Intro to Computing Lab
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Laboratory II - Using the DOS Command Line

Wildcards

DOS is not case-sensitive, which means that commands can be typed in uppercase or in lowercase. We will use uppercase in this lab, to emphasize that we are on the command line.

DOS allows you to express sets of files using what it calls *wildcards*. There are two types:

- `*`: an asterisk (aka star) matches any characters in the rest of the name

- `?`: a question mark matches exactly one character

Click the DOS icon to enter a DOS box.

Type `<ALT-ENTER>`. This expands the DOS box, putting the computer in character mode. You can type `<ALT-ENTER>` again to return to graphics mode, but don't; leave it in character mode for a while.

Type `<CAPS LOCK>`. This will force all input to be interpreted as uppercase. If it says `CAPS LOCK: OFF` in the lower right corner when you do this, you have just turned off caps lock, in which case you need to hit it again to turn it back on.

Type `CD \WINDOWS`. This will put you in the windows directory, where there are lots of files to list.

Type `DIR W*`. All files whose name begins with `W` will appear.

Type `DIR W*.INI`. All files whose name begins with `W` and whose extension is `INI` will appear.

Type `DIR ?I*`. All files whose name has `I` as its second character will appear.

Pipes and Redirection

Click the DOS icon to enter a DOS box.

Type `<ALT-ENTER>` to expand to character mode.

Type `<CAPS LOCK>` to force uppercase letters.

Type `DIR` and note that the files are sorted as promised. However, if there are more than 24 files, they will scroll off the screen.

Type `DIR | MORE`; this causes the files to be listed in chunks of 23 files, followed by a pause. Type a `<SPACE>` to get the next chunk. The vertical bar is called a *pipe*; the output of the `dir` command becomes the input of the `more` program, and the `more` program inserts the pauses.

Type `DIR > XX`; this causes the output to be sent to the file named `XX`. This is called *redirection of output*, from the screen to the file. It is also possible to redirect input.

Type `NOTEPAD XX` to view the contents of the file `XX`. Since `notepad` is a GUI program, the system automatically put you back in graphics mode. Exit notepad by clicked the red box in the upper right corner.

The Environment

The *environment* is what DOS calls its symbol table. This contains information that tells programs how to run. Although this is still used by some Windows programs, much more information controlling Windows is stored in the so-called *registry*. We may look at this later, but it is very complicated. For now, let's look at the environment.

Click the DOS icon to enter a DOS box.

Type `<ALT-ENTER>` to expand to character mode.

Type `<CAPS LOCK>` to force uppercase letters.

Type `SET`. This displays all symbols in the symbol table.

Type `SET | MORE`. This displays the symbol table in chunks.

Type `SET ZZZ=THINGWITHWINGS`. This causes the symbol `ZZZ` to be assigned the value `THINGWITHWINGS`.

Type `SET`. You should see that your new symbol is in the symbol table.

Type `SET ZZZ`. This displays the value of `ZZZ`.

Type `SET ZZZ=`. This erases the symbol `ZZZ`.

Type `SET`. You should see that the symbol `ZZZ` is gone.

Type `PATH`. This displays the value of the symbol `PATH`. The path tells the operating system where to find executable files.

Common Commands

The most commonly used DOS commands presented in the following table.

Command	Function
DIR	list files in the current directory
CD	change directory
MD	make directory
RD	remove directory
COPY	copy file
DEL	delete file
TYPE	outputs text file
HELP	display commands
PATH	displays or changes the path
SET	displays or changes the environment
EXIT	exits the command processor

Let's practice these.

Click the DOS icon, if you are not already in the DOS box.

Type `<ALT-ENTER>` to obtain character mode.

Type `<CAPS LOCK>` to lock yourself into uppercase.

Type each command in order. Follow each command you type with the `<ENTER>` key, to tell the command processor to process the command.

Command	Function
CD	Displays the current directory
CD \	Changes the current directory to the root.
CD TEST	Make a directory called test.
DIR T*	List all files in the current directory whose name starts with t.
DIR TEST	List all files in the directory TEST; it should be empty.
CD TEST	Change the current directory to TEST.
DIR	List files in current directory; it should be empty.
DIR \ > X1	List files in root, redirected to file X1.
HELP > X2	List DOS commands, redirected to file X2.
DIR	List files in current directory; there should be two.
COPY X2 X3	Copies file X2 to file X3.
TYPE X3	Output the text of file X3.
TYPE X3 | MORE	Output the text of file X3, with pauses.
NOTEPAD X3	Flips to graphics mode and opens file X3 in notepad.

After viewing the file X3, close notepad by clicking the red box in the upper right corner.