystem, you used a combination of logical blocks to only perform a specific action if the result of the logical statements was true. Effectively, you told the robot how to make a decision (to pull or not to pull the lever) based on the value of the sensor. But, what if the outcome of a decision was more than a single block? 🤔

Let's suppose that you wanted to write a program that would automatically respond to your phone's notifications. 📲 If the notification is for a text message, you want to run some code (instructions) to tell your phone to open up your messaging app, read the message, and send an appropriate reply. 💬 However, if the notification was for an email, the steps to reply would be pretty different. 📧 You would need to open up a different app and fill out multiple fields, for starters.

In this situation, we can see that we want to run different code based on the type of notification that we receive. We can write programs with this behaviour using IF statements.

IF statements allow us to run completely different code depending on a condition.

**The basic structure of an IF statement goes like this:**

If some condition X is TRUE:
    run code A
Otherwise:
    run code B

**Only one of the two options in the IF statement is run. Code A is only run if condition X is TRUE. Code B is only run if condition X is FALSE.**

**We can chain multiple IF statements together to decide between multiple options. For example:**

If some condition X is TRUE:
    run code A
Otherwise, if another condition Y is TRUE:
    run code B
Otherwise:
    run code C

**In our notification example, it may look like this:**

If notification_type == text message:
    run code A
Otherwise, if notification_type == email:
    run code B
Otherwise:
    do nothing