Title

---

while — while (exp) stmt

Syntax

```
while (exp) stmt


while (exp) {
        stmts
}
```

where *exp* must evaluate to a real scalar.

Description

while executes *stmt* or *stmts* zero or more times. The loop continues as long as *exp* is not equal to zero.

Remarks and examples   stata.com

To understand while, enter the following program

```
function example(n)
{
    i = 1
    while (i<=n) {
        printf("i=%g\n", i)
        i++
    }
    printf("done\n")
}
```

and run example(3), example(2), example(1), example(0), and example(-1).

One common use of while is to loop until convergence:

```
while (mreldif(a, lasta)>1e-10) {
    lasta = a
    a = ...
}
```

Also see

[M-2] **semicolons** — Use of semicolons

[M-2] **do** — do . . . while (exp)

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

[M-2] **break** — Break out of for, while, or do loop

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

[M-2] **intro** — Language definition