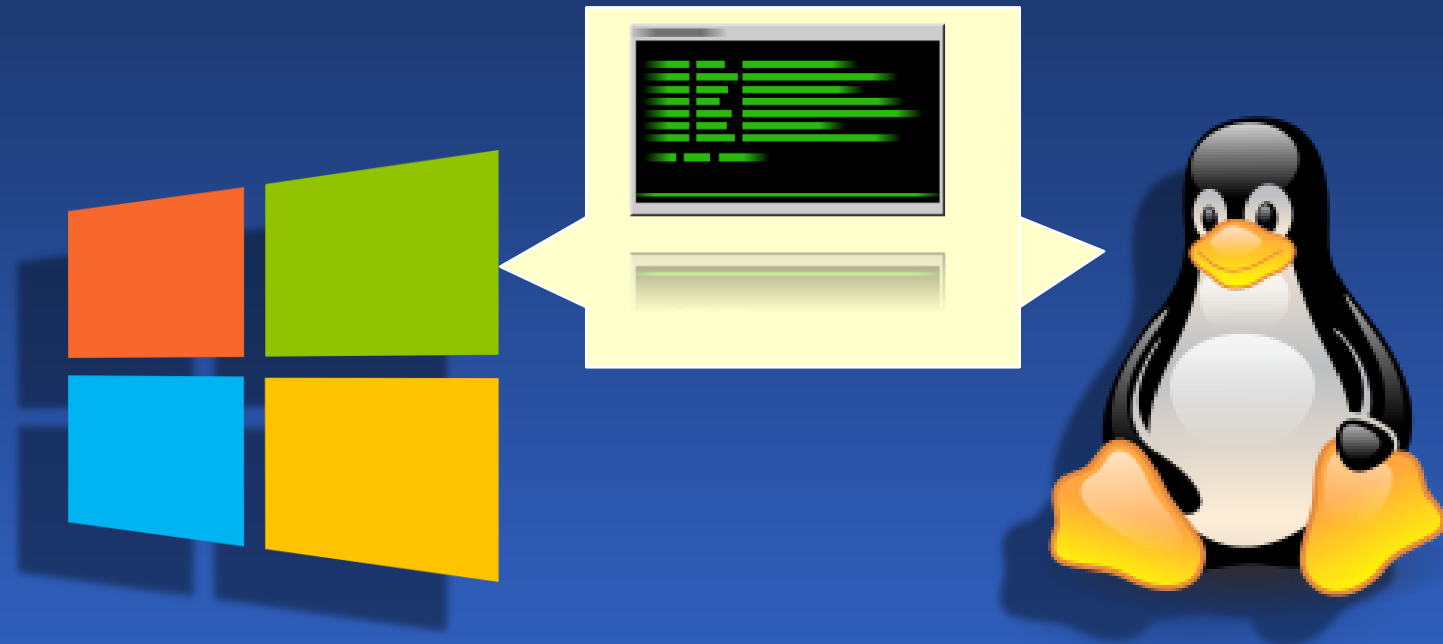


System shells



BAT syntax - 3



3 - BATCH PROGRAMS

.BAT etc.

BATCH script file

- ◆ Type a group of commands in **scr1.bat**

```
set BEBACK=%cd%
cd %USERPROFILE%\BB
md lab
cd lab
md AA,BB;CC
Date /t > AA\dd.txt
Time /t > BB\tt.txt
Echo %USERNAME% > CC\uu.txt
@Copy CC\uu.txt+AA\dd.txt+BB\tt.txt ..\here.txt
cd ..
tree /F /A >> here.txt
type here.txt
cd %BEBACK%
```

- ◆ Run the **scr1.bat** batch script
 - All structure is created at once in milliseconds

Automate the cleaning

- ◆ Type another group of commands in **scr2.bat**

```
@echo off
set BEBACK=%cd%
cd %USERPROFILE%\BB

rd /S /Q Lab
del /Q *.*

cd %BEBACK%
```

- ◆ Run the **scr2.bat** batch script
 - Now we have a CLEANER
 - Note **%BEBACK%** is now a defined variable

Script special variables

◆ Type another group of commands in **scr3.bat**

```
@echo off
```

```
Echo %0
```

```
Echo %1-%2-%3-%4-%5
```

```
Echo %6-%7-%8-%9
```

A unique % is required for parameters

◆ Run the **scr3.bat** batch script

- Shows script parameters
- **%0** is the script name
- **%1-%9** are the following words (*no more than 9!*)
- Type **scr3 A B C D E F G H I**
- Type **scr3 A,B,C,D**
- Type **scr3 A;B;C;D**

Script variables operations

- ◆ Add another group of commands to **scr3.bat**

```
@echo off
Echo %0
Echo %~dp0
Echo %~dpnx
Echo %~f0
```

- ◆ Run the **scr3.bat** batch script
 - **%~dp0** is drive and folder of the script file
 - **%~x0** is extension of the script file
 - **%~dpnx0** or **%~f0** is full name of the script file
- ◆ We don't need a **%BEBACK%** variable 😊

Shift the script variables

- ◆ Add another group of commands to **scr3.bat**

```
@echo off
Echo %1-%2-%3
Shift
Echo %1-%2-%3
Shift
Echo %1-%2-%3
```

- ◆ Run the **scr3.bat** batch script
 - **Shift** does as it says, arguments move left
- ◆ All arguments may be treated as **%1** ...

Use the navigation stack

◆ Modify **scr1.bat**

```
PUSHD %USERPROFILE%\BB
md lab
cd lab
md AA,BB;CC
Date /t > AA\dd.txt
Time /t > BB\tt.txt
Echo %USERNAME% > CC\uu.txt
@Copy CC\uu.txt+AA\dd.txt+BB\tt.txt ..\here.txt
cd ..
tree /F /A >> here.txt
type here.txt
POPD
```

◆ Folder navigation keywords

- **PUSHD** remembers before moving
- **POPD** gets back to the original folder

Document your scripts

◆ Modify **scr3.bat**

```
@echo off
:: Will display name and all arguments
REM Will display name and all arguments
Echo %0
Echo %1-%2-%3-%4-%5-%6-%7-%8-%9
```

COMMENT

REMARK

◆ Run the **scr3.bat** batch script

- Line starting with "::" does not display
- Line starting with "**REM**" does not display

◆ Suppress **@echo off** in **scr3.bat**

- Line starting with "::" does not display
- Line starting with "**REM**" displays
- "**REM**" may be interesting for debug purposes

Chain your scripts

◆ Type **scr4.bat**

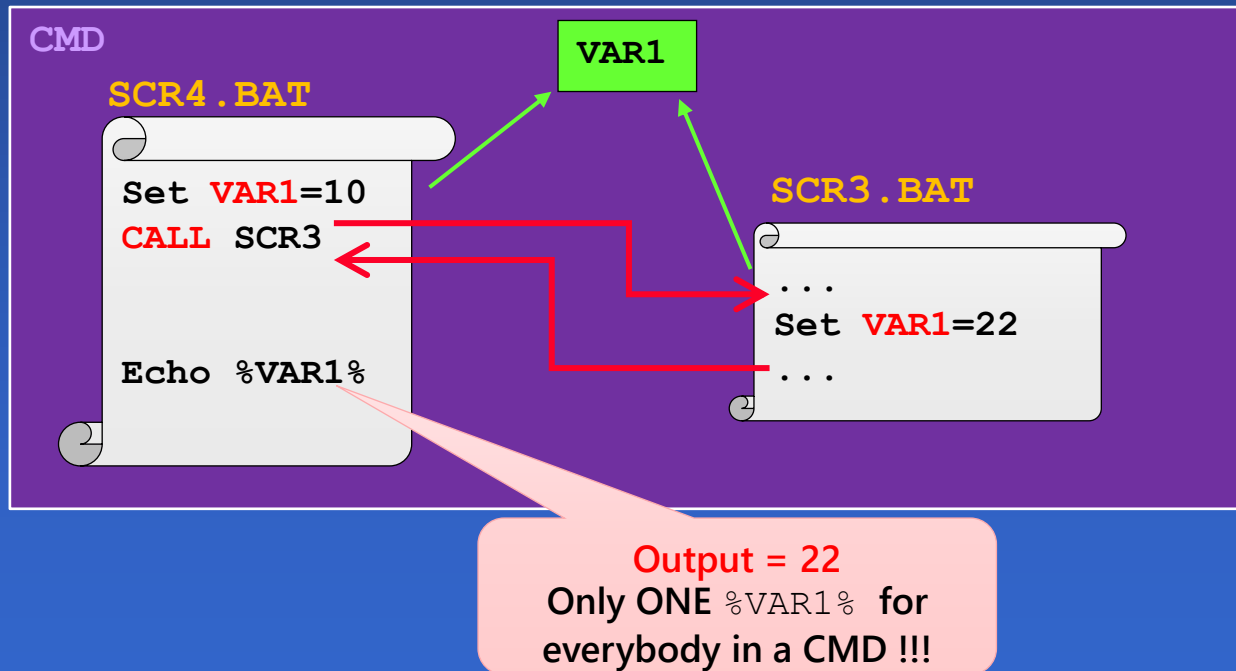
```
@echo off
REM -- Will make a call ro SCR3.BAT --
Echo %0
CALL scr3 A B C
Echo --^> %0 Done
```

◆ Run the **scr4.bat** batch script

- **CALL** Will execute **scr3.bat** as if we called it directly
- At the end of **scr3.bat**, control goes back to scr4
- Not using **CALL** would end caller script

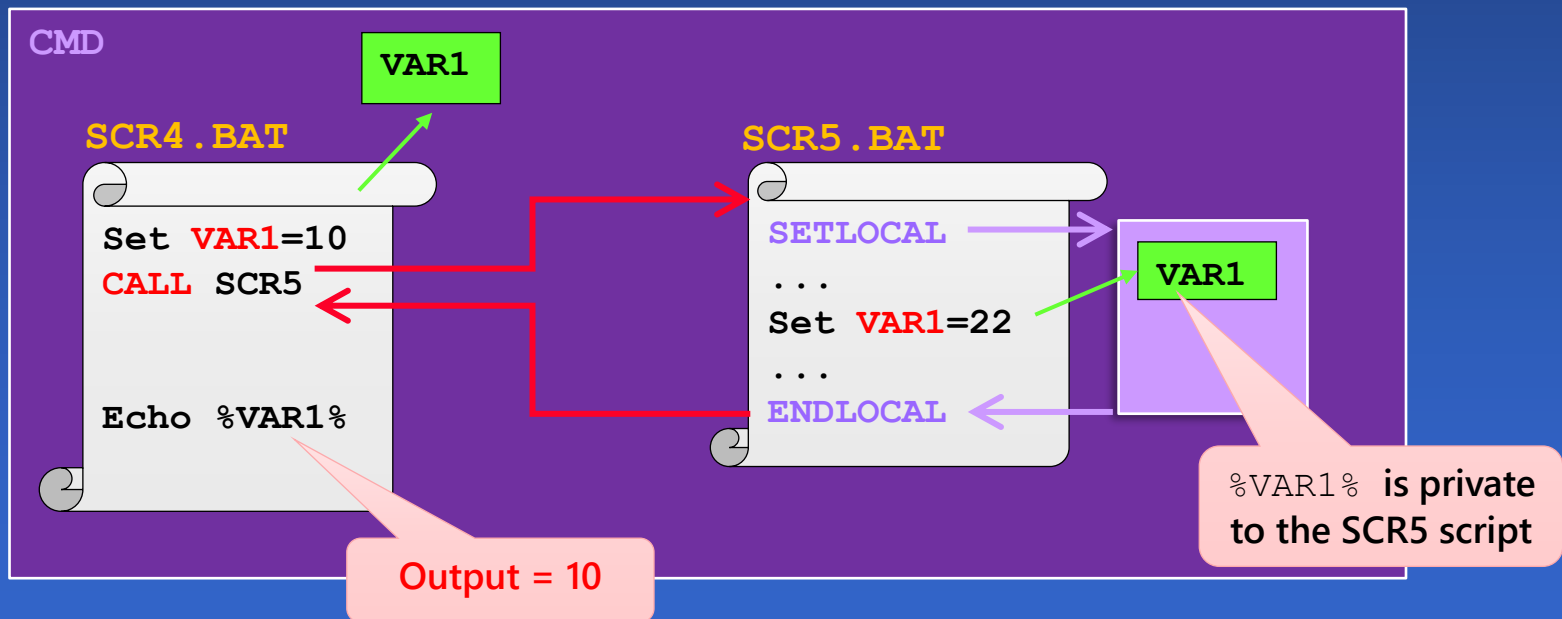
Variables base scope

- ◆ Variables belong to the CMD environment
 - Variables created are lost on **EXIT**
 - All scripts in a CMD share the variables
 - Calling a script may create variable collisions



Variables scope modifier

- ◆ Variables may be set to the current script
 - Local declarations on **SETLOCAL**
 - Back to environment on **ENDLOCAL**
 - **ENDLOCAL** will always be called at the end of a script



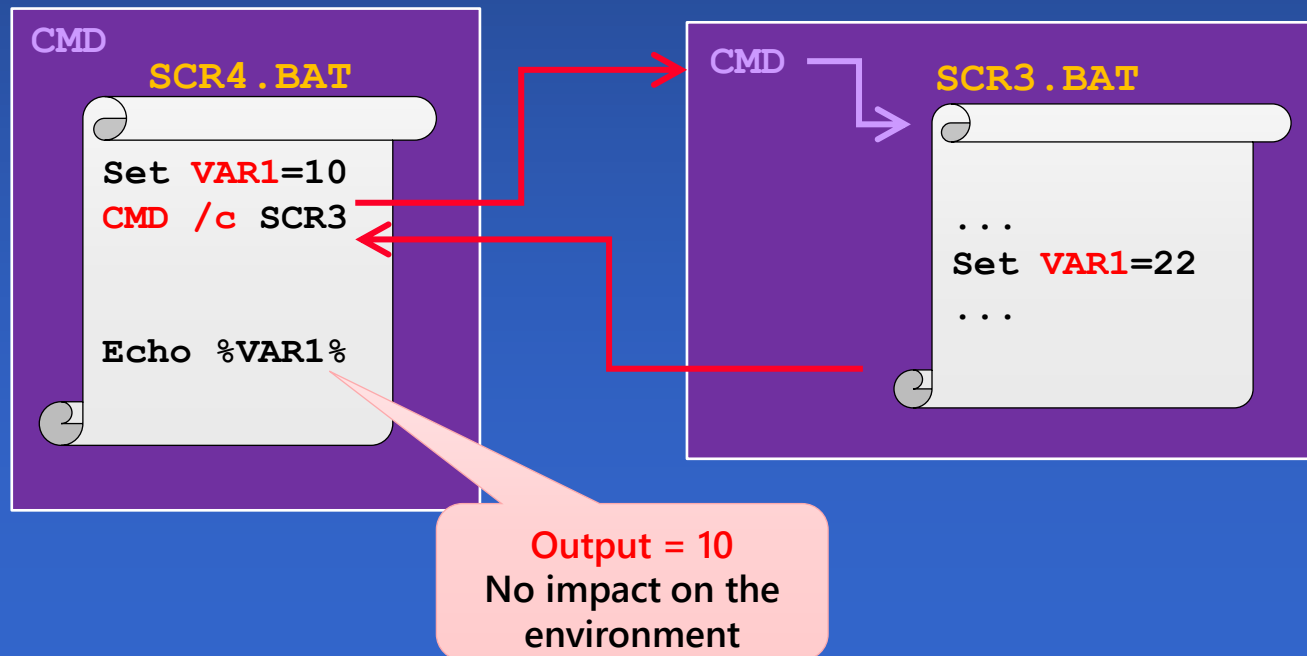
Cascade your scripts

◆ Modify **scr4.bat**

```
@echo off
REM -- Will make a call ro SCR3.BAT --
Echo %0
CMD /c scr3 A B C
Echo --^> %0 Done
```

◆ Run the **scr4.bat** batch script

- **CMD** will execute **scr3.bat** in a **separate CMD interpreter**



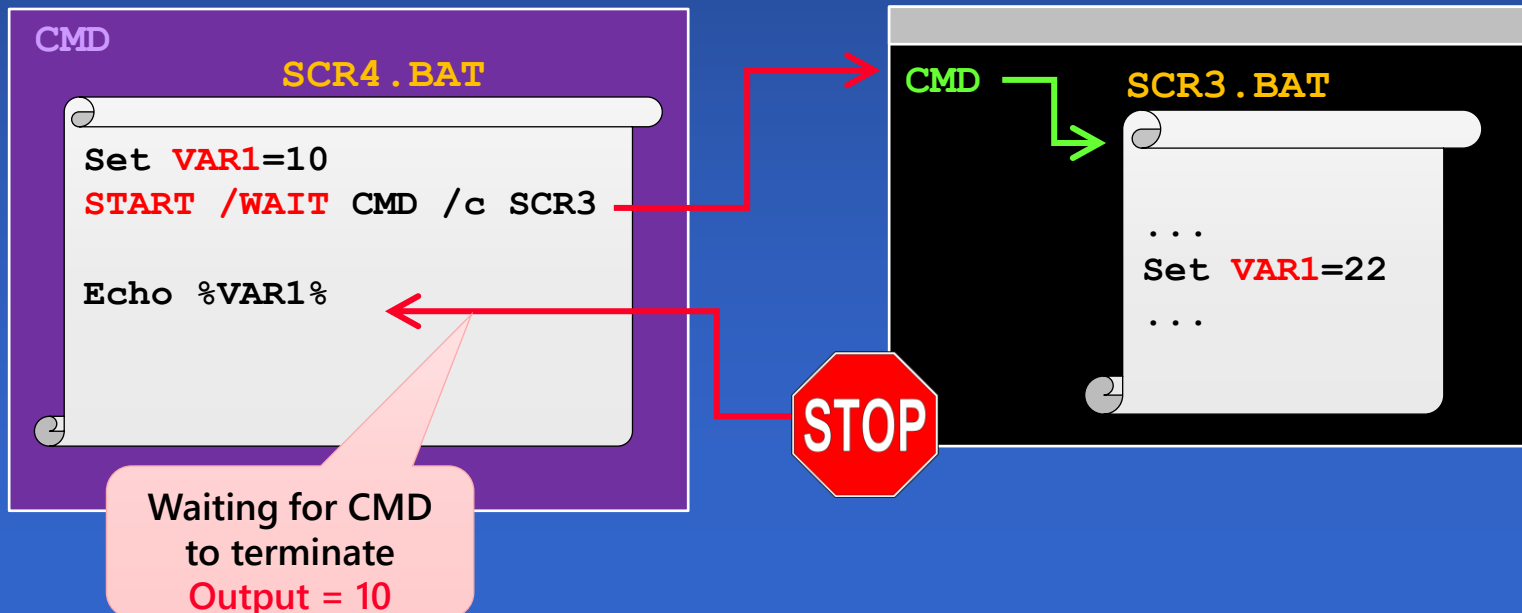
Sequence your scripts

◆ Modify **scr4.bat**

```
@echo off
REM -- Will make a call ro SCR3.BAT --
Echo %0
START /WAIT CMD /c scr3 A B C
Echo --^> %0 Done
```

◆ Run the **scr4.bat** batch script

- **CMD** will execute **scr3.bat** in a **separate CMD Window**



Sequence programs

◆ Modify **scr4.bat**

```
@echo off
REM -- Will make a call ro SCR3.BAT --
Echo %0
START /WAIT notepad a.txt
Echo --^> %0 Done
```

◆ Run the **scr4.bat** batch script

- **START** will execute **notepad**

