technoteach

technocamps

UNDEB EWROPEAIDD
EUROPEAN UNION

Llywodraeth Cymru
Welsh Government

Cronfa Gymdeithasol Ewrop
European Social Fund

Prifysgol Abertawe
Swansea University

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

PRIFYSGOL BANGOR UNIVERSITY

Cardiff Metropolitan University
Prifysgol Metropolitan Caerdydd

i.t.wales

PRIFYSGOL ABERYSTWYTH UNIVERSITY

PRIFYSGOL glyndŵr Wrecsam
Wrexham glyndŵr UNIVERSITY

University of South Wales
Prifysgol De Cymru

technoteach
technocamps

Python: Data Types

Data Types

The data types we will most commonly use in Python are:

int meaning integer, used for whole valued numbers

float meaning floating point number, used for non-whole numbers such as 3.1

str meaning string, used for letters and symbols in a text format

bool meaning Boolean, a data type that only has the value True or False

20 is an integer where as **20.0** is a float.

"five" is a string and **"5"** is a string whereas **5** is an integer.

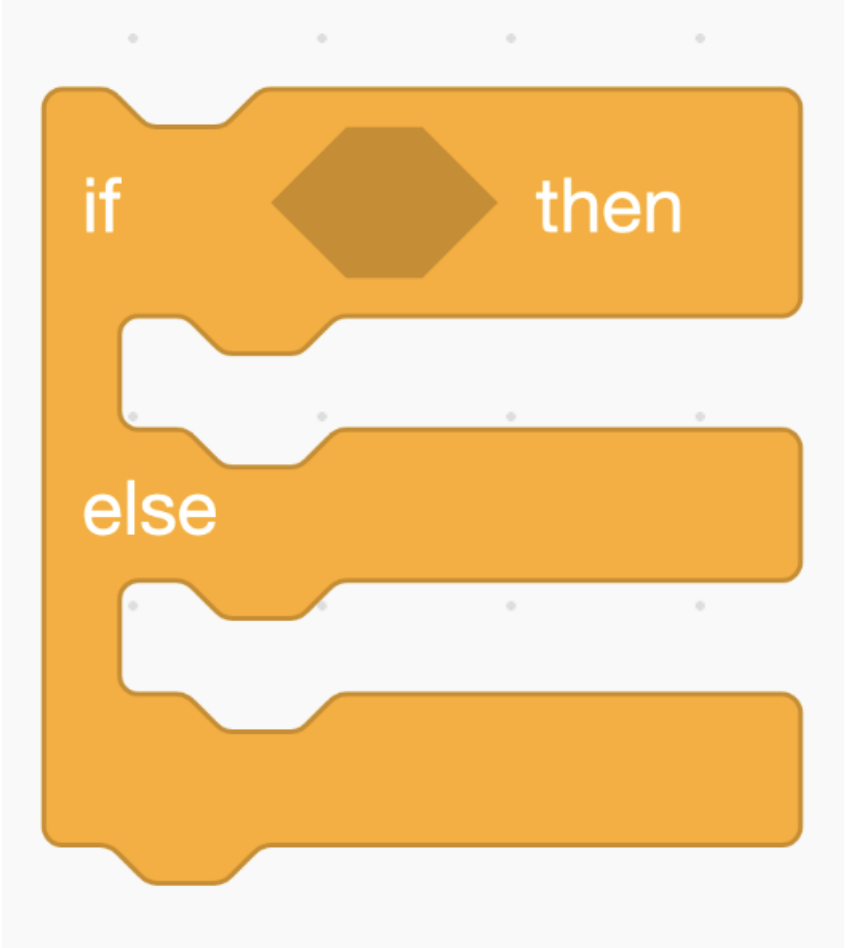
"True" is a string whereas **True** is a Boolean.

technoteach
technocamps

Python: Conditionals

Decision Making

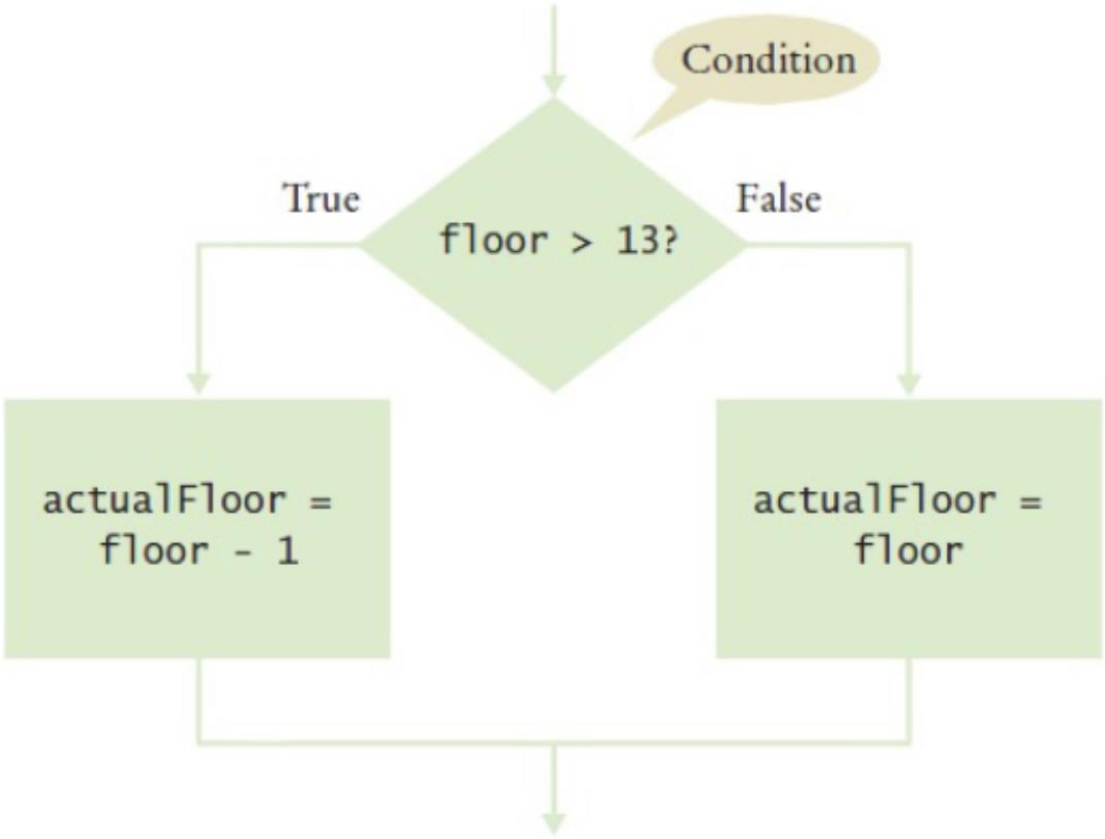
- If I wanted my code to make a decision in Scratch what block would I use?
- An “if” or an “if else” block
- Python is very much the same, but now we need to write it into our program



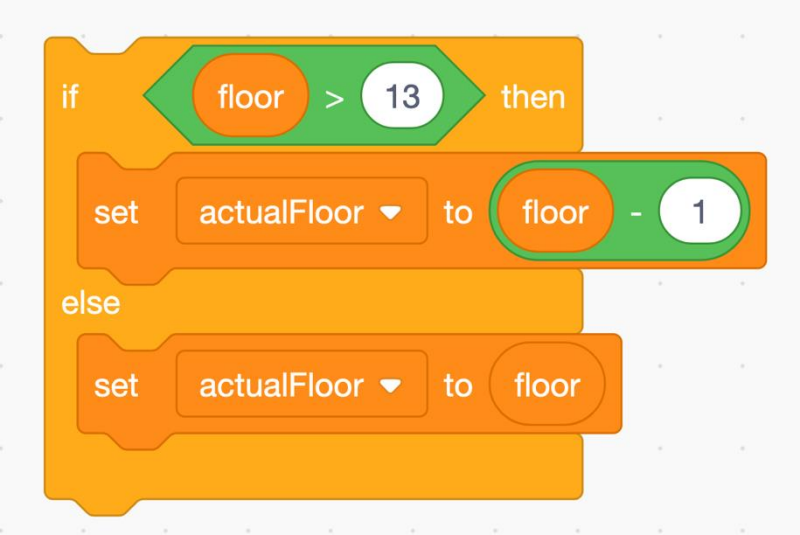
The Program

- I'm trying to program a lift for a very tall building
- The building doesn't have a 13th floor, it skips straight to floor 14
- The lift still needs to take everyone to the *actual* floor
- **If** the button pressed is greater than 13 the actual floor the person should be taken to is 1 less than the requested floor
- **Else** the person should be taken to the actual floor corresponding to the button pressed

If Else Flow Chart



Scratch & Python




```
if floor > 13 :
    actualFloor = floor - 1
else :
    actualFloor = floor
```

Relational Operators

Every if statement has a condition

Table 1 Relational Operators

Python	Math Notation	Description
>	>	Greater than
>=	≥	Greater than or equal
<	<	Less than
<=	≤	Less than or equal
==	=	Equal
!=	≠	Not equal