

## Selection in an algorithm | Part A

Hello, in this video we will be looking at how programs deal with different conditions. We're going to write a simple program that detects if a user types in 'yes' or 'no'. The important key word here is **if**. Programming languages use this key word to test the condition that is typed. If it matches it will execute the block of text below, this is called selection. So let's actually code a simple program, we're going to use a string variable to hold the users response, so let's ask them a question which will have a yes or no answer.

I have here a very simple program that detects whether or not the user likes or dislikes Brussel sprouts, so it's a bit of fun really. I've got two variables that I am using in the program. The first one will detect whether or not the user actually likes Brussel sprouts and the second one is to hold the text that the user is going to type in – yes or no. So we get the user to type in yes or no to the question – “Do you like Brussel sprouts?” – and then we have blocks of code that will execute depending on what they've typed in. So for the first block you will see the keyword **if**, has been highlighted in orange. If the response equals yes, so they have typed in yes, then we will execute the code beneath it, if they've typed in no, then we'll execute the code with the keyword **elif** and I'll be talking a little bit more about this in a moment. If they type in something else I've got another keyword **else**, that will pick up any other response that the user types in, so let's run the program, click on run and it asks me the question “Do you like Brussel sprouts?” well as it happens I do so I am going to type in yes and it tells me “Well done”. Now if you look at the code on the other side of the screen you can see – Print “Well done” - when the user's typed in yes so our program has worked. So let's suppose that I don't like Brussel sprouts so we will run the program again, click on run, it asks me the same question but this time I am going to type in no, and it says “well you should because they're tasty” and again if you look at the block of code here, it starts with the keyword **elif**, I've typed in no, so it says, print “Well you should because they are tasty!”. Well let's suppose I make a mistake and I type in something silly the program is not going to crash because my **else** statement will pick up anything else that the user has typed in. So we will just do that one more time, so run the program, “Do you like Brussel sprouts?” I'm going to type in 't', which isn't yes, isn't no, enter, and it says “Not sure? Give them another try!” exactly as the code should run so that program worked absolutely fine.

This question only has two possible answers but code can become quite messy if we have multiple possible conditions to match. Python requires you to indent the code that you want to execute if the conditions matched, you should do this will all languages because it helps to make the code more readable but with Python you don't get the choice because it won't work without it.