break — Break out of for, while, or do loop

Description

break exits the innermost for, while, or do loop. Execution continues with the statement immediately following the close of the loop, just as if the loop had terminated normally.

break nearly always occurs following an if.

Syntax

for, while, or do {
    ...
    if (...) {
        ...
        break
    }
}

\( stmt \leftarrow \text{break jumps here} \)

\(...\)

Remarks and examples

In the following code,
\[
\text{for (i=1; i<=rows(A); i++) {}
\text{    for (j=1; j<=cols(A); j++) {}
\text{        ...
\text{            if (A[i,j]==0) break
\text{        }
\text{        printf("j = \%g\n", j)
\text{    }
\text{}}
\text{}}
\text{}}
\]
the break statement will be executed if any element of \( A[i,j] \) is zero. Assume that the statement is executed for \( i=2 \) and \( j=3 \). Execution will continue with the printf() statement, which is to say, the \( j \) loop will be canceled but the \( i \) loop will continue. The value of \( j \) upon exiting the loop will be 3; when you break out of the loop, the \( j++ \) is not executed.

Also see

[M-2] continue — Continue with next iteration of for, while, or do loop

[M-2] do — do ... while (exp)

[M-2] for — for (exp1; exp2; exp3) stmt

[M-2] while — while (exp) stmt

[M-2] Intro — Language definition