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1 INTRODUCTION

This tutorial is aimed at readers who are about to use Helios for the first time and have little or no experience of Unix-like systems. It provides a simple introduction to the most commonly used features of the Helios user interface.

The tutorial consists of a sequence of descriptions of commands with associated examples. The examples should be done in the order they are given. They are boxed to make them stand out from the descriptions. The bold text shows what you should type in and the lighter text shows what you should see on the screen. All actions in the tutorial are numbered consecutively.

It is essential that you do all the examples in the correct order as they are interdependant.

Each time a new command is introduced its name appears in the margin together with a one line summary in the main column. This should help you to reference them quickly.

In order to keep this tutorial short it does not give complete descriptions of the commands that are mentioned. Some of the command options are not mentioned at all. Inevitably there will be questions raised which are not answered here. Further information on all the commands is provided in "**The Helios Operating System**" manual.

1.1 *TYPOGRAPHIC CONVENTIONS*

Throughout this tutorial the following typographic conventions have been used:

italic	Words appearing in *italic* mark a new term in the text. This is where the term will be defined.
`screen text`	Words appearing in the `screen text` font refer to command names, command lines, and any text which is displayed on a screen.
`user text`	Words appearing in the **`user text`** font refer to text that should be typed by the reader when doing one of the examples.
KEY	Words that appear within a BOX refer to keys on the keyboard.
X Y	Means key X should be pressed and then key Y.
X+Y	Means key X should be pressed at the same time as key Y.

This tutorial assumes that you have correctly installed your copy of Helios.

Some of the practicals assume you are running Helios with a PC hosted system.

2

USING HELIOS

This chapter provides a brief introduction to the most commonly used features of the Helios user interface.

2.1 *STARTING HELIOS*

Before trying the examples in this tutorial you must start Helios.

1 Make the `\helios` directory the current directory. E.g.,

```
C:  cd \helios RETURN
C:
```


2 Start Helios by executing the `server` program:

```
C:  server RETURN
```

The `server` program loads Helios onto the transputer board.

You should now have a running Helios system (if not, you should check carefully that you have installed Helios correctly).

The information displayed on your screen will look something like this:

```
                                                        console
                    Helios Operating System
                         Version x.x
          (C) Copyright 1987-90, Perihelion Software Ltd.

login:
```

Helios will be waiting for you to *login*. Logging in is the process by which you tell Helios who you are. This is described in more detail in the next chapter.

The default Helios system knows about a user called `guest`. You should use this name when logging in for the tutorial.

If Helios does not ask you to login it means your system has been set up differently. In this case you should consult the person responsible for installing the Helios system before continuing with this tutorial.

3 Login to Helios as 'guest':

```
login:  guest RETURN

                Welcome to the Helios Operating System
%
```

If Helios does not recognise the login name you give it will first ask for a password and then display the message "`Login incorrect`". You will then have the opportunity to login again.

The '`%`' character displayed on the line after the welcome message is the Helios *command-line prompt*. This tells you that Helios is ready to receive a command. When a command has been executed Helios responds with another command-line prompt.

2.2 *TYPING, EDITING AND EXECUTING COMMANDS*

All commands issued to Helios at the command-line prompt, are *interpreted* (i.e., understood and acted upon) by a part of the Helios operating system called the *shell*. The shell is a program which interfaces between you and the operating system. The Helios shell has been designed to look as similar to the standard Unix shell (`csh`) as possible.

Users who are familiar with the Unix shell should have no difficulty in using Helios. However you should note that some Unix shell commands are not available under Helios, and that some commands with the same name may not behave in exactly the same way.

Commands are given to the shell by typing the command name, together with any parameters, at the command-line prompt ('`%`'). When you press the RETURN key the shell program interprets the command and causes the appropriate program to run.

You can interrupt or cancel a command that has just been issued by pressing CTRL+C (i.e., the control key and the 'C' key pressed together).

The simplest commands consist of a single lower-case word. For example:

To display today's date:

```
4 % date RETURN
  Date : Tue Sep  4  10:00:22 1990
  %
```

If you make a mistake when typing a command name you will get an error message of the form:

```
Command not found
```

For example:

Entering an incorrect command:

```
5 % fate RETURN
  fate: Command not found.
  %
```

EDITING THE COMMAND LINE

If you notice a mistake before pressing the RETURN key you can correct it by deleting back to the point where the error was made and retyping the rest of the command. The labeling of the delete key will vary between makes of keyboard. The delete key is usually one of:

BACKSPACE, DELETE, DEL, RUBOUT, <—

Alternatively you can use the control sequence CTRL+H to delete the previous character on the line.

Many Helios commands take parameters which affect what the commands do. The format of a command with parameters is:

command-name *option(s) filename(s)*

This means;

a command name followed by none or more options, followed by none or more file names. These terms are described below.

command-name

All Helios commands should be entered in lower case. For example, '`Date`' is not the same as '`date`'. If you type '`Date`' Helios will respond with the message "`Command not found`".

option(s)

The options affect the way the command works. Options are normally prefixed by the minus character '`-`'. Option names are mostly single letter and are case sensitive. This means that option '`-t`' is different from option '`-T`'. If a command has more than one option the options can either be typed separately, each preceded by the '`-`' character, or combined with just one minus sign preceding the lot. For example,

```
-t -s   or   -ts
```

filename(s)

Many commands take information from a file and manipulate it in some way before producing some output. The *filename* parameter(s) specify which file(s) are to be processed.

You must put a space between the command name and the options, and between the options and the file names.

ls

LISTING THE FILES IN A DIRECTORY

An example of a command with parameters is the listing command, '`ls`', which lists the contents of a directory.

The `ls` command without parameters produces a simple listing of the files within the current directory:

To display a simple listing of the names of the files in the current directory:

```
6 % ls RETURN
cshrc                examples/              login
%
```

This generates an alphabetical listing of the contents of the `guest` directory.

The `ls` command with the `-l` (long) parameter produces a detailed listing of the files in the directory:

To display a more detailed listing of the directory contents:

```
7 % ls -l RETURN
f rwe---da    0     128 Fri Aug 31 12:53:20 1990 cshrc
d rwvxyzda    0       0 Mon Sep  3 09:17:38 1990 example/
f rwe---da    0       1 Thu Aug  9 10:04:12 1990 login
%
```

The '`-l`' option tells `ls` to provide a line of information on each file. Amongst the information listed is whether something is a file or a directory, the size of the file and the time and date the file was last altered. The first column of the listing indicates the *type of file*. '`d`' is a directory file and '`f`' an ordinary file such as a data file or executable program. Following the type of file is the *access mode* which specifies who is allowed to read (r), write (w) or execute (e) the file.

The `ls` command with a filename as a parameter produces a listing for that file:

To display detailed information on the file 'cshrc':

```
8 % ls -l cshrc RETURN
  f rwe---da    0     128 Fri Aug 31 12:53:20 1990 cshrc
  %
```

In this example the listing is limited to the file 'cshrc'.

help **ONLINE HELP INFORMATION**

There will be times when you cannot remember what parameters a particular command takes. When this happens you can use the Helios on-line `help` facility which provides detailed information on every Helios command.

Here is an example of the `help` command:

To display help information on the `printenv` command:

```
9 % help printenv RETURN
  printenv: Displays environment variables

  Format: printenv

  Description: The printenv command is used to display the names
  and values of all environment variables that are currently set.

  See also: setenv, unsetenv


  Quit      ?Help      Go back
   Q
  %
```

To exit from the `help` program you must hit the Q key.