

CS Bridge Module 6: Iterative Statements

Control Flow of Iterative Statements:

- Statements that repeat for some determined action or input

While Loops

Syntax: while (condition) {

...
...
}

Semantics: - Program is executed up to the "while" statement

- Once the "while" statement is reached

First: Condition is evaluated, either true or false

True: The body is executed, and the condition is re-evaluated

- When the condition turns false

False: Program continues in its original path

While the condition is still True, the body is executed over and over.
When the condition turns False, 'break' out and continue program flow.

"For" Loops

Syntax: ...
for (initialization; condition; increment) {
...
}

Semantics: Execute program up to "for" statement

- Firstly: Executes "initialization" statement one time
- Secondly: "Condition" is evaluated, either True or False
 - If "condition" is true, the body is executed,
 - followed by the "increment" statement.
- Then: "Condition" is re-evaluated, if True body is executed
 - followed by the "increment" statement
- If "condition" is false ("For" Loop Breaks Out)
- "For" Loop ends, program just continues with original execution

- Preferred over "while" loops