

[Enterprise AJAX Framework](#)
www.SmartClient.com
 Chosen by top software vendors. View 200+ examples & full docs



Variable Expansion in FOR Loops

One question about FOR loops has cost batch scripters many a sleepless night:

Why doesn't the SET command work in my FOR loop?

My counter-question is: Doesn't it?

I think it does *exactly* what you *tell* it to do.

On this page I'll try to explain how a **FOR** loop is interpreted, why it seems unable to **SET** variables, and how to **SET** variables in **FOR** loops anyway.

Once you understand how the **FOR** loop is interpreted, you'll know how to circumvent its limitations.

First some hands-on training: [exercise 1](#)

OK, what did we just find out?

It seems we can *not* change a variable within a **FOR** loop *and* use that changed variable in the same loop.

Can't we? Yes we can!

What we need is **delayed variable expansion**.

That means the variables are "expanded" not *before* but *during* command execution.

Typing **SET /?** and **SETLOCAL /?** on a DOS-prompt will show you more details on delayed variable expansion, as do the [SET](#) and [SETLOCAL](#) sections of [AllHelp](#) generated HTML pages.

Time for some hands-on training again: [exercise 2](#)

OK, what did we just learn?

1. To use delayed variable expansion we need to enable it first.
 This can be done using **CMD /V:ON /C** to start the batch file, or, better yet
SETLOCAL ENABLEDELAYEDEXPANSION inside the batch file.
2. The variable whose expansion should be delayed should be surrounded by exclamation marks instead of percent signs.

A final note on FOR command layout:

```
FOR %%A IN (1 2 3) DO (
    SET VAR1=%VAR1%%A
    SET VAR2=%VAR2%%A
)
```

is identical to:

```
FOR %%A IN (1 2 3) DO (SET VAR1=%VAR1%%A&SET VAR2=%VAR2%%A)
```

Both are interpreted as a single FOR command line, so variable expansion takes place before execution of the FOR command.

So neither of these will work, unless used with delayed variable expansion:

```
FOR %%A IN (1 2 3) DO (  
    SET VAR1=!VAR1!%%A  
    SET VAR2=!VAR2!%%A  
)
```

or:

```
FOR %%A IN (1 2 3) DO (SET VAR1=!VAR1!%%A&SET VAR2=!VAR2!%%A)
```

Note: Read about this [bug in delayed variable expansion](#), found by Scott Wegner!

PHP Code Generator
www.scriptcase.net
Rapid **WEB** application **development** Forms, Reports, Grids, Charts, PDF



