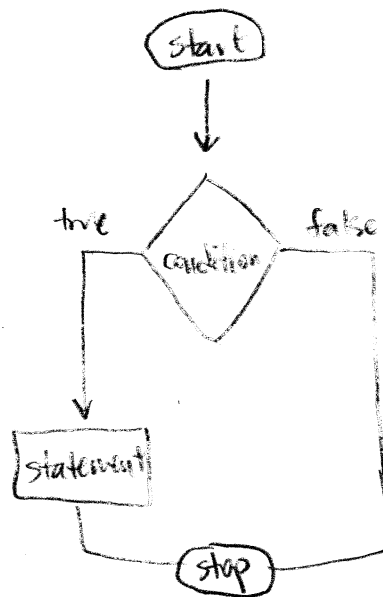


Lecture 5- Conditional Statements

* Prayer / AMA / Quiz

I. The "if" statement

* When we program, we often need branch points where we make decisions. This is done using an "if" statement.



* In Python we write this as:

```

if (logical condition):
    statement
  
```

Example:

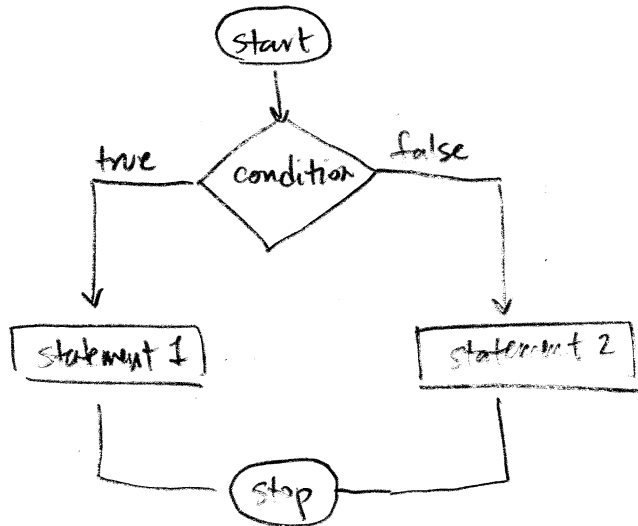
```

x = 2
if (x == 2):
    print("equal")

```

← notice the difference between the assignment operator '=' and the comparison operator '=='

* what if we need this logical structure?



* In python we write this as :

```

if (logical condition):
    statement 1
else:
    statement 2

```

} if-else construct

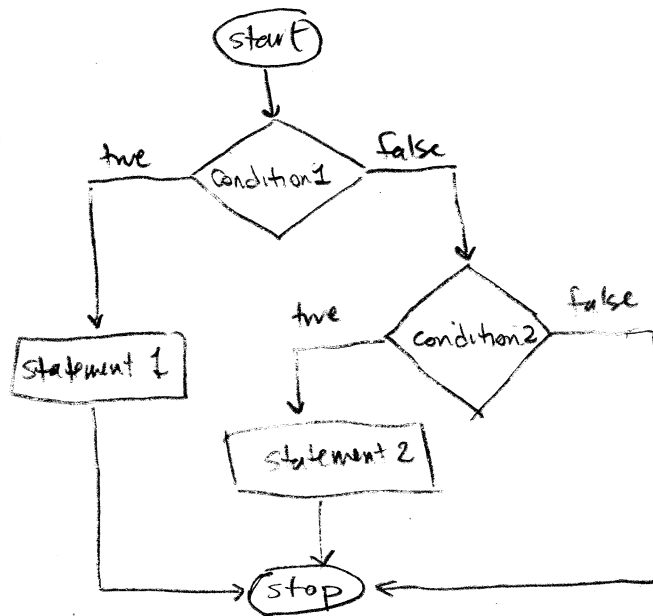
* Example

```

x = 2
if (x < 2):
    print("less than 2")
else:
    print("greater than or equal to 2")

```

* Finally, sometimes we need multiple criteria.



* in python we write this as :

```

if (condition 1):
    _____ statement 1
elif (condition 2):
    _____ statement 2
  
```

This is an if-elif
statement or a
nested if.

↑ one if inside another.

II. Conditional Operators

* There are logical operators and keywords that are useful in 'if' statements.

True

False

and : True and True → True
 or : True or False → True
 not : not True → False

* We also have useful comparison operators

$==$: equal

$!=$: not equal

$<$: less than

$>$: greater than

$<=$: less than or equal to

$>=$: greater than or equal to

Activity

Conditionals in Python

Activity

Conditionals in Excel.