Loops and Conditionals

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Today's Objectives

1) Understand what a loop is and it's structure

2) Understand why loops are important and see how they applicable to everyday life.

2 Min Warm Up : Loops

1) Please define what a loop is in your own words

2) Please define what the term condition means in your own word

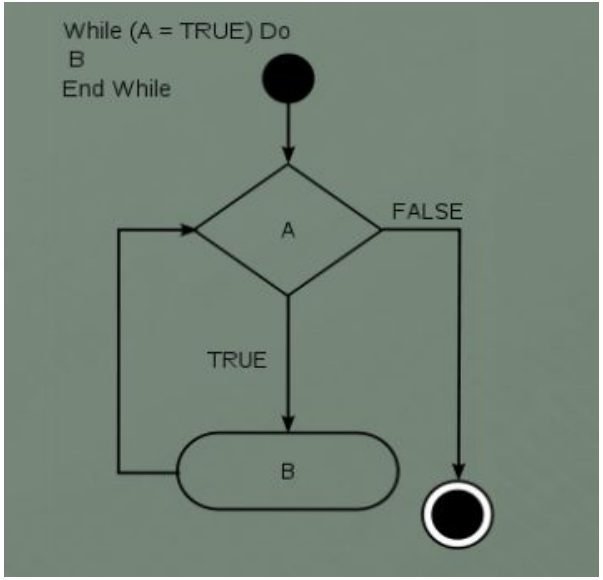
Formally Defining a Loop

Loop: A series of instructions (as for a computer) that is repeated until a terminating condition is reached

Loops have a

- Starting point
- Procedure
- End/Stopping point

Why are loops important?



How do we construct loops

```
for(i = 0; i < x, i++){
 console.log(i)
 }
```

for : defining the loop

i = 0: initiating the iterator

i < x: terminator, which is the ending condition

i++ : the accumulation

What happens if a loop gets stuck

Infinite loop - is a sequence of instructions in a computer program which loops endlessly, either due to the loop having no terminating condition, having one that can never be met, or one that causes the loop to start over

-Loading screens such as the spinning mac wheel can be an indicator of an infinite loop

Conditional Statements

Conditional Statements: Are features of a programming language which perform different computations or actions depending on whether a programmer-specified boolean *condition* evaluates to true or false

First Form:

For instance, “If it snows, then they cancel school.”

"It snows" is the hypothesis.

"They cancel school" is the conclusion.

When the condition is true, you execute the body

The Else Block

Second Form:

```
if (condition):
    block1
else :
    block2
```

For example:

```
If (i'm happy):
    I like tea
else:
    I do not tea
```