

Introduction

DOS Batch Language Scripting

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Chapter 1: Introduction

Objectives

You will learn:

- The purpose of scripts.
- Batch commands.
- .BAT versus .CMD extension.
- Editing a script .
- start command.
- Accessing help.
- Setting echo off.
- Variables - setting, expanding, and clearing.

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Scripts - Purpose

- In DOS and Microsoft Windows, a batch file is a text file containing a series of commands which can be executed by the command interpreter.
- When a batch file is run, the shell program reads the file and executes its commands line-by-line in sequence.
 - The shell program is typically COMMAND.COM or CMD.EXE.
- Batch files are useful for running a sequence of executables automatically.
 - They are frequently used by system administrators to automate administrative processes.

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Batch Commands

- **Any command can be used in a batch file.**
 - **Certain commands, such as for, goto, and if, provide the capability for the conditional processing of the commands in the batch file.**
 - **Example:**
 - **An if command will carry out a command based on the results of a condition.**
 - **Other commands provide the capability for controlling input and output and calling other batch files.**

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.BAT versus .CMD

- In MS Windows NT/2000/XP/VISTA either the **.BAT** or **.CMD** can be used as the file extension.
 - **CMD.EXE** will interpret either file type.
- In this course, the **.BAT** will be used as the file extension.
 - It will work for both Windows 95/98/ME and Windows NT/2000/XP/VISTA.

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Editing a Script

- A batch script is a text file.
 - MS Windows Notepad or another text editor can be used.
 - Word processors will not by default create text files.
- Notepad can be started with an immediate mode command from a Batch Window:
start /min notepad HW.BAT

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START Command

- The START command invokes a separate window for running a specified program or command.

```
START ["title"] [/Dpath] [/I]
[/MIN] [/MAX]
[/SEPARATE | /SHARED]
[/LOW | /NORMAL | /HIGH | /REALTIME |
/BOVENORMAL | /BELOWNORMAL]
[command/program] [parameters]
```

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Running a Basic Script

- Use the Notepad editor to type in the following command:

```
echo Hello World
```

 - Save the file as first.bat and run the script by typing `first` at the command prompt.
 - In addition to the output of the echo command, the command itself is displayed.
 - Although this may be useful for debugging purposes; it is usually not required.

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Help

- Help information is available with most Batch commands by using the help switch (/?).

```
C:\>echo /?
```

```
Displays messages, or turns  
command-echoing on or off.
```

```
ECHO [ON | OFF]
```

```
ECHO [message]
```

```
Type ECHO without parameters to  
display the current echo setting.
```

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Echo off

- Setting **ECHO OFF** in the first.bat script will prevent the script command lines from being displayed as the script runs.
 - ECHO OFF needs to be the first line of the script.
 - This is because it affects only the lines that follow it.
 - Add it to the **first .bat** script.
 - Most programmers will elect to code the command with an ampersand (@) before ECHO.
 - This prevents the echo command itself from being displayed.

```
@echo off  
echo hello world
```

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Setting a Variable

- Variable name can contain most normal characters, including letters and digits.
 - Avoid creating variable names starting with a digit; they may conflict with replaceable parameters.
 - Replaceable parameters will be presented later.
- The SET command can be used for setting a variable named src to the folder name, C:\BKTEST .

```
set src=C:\BKTEST
```

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Expanding a Variable

- The case of letters in the contents, which is the part on the right of the = sign, is preserved.
 - In order to make use of the current contents of a variable, it will need to be enclosed in the % characters.
- In order to expand the variable that has been set, src, it will be necessary to type %src%.
 - When typing %src% at the prompt or in a script, it will be identical to the exact text stored in the variable.

```
echo The folder is %src%
```

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Clearing a Variable

- A variable is cleared by setting it to nothing.
 - Ensure that a space is not placed after the = sign.
`set src=`