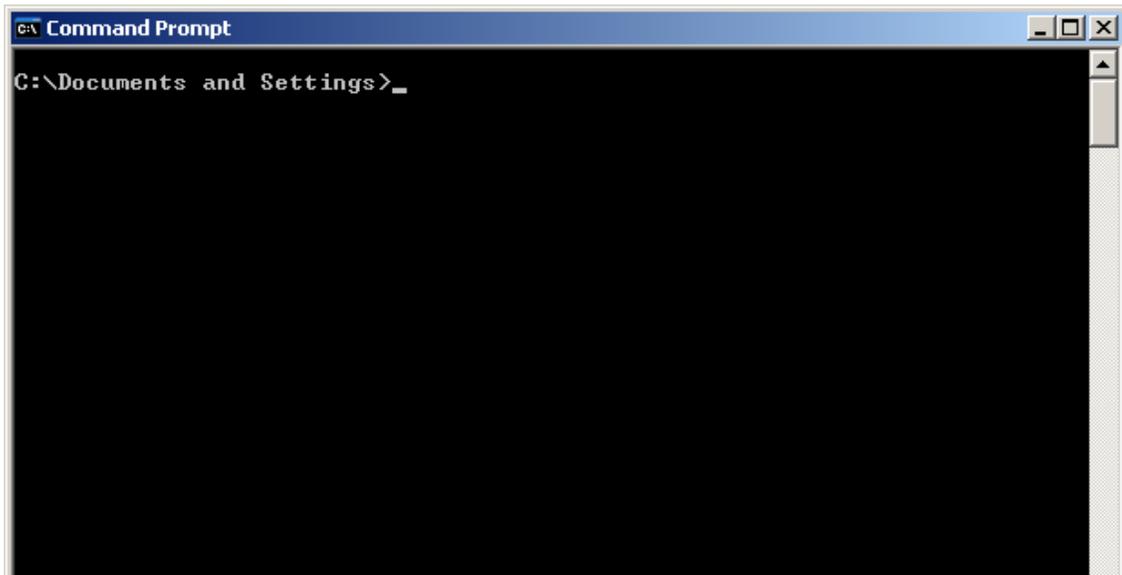# Appendix C An MS-DOS Primer

C.1 Introduction

The Microsoft Disk Operating System (MS-DOS) runs in a Windows XP window and provides a primitive interface between the user and the computer. It is a simple interface - no windows, no mice, no menus, no problem. We shall see how to:

- view the contents of a directory (folders are known as directories in MS-DOS)
- change from one directory to another
- create and delete directories
- change from one drive to another
- copy files
- rename files
- delete files

C.2 Load an MS-DOS Window

From the Windows *Start* menu select *Programs*, *Accessories*, *Command Prompt*. You should see something like
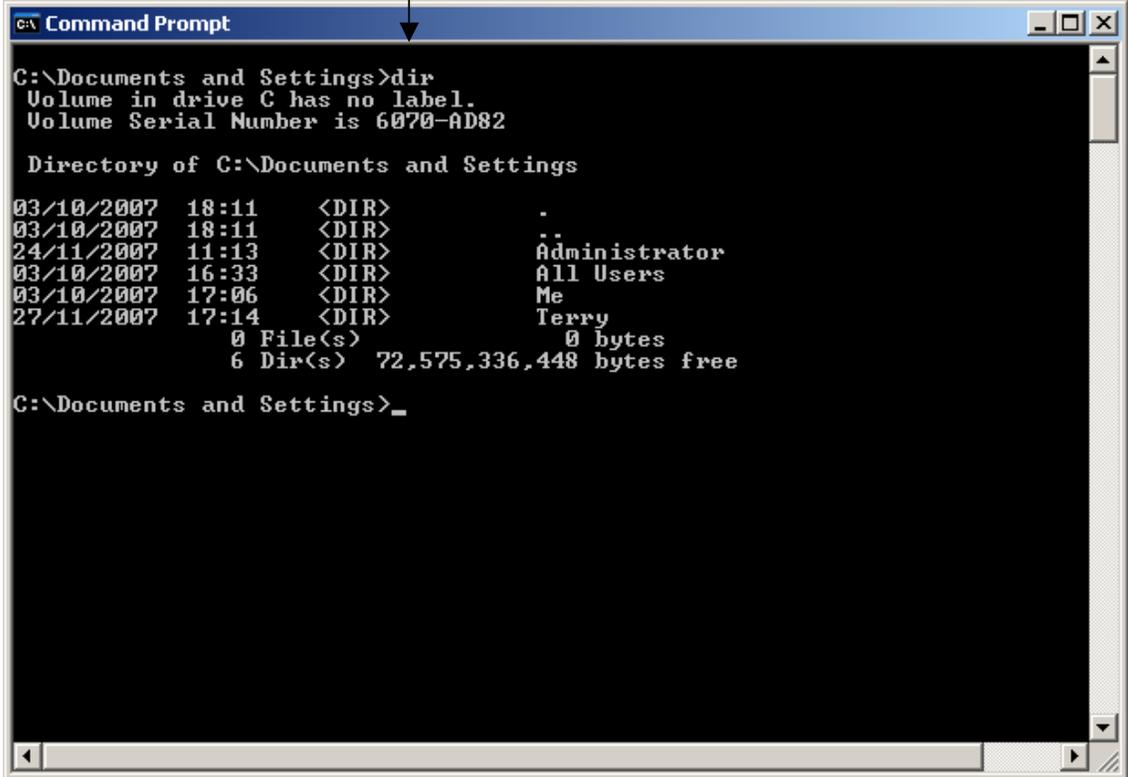

The line

```
C:\Documents and Settings>
```

is known as the command prompt. `c:\` represents the current drive. `Documents and Settings` represents the current directory. `>` indicates where you issue commands.

C.3 Viewing the Contents of a Directory

Use the `dir` command to view the contents of a directory.

```
C:\Documents and Settings>dir
 Volume in drive C has no label.
 Volume Serial Number is 6070-AD82

 Directory of C:\Documents and Settings

03/10/2007  18:11    <DIR>          .
03/10/2007  18:11    <DIR>          ..
24/11/2007  11:13    <DIR>          Administrator
03/10/2007  16:33    <DIR>          All Users
03/10/2007  17:06    <DIR>          Me
27/11/2007  17:14    <DIR>          Terry
               0 File(s)              0 bytes
               6 Dir(s)  72,575,336,448 bytes free

C:\Documents and Settings>_
```

A directory list shows the files and sub-directories contained by a directory.

Use `dir/p` to show a directory list one screen-full at a time.

Use `dir/w` to show a directory list in wide format.

You can combine the `/p` and `/w` directory switches: `dir /w/p`

C.4 Changing Directories

Use the `cd` command to change directories.

`cd Terry`

changes the current working directory to *c:\Documents and Settings\Terry*

```
Command Prompt                                              _ □ ×

C:\Documents and Settings>dir
 Volume in drive C has no label.
 Volume Serial Number is 6070-AD82

 Directory of C:\Documents and Settings

03/10/2007  18:11    <DIR>          .
03/10/2007  18:11    <DIR>          ..
24/11/2007  11:13    <DIR>          Administrator
03/10/2007  16:33    <DIR>          All Users
03/10/2007  17:06    <DIR>          Me
27/11/2007  17:14    <DIR>          Terry
               0 File(s)              0 bytes
               6 Dir(s)  72,574,939,136 bytes free

C:\Documents and Settings>cd Terry

C:\Documents and Settings\Terry>_
```

cd.. takes you back one step back up the directory tree.


```
Command Prompt                                              _ □ ×

C:\Documents and Settings>dir
 Volume in drive C has no label.
 Volume Serial Number is 6070-AD82

 Directory of C:\Documents and Settings

03/10/2007  18:11    <DIR>          .
03/10/2007  18:11    <DIR>          ..
24/11/2007  11:13    <DIR>          Administrator
03/10/2007  16:33    <DIR>          All Users
03/10/2007  17:06    <DIR>          Me
27/11/2007  17:14    <DIR>          Terry
               0 File(s)              0 bytes
               6 Dir(s)  72,574,939,136 bytes free

C:\Documents and Settings>cd Terry

C:\Documents and Settings\Terry>cd..

C:\Documents and Settings>_
```
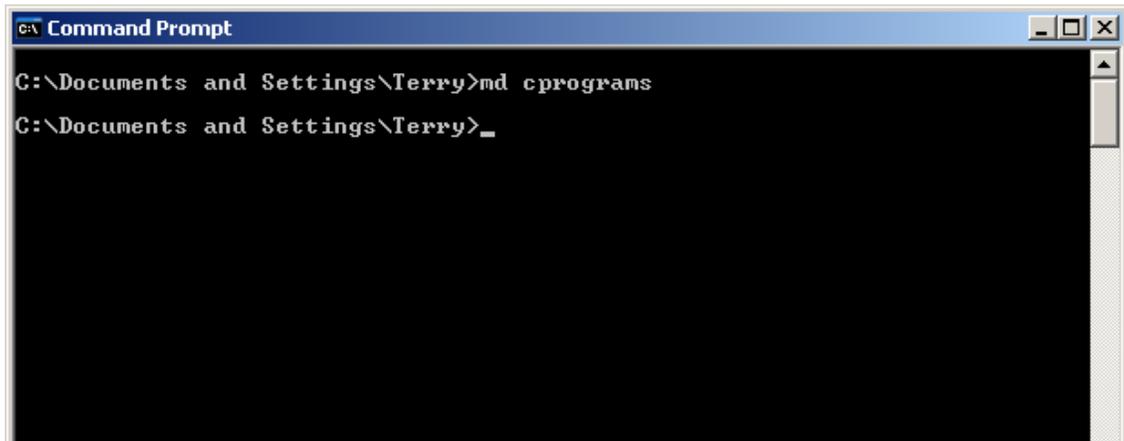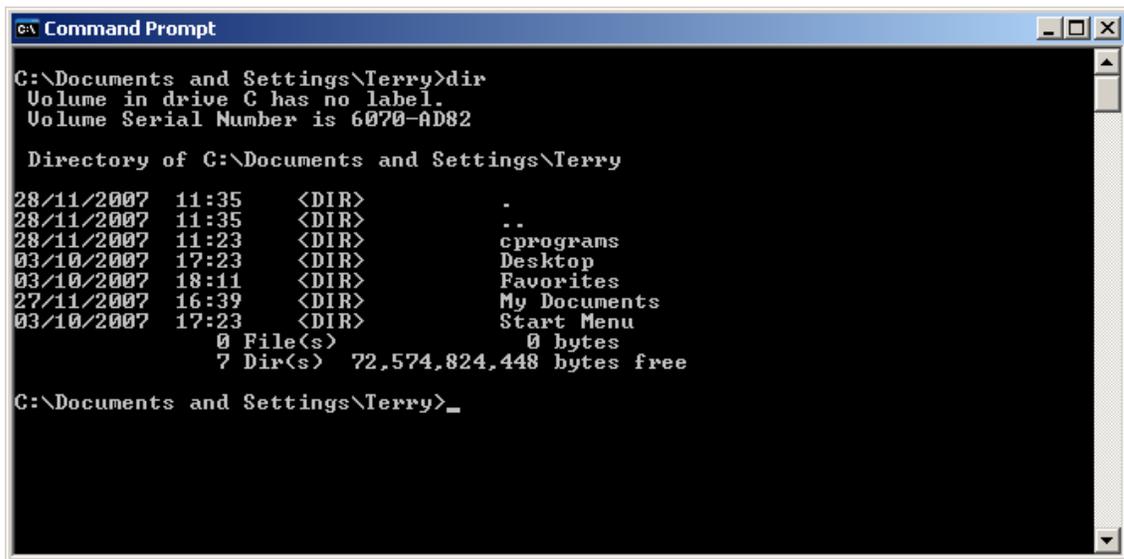
C.5 Creating a Directory

Use md to make a directory. To create a directory named *cprograms* enter

```
md cprograms
```


C.6 Deleting a Directory

Use rd to remove a directory. For example:

```
rd junk
```

would remove a directory named *junk* - but the directory must exist and be empty of files and other folders.
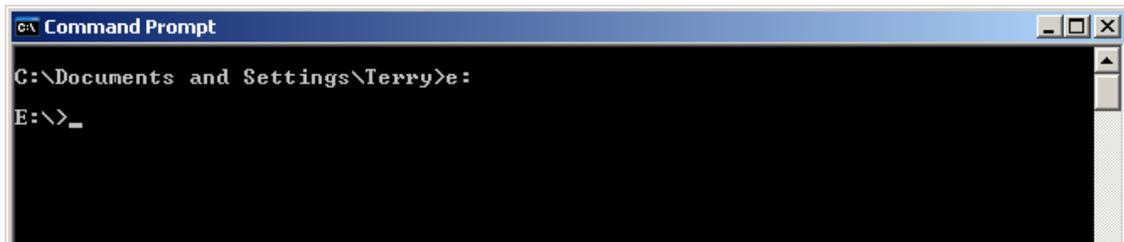
C.7 Changing Drives

You may be using a Universal Serial Bus (USB) pen drive for your C programs. Typically, a pen drive is identified as drive E. Enter

```
e:
```

to change to drive e.

and `c:` to return to drive C.

C.8 Copying a File

The general pattern is

```
copy source destination
```

For example

```
copy tm11.c e:\cprograms\
```

copies the file *tm11.c* from the current working directory into the *cprograms* directory on drive *e*.

```
copy e:\cprograms\tm11.c
```

copies *tm11.c* from the *cprograms* directory on drive *e*.

C.9 Renaming a File

Use `ren` to rename a file. For example

```
ren old.c new.c
```

renames the file *old.c* as *new.c*

C.10 Deleting a File

Use `del` to irreversibly delete a file. for example

```
del old.c
```

permanently removes the file *old.c*.

Use `del *.*` to remove all the files in the current directory.
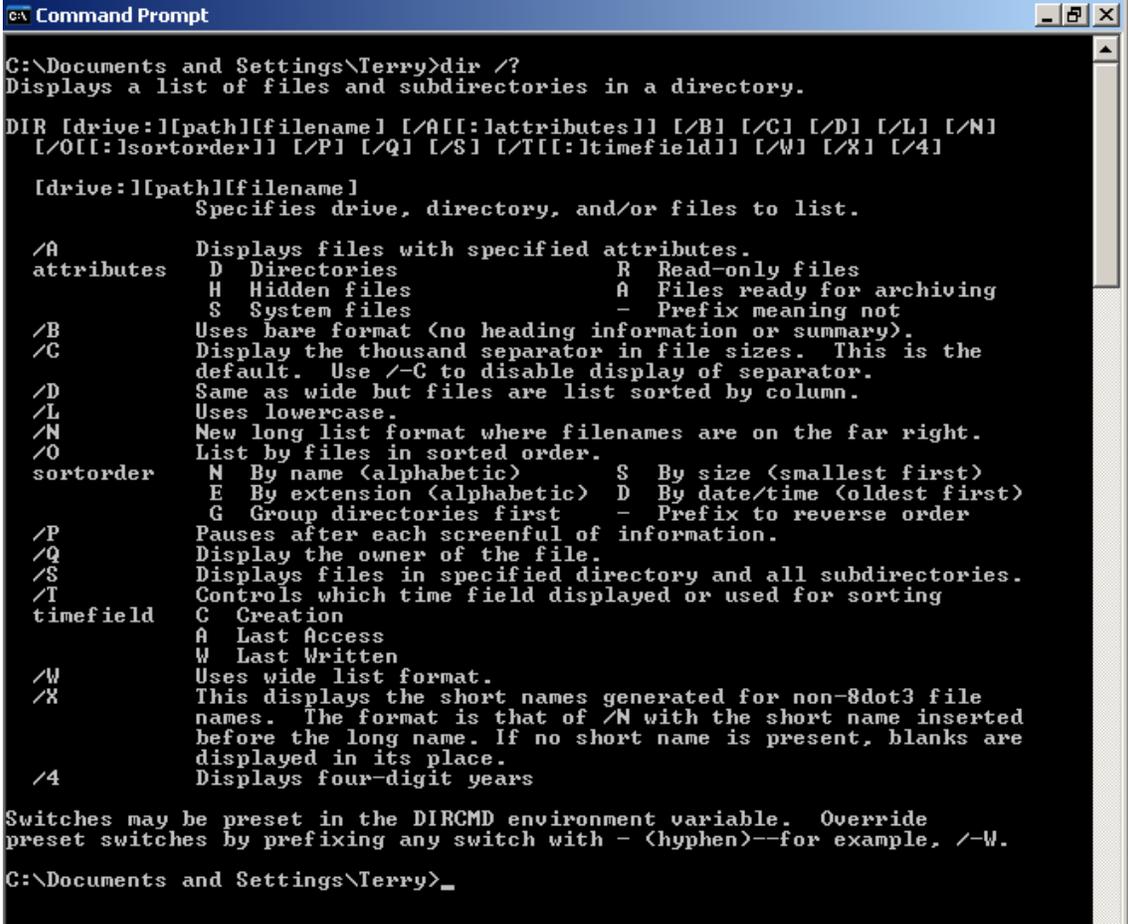
C.11 Summonsing Help

Enter `help` for a list of all MS-DOS commands.

```
C:\Documents and Settings\Terry>help
For more information on a specific command, type HELP command-name
ASSOC     Displays or modifies file extension associations.
AT        Schedules commands and programs to run on a computer.
ATTRIB    Displays or changes file attributes.
BREAK     Sets or clears extended CTRL+C checking.
CACLS     Displays or modifies access control lists (ACLs) of files.
CALL      Calls one batch program from another.
CD        Displays the name of or changes the current directory.
CHCP      Displays or sets the active code page number.
CHDIR     Displays the name of or changes the current directory.
CHKDSK    Checks a disk and displays a status report.
CHKNTFS   Displays or modifies the checking of disk at boot time.
CLS       Clears the screen.
CMD       Starts a new instance of the Windows command interpreter.
COLOR     Sets the default console foreground and background colors.
COMP      Compares the contents of two files or sets of files.
COMPACT   Displays or alters the compression of files on NTFS partitions.
CONVERT   Converts FAT volumes to NTFS.  You cannot convert the
          current drive.
COPY      Copies one or more files to another location.
DATE      Displays or sets the date.
DEL       Deletes one or more files.
DIR       Displays a list of files and subdirectories in a directory.
DISKCOMP  Compares the contents of two floppy disks.
DISKCOPY  Copies the contents of one floppy disk to another.
DOSKEY    Edits command lines, recalls Windows commands, and creates macros.
ECHO      Displays messages, or turns command echoing on or off.
ENDLOCAL  Ends localization of environment changes in a batch file.
ERASE     Deletes one or more files.
EXIT      Quits the CMD.EXE program (command interpreter).
FC        Compares two files or sets of files, and displays the differences
          between them.
FIND      Searches for a text string in a file or files.
FINDSTR   Searches for strings in files.
FOR       Runs a specified command for each file in a set of files.
FORMAT    Formats a disk for use with Windows.
FTYPE     Displays or modifies file types used in file extension associations.
GOTO      Directs the Windows command interpreter to a labeled line in a
          batch program.
GRAFTABL  Enables Windows to display an extended character set in graphics
          mode.
HELP      Provides Help information for Windows commands.
IF        Performs conditional processing in batch programs.
LABEL     Creates, changes, or deletes the volume label of a disk.
MD        Creates a directory.
MKDIR     Creates a directory.
MODE      Configures a system device.
MORE      Displays output one screen at a time.
MOVE      Moves one or more files from one directory to another directory.
PATH      Displays or sets a search path for executable files.
PAUSE     Suspends processing of a batch file and displays a message.
POPD      Restores the previous value of the current directory saved by PUSHD.
PRINT     Prints a text file.
PROMPT    Changes the Windows command prompt.
PUSHD     Saves the current directory then changes it.
RD        Removes a directory.
RECOVER   Recovers readable information from a bad or defective disk.
```

Enter a command name followed by */?* for help on a particular command. For example:

```
dir /?
```

```
Command Prompt                                                    _ 8 X

C:\Documents and Settings\Terry>dir /?
Displays a list of files and subdirectories in a directory.

DIR [drive:][path][filename] [/A[[:]attributes]] [/B] [/C] [/D] [/L] [/N]
  [/O[[:]sortorder]] [/P] [/Q] [/S] [/T[[:]timefield]] [/W] [/X] [/4]

  [drive:][path][filename]
              Specifies drive, directory, and/or files to list.

  /A          Displays files with specified attributes.
  attributes   D  Directories               R  Read-only files
               H  Hidden files              A  Files ready for archiving
               S  System files              -  Prefix meaning not
  /B          Uses bare format (no heading information or summary).
  /C          Display the thousand separator in file sizes.  This is the
              default.  Use /-C to disable display of separator.
  /D          Same as wide but files are list sorted by column.
  /L          Uses lowercase.
  /N          New long list format where filenames are on the far right.
  /O          List by files in sorted order.
  sortorder    N  By name (alphabetic)      S  By size (smallest first)
               E  By extension (alphabetic) D  By date/time (oldest first)
               G  Group directories first   -  Prefix to reverse order
  /P          Pauses after each screenful of information.
  /Q          Display the owner of the file.
  /S          Displays files in specified directory and all subdirectories.
  /T          Controls which time field displayed or used for sorting
  timefield    C  Creation
               A  Last Access
               W  Last Written
  /W          Uses wide list format.
  /X          This displays the short names generated for non-8dot3 file
              names.  The format is that of /N with the short name inserted
              before the long name. If no short name is present, blanks are
              displayed in its place.
  /4          Displays four-digit years

Switches may be preset in the DIRCMD environment variable.  Override
preset switches by prefixing any switch with - (hyphen)--for example, /-W.

C:\Documents and Settings\Terry>_
```

`dir/ad` lists just directories

`dir /on` lists directory contents in alphabetical order by name.

c.12 Clearing the Screen

`cls` clears the screen.