

Bonus

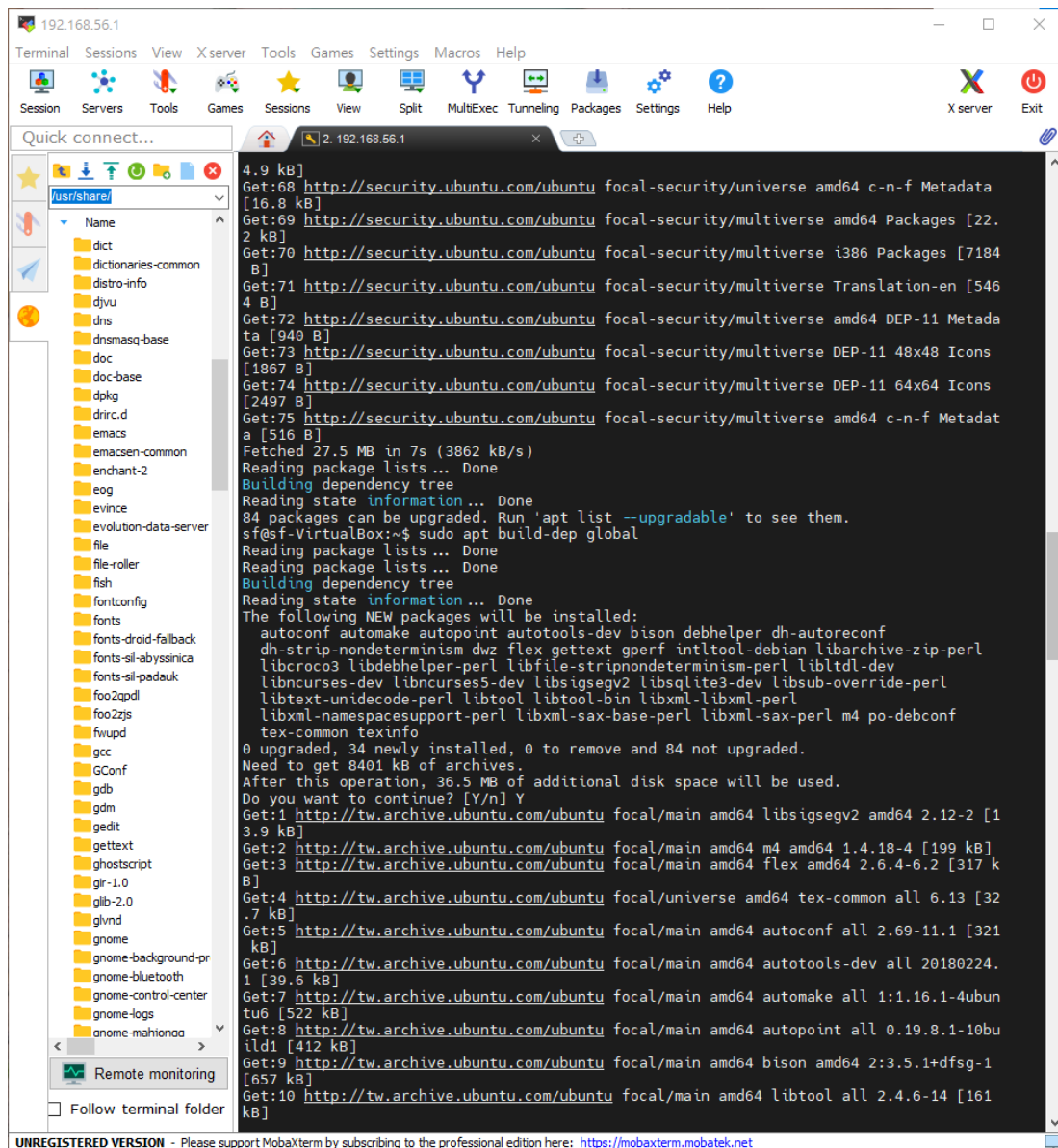
1. 安裝 global

sudo apt-get install global

但若覺得本身版本太舊，也可以自己手動編譯安裝

sudo apt build-dep global

sudo apt install libncurses5-dev libncursesw5-dev



```
192.168.56.1
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
Name
dict
dictionaries-common
distro-info
djuv
dns
dnsmasq-base
doc
doc-base
dpkg
drirc.d
emacs
emacs-common
emacsen-common
enchant-2
eog
evince
evolution-data-server
file
file-roller
fish
fontconfig
fonts
fonts-droid-fallback
fonts-sil-abyssinica
fonts-sil-padauk
foo2qpdf
foo2zjs
fvupdf
gcc
GConf
gdb
gdm
gedit
gettext
ghostscript
gir-1.0
glib-2.0
glvnd
gnome
gnome-background-pr
gnome-bluetooth
gnome-control-center
gnome-logs
gnome-mahjongg
Remote monitoring
Follow terminal folder

4.9 kB]
Get:68 http://security.ubuntu.com/ubuntu focal-security/universe amd64 c-n-f Metadata [16.8 kB]
Get:69 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [22.2 kB]
Get:70 http://security.ubuntu.com/ubuntu focal-security/multiverse i386 Packages [7184 B]
Get:71 http://security.ubuntu.com/ubuntu focal-security/multiverse Translation-en [5464 B]
Get:72 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 DEP-11 Metadata [940 B]
Get:73 http://security.ubuntu.com/ubuntu focal-security/multiverse DEP-11 48x48 Icons [1867 B]
Get:74 http://security.ubuntu.com/ubuntu focal-security/multiverse DEP-11 64x64 Icons [2497 B]
Get:75 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 c-n-f Metadata [516 B]
Fetched 27.5 MB in 7s (3862 kB/s)
Reading package lists ... Done
Building dependency tree
Reading state information ... Done
84 packages can be upgraded. Run 'apt list --upgradable' to see them.
sf@sf-VirtualBox:~$ sudo apt build-dep global
Reading package lists ... Done
Reading package lists ... Done
Building dependency tree
Reading state information ... Done
The following NEW packages will be installed:
autoconf automake autopoint autotools-dev bison debhelper dh-autoreconf
dh-strip-nondeterminism dwz flex gettext gperf intltool-debian libarchive-zip-perl
libcroco3 libdebhelper-perl libfile-stripnondeterminism-perl libltdl-dev
libncurses-dev libncurses5-dev libsigsegv2 libsqlite3-dev libsub-override-perl
libtext-unidecode-perl libtool libtool-bin libxml-libxml-perl
libxml-namespacesupport-perl libxml-sax-base-perl libxml-sax-perl m4 po-debconf
tex-common texinfo
0 upgraded, 34 newly installed, 0 to remove and 84 not upgraded.
Need to get 8401 kB of archives.
After this operation, 36.5 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 libsigsegv2 amd64 2.12-2 [3.9 kB]
Get:2 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 m4 amd64 1.4.18-4 [199 kB]
Get:3 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 flex amd64 2.6.4-6.2 [317 kB]
Get:4 http://tw.archive.ubuntu.com/ubuntu focal/universe amd64 tex-common all 6.13 [32.7 kB]
Get:5 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 autoconf all 2.69-11.1 [321 kB]
Get:6 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 autotools-dev all 20180224.1 [39.6 kB]
Get:7 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 automake all 1:1.16.1-4ubuntu6 [522 kB]
Get:8 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 autopoint all 0.19.8.1-10build1 [412 kB]
Get:9 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 bison amd64 2:3.5.1+dfsg-1 [657 kB]
Get:10 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 libtool all 2.4.6-14 [161 kB]
```

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192.168.56.1

Terminal Sessions View Xserver Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...

192.168.56.1

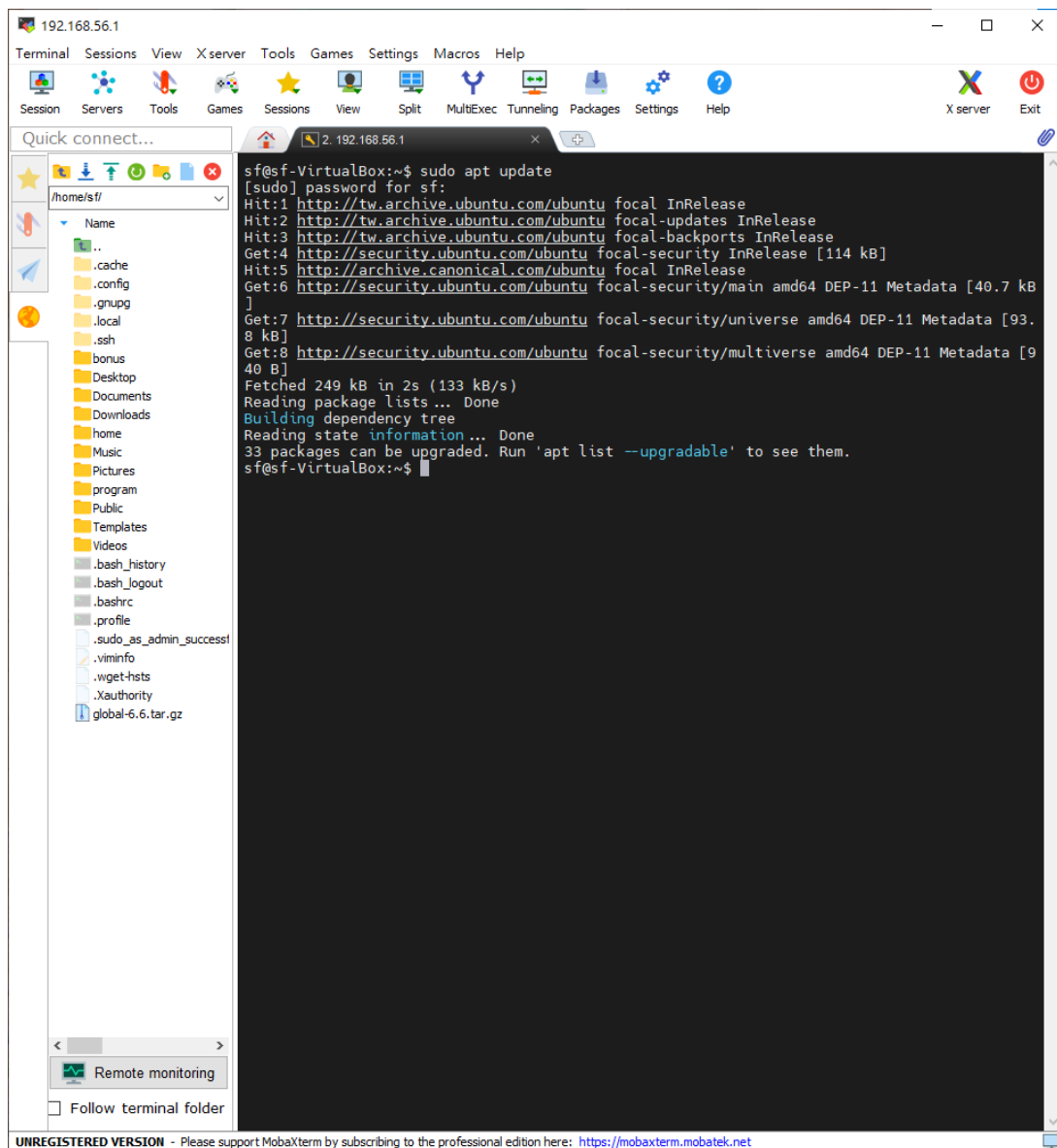
Setting up autoconf (2.69-11.1) ...
Setting up libxml-libxml-perl (2.0134+dfsg-1build1) ...
update-perl-sax-parsers: Registering Perl SAX parser XML::LibXML::SAX::Parser with priority 50 ...
update-perl-sax-parsers: Registering Perl SAX parser XML::LibXML::SAX with priority 50 ...
update-perl-sax-parsers: Updating overall Perl SAX parser modules info file ...
Replacing config file /etc/perl/XML/SAX/ParserDetails.ini with new version
Setting up dh-strip-nondeterminism (1.7.0-1) ...
Setting up bison (2:3.5.1+dfsg-1) ...
update-alternatives: using /usr/bin/bison.yacc to provide /usr/bin/yacc (yacc) in auto mode
Setting up automake (1:1.16.1-4ubuntu6) ...
update-alternatives: using /usr/bin/automake-1.16 to provide /usr/bin/automake (automake) in auto mode
Setting up libtool-bin (2.4.6-14) ...
Setting up flex (2.6.4-6.2) ...
Setting up po-debconf (1.0.21) ...
Setting up libltdl-dev:amd64 (2.4.6-14) ...
Setting up texinfo (6.7.0.dfsg.2-5) ...
Setting up dh-autoreconf (19) ...
Setting up debhelper (12.10ubuntu1) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for install-info (6.7.0.dfsg.2-5) ...
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
sf@sf-VirtualBox:~\$ sudo apt install libncursesw5-dev libncursesw5-dev
[sudo] password for sf:
Reading package lists ... Done
Building dependency tree
Reading state information ... Done
libncursesw5-dev is already the newest version (6.2-0ubuntu2).
The following NEW packages will be installed:
libncursesw5-dev
0 upgraded, 1 newly installed, 0 to remove and 33 not upgraded.
Need to get 980 B of archives.
After this operation, 6144 B of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://tw.archive.ubuntu.com/ubuntu focal/main amd64 libncursesw5-dev amd64 6.2-0ubuntu2 [980 B]
Fetched 980 B in 0s (15.1 kB/s)
Selecting previously unselected package libncursesw5-dev:amd64.
(Reading database ... 191977 files and directories currently installed.)
Preparing to unpack .../libncursesw5-dev_6.2-0ubuntu2_amd64.deb ...
Unpacking libncursesw5-dev:amd64 (6.2-0ubuntu2) ...
Setting up libncursesw5-dev:amd64 (6.2-0ubuntu2) ...
sf@sf-VirtualBox:~\$ wget https://ftp.gnu.org/pub/gnu/global/global-6.6.tar.gz
-2022-12-20 17:30:37-- https://ftp.gnu.org/pub/gnu/global/global-6.6.tar.gz
Resolving ftp.gnu.org (ftp.gnu.org) ... 209.51.188.20, 2001:470:142:3::b
Connecting to ftp.gnu.org (ftp.gnu.org)|209.51.188.20|:443 ... connected.
HTTP request sent, awaiting response ... 200 OK
Length: 2961446 (2.8M) [application/x-gzip]
Saving to: 'global-6.6.tar.gz'
global-6.6.tar.gz 100%[=====] 2.82M 1.76MB/s in 1.6s
2022-12-20 17:30:40 (1.76 MB/s) - 'global-6.6.tar.gz' saved [2961446/2961446]
sf@sf-VirtualBox:~\$

dict
dictionaries-common
distro-info
djvu
dns
dnsmasq-base
doc
doc-base
dpkg
drirc.d
emacs
emacsens-common
enchant-2
eog
evince
evolution-data-server
file
file-roller
fish
fontconfig
fonts
fonts-droid-fallback
fonts-sil-abyssinica
fonts-sil-padauk
foo2qpdf
foo2zjs
fwupd
gcc
GConf
gdb
gdm
gedit
gettext
ghostscript
gir-1.0
glib-2.0
glvnd
gnome
gnome-background-pr
gnome-bluetooth
gnome-control-center
gnome-logs
gnome-mahjongg

Remote monitoring

Follow terminal folder

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如果遇到這個錯誤

E: You must put some 'deb-src' URIs in your sources.list

通常是因為在/etc/apt/sources.list 裡的 deb-src 沒有被 enable

解決方式：

```
sudo cp /etc/apt/sources.list /etc/apt/sources.list~
```

```
sudo sed -Ei 's/^# deb-src /deb-src /' /etc/apt/sources.list
```

```
sudo apt update
```

192.168.56.1

Terminal Sessions View X server Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...

2. 192.168.56.1

usr/share

Name

- dict
- dictionaries-common
- distro-info
- djvu
- dns
- dnsmasq-base
- doc
- doc-base
- dpkg
- drirc.d
- emacs
- emacsen-common
- enchanted-2
- eog
- evince
- evolution-data-server
- file
- file-roller
- fish
- fontconfig
- fonts
- fonts-droid-fallback
- fonts-sil-abyssinica
- fonts-sil-padauk
- foo2qpdf
- foo2zjs
- fwupd
- gcc
- GConf
- gdb
- gdm
- gedit
- gettext
- ghostscript
- gir-1.0
- glib-2.0
- glvnd
- gnome
- gnome-background-pr
- gnome-bluetooth
- gnome-control-center
- gnome-logs
- gnome-mahjongg

Remote monitoring

Follow terminal folder

```
sf@sf-VirtualBox:/$ cd sf
-bash: cd: sf: No such file or directory
sf@sf-VirtualBox:/$ ls
bin      dev      lib      libx32   mnt      root     snap     sys      var
boot     etc      lib32    lost+found  opt      run      srv      tmp
cdrom    home     lib64    media    proc     sbin     swapfile usr
sf@sf-VirtualBox:/$ cd home
sf@sf-VirtualBox:/home$ ls
sf
sf@sf-VirtualBox:/home$ cd sf
sf@sf-VirtualBox:~$ sudo apt build-dep global
[sudo] password for sf:
Reading package lists... Done
E: You must put some 'deb-src' URIs in your sources.list
sf@sf-VirtualBox:~$ ^C
sf@sf-VirtualBox:~$ sudo cp /etc/apt/sources.list /etc/apt/sources.list~
sf@sf-VirtualBox:~$ sudo sed -E 's/^# deb-src /deb-src /' /etc/apt/sources.list
sf@sf-VirtualBox:~$ sudo apt update
Hit:1 http://tw.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://tw.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:3 http://tw.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:4 http://tw.archive.ubuntu.com/ubuntu focal/multiverse Sources [174 kB]
Get:5 http://tw.archive.ubuntu.com/ubuntu focal/restricted Sources [6472 B]
Get:6 http://tw.archive.ubuntu.com/ubuntu focal/main Sources [847 kB]
Get:7 http://tw.archive.ubuntu.com/ubuntu focal/universe Sources [9707 kB]
Get:8 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:9 http://archive.canonical.com/ubuntu focal InRelease [12.1 kB]
Get:10 http://archive.canonical.com/ubuntu focal/partner Sources [716 B]
Get:11 http://tw.archive.ubuntu.com/ubuntu focal-updates/main Sources [539 kB]
Get:12 http://tw.archive.ubuntu.com/ubuntu focal-updates/restricted Sources [47.5 kB]
Get:13 http://tw.archive.ubuntu.com/ubuntu focal-updates/multiverse Sources [20.4 kB]
Get:14 http://tw.archive.ubuntu.com/ubuntu focal-updates/universe Sources [297 kB]
Get:15 http://security.ubuntu.com/ubuntu focal-security/multiverse Sources [10.6 kB]
Get:16 http://tw.archive.ubuntu.com/ubuntu focal-updates/main i386 Packages [763 kB]
Get:17 http://tw.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2269 kB]
Get:18 http://security.ubuntu.com/ubuntu focal-security/main Sources [260 kB]
Get:19 http://tw.archive.ubuntu.com/ubuntu focal-updates/main Translation-en [395 kB]
Get:20 http://tw.archive.ubuntu.com/ubuntu focal-updates/main amd64 DEP-11 Metadata [275 kB]
Get:21 http://tw.archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [16.1 kB]
Get:22 http://tw.archive.ubuntu.com/ubuntu focal-updates/restricted i386 Packages [29.2 kB]
Get:23 http://tw.archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [1476 kB]
Get:24 http://tw.archive.ubuntu.com/ubuntu focal-updates/restricted Translation-en [208 kB]
Get:25 http://tw.archive.ubuntu.com/ubuntu focal-updates/restricted amd64 c-n-f Metadata [592 B]
Get:26 http://tw.archive.ubuntu.com/ubuntu focal-updates/universe i386 Packages [705 kB]
Get:27 http://security.ubuntu.com/ubuntu focal-security/restricted Sources [47.4 kB]
Get:28 http://security.ubuntu.com/ubuntu focal-security/universe Sources [147 kB]
Get:29 http://tw.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1009 kB]
Get:30 http://tw.archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [234 kB]
Get:31 http://tw.archive.ubuntu.com/ubuntu focal-updates/universe amd64 DEP-11 Metadata
```

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2.使用 global

首先要先下 **gtags** 讓他幫你從所有子目錄提取符號
並幫你在當目錄生成三個文件

GTAGS 定義數據庫

GRTAGS 引用數據庫

GPATH 路徑名數據庫

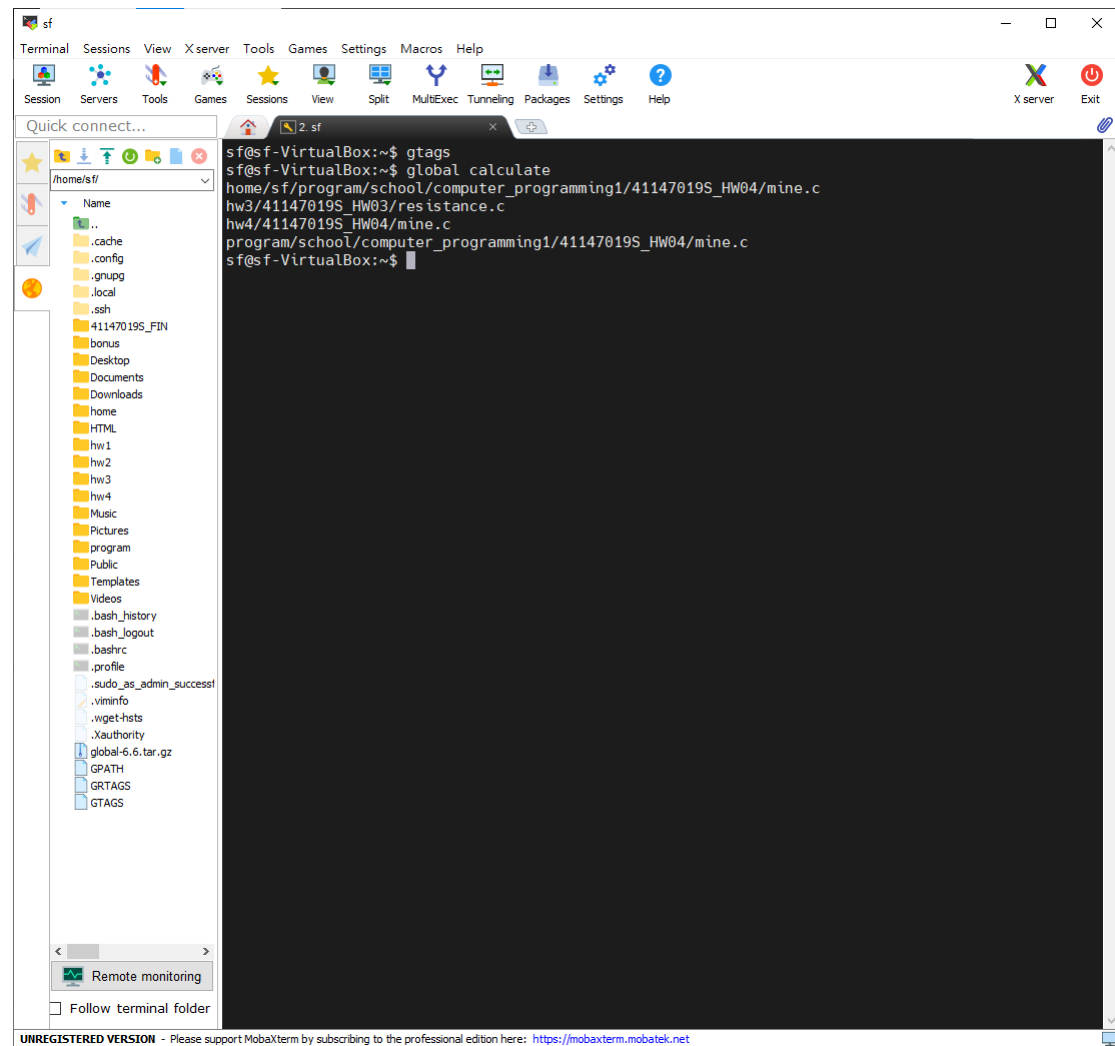
接下來就可以使用各種工具了

(1).尋找定義

global {function}

{function} 填你想查找的函式

會幫你列出在哪個檔案裡有定義這個函式



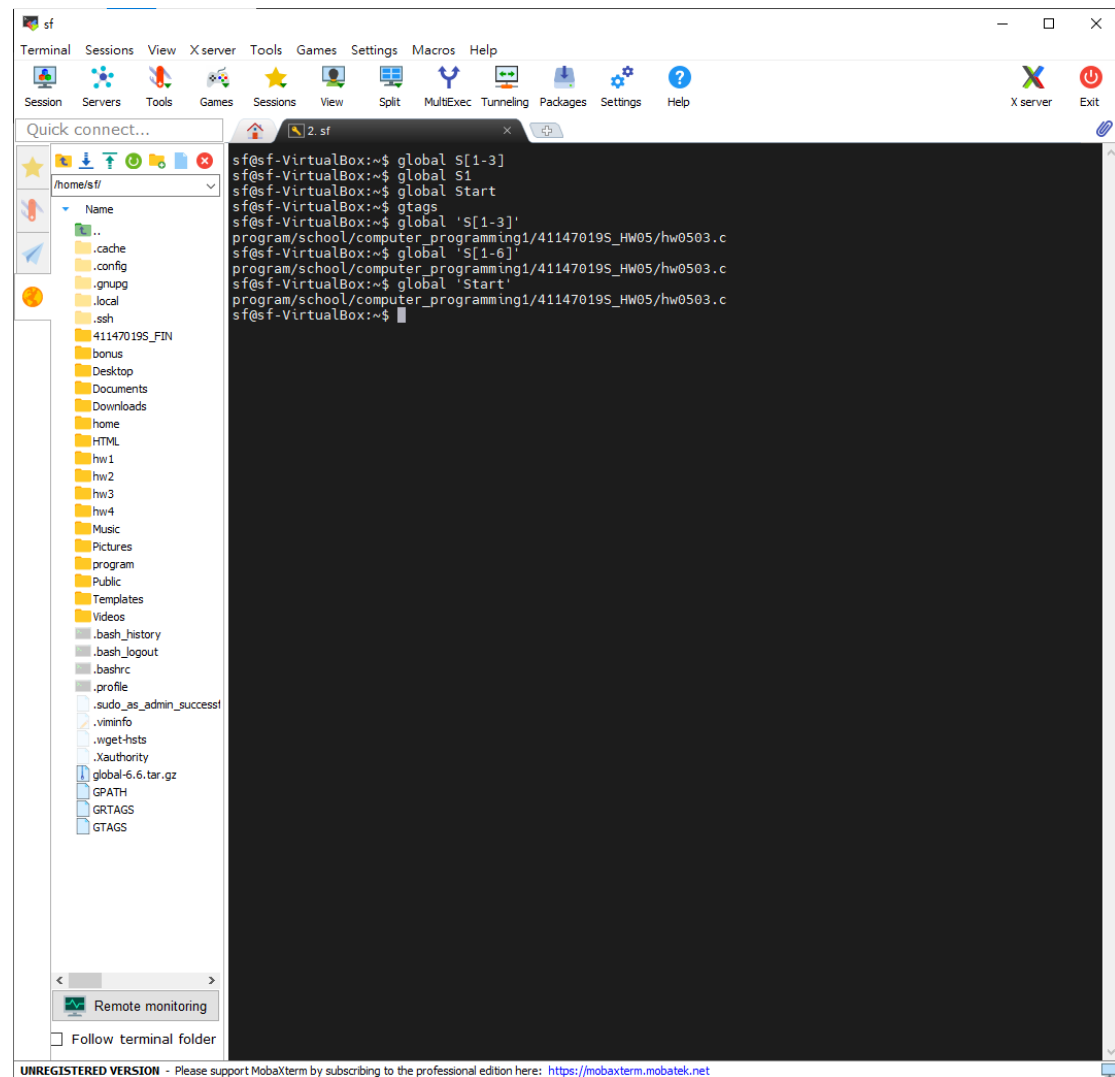
(2).使用正則表達式尋找

global '{function}'

'{function}' 填你想查找的函式

例：若想查找含有函式 **S1, S2, S3** 的檔案，可用中括號表達

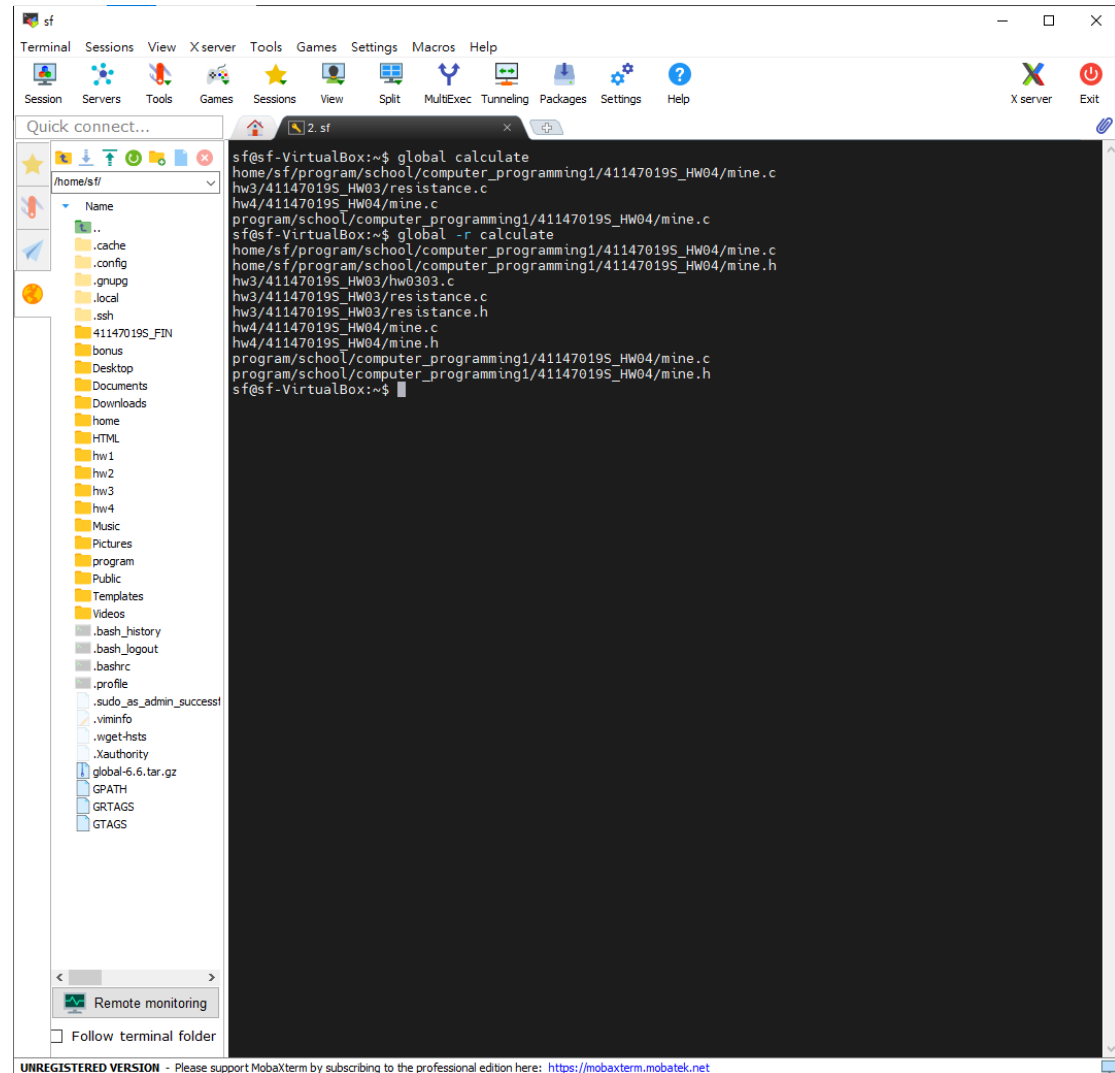
global 'S[1-3]'



(3).(-r)

global -r {function}

會幫你列出在哪個檔案裡有引用這個函式



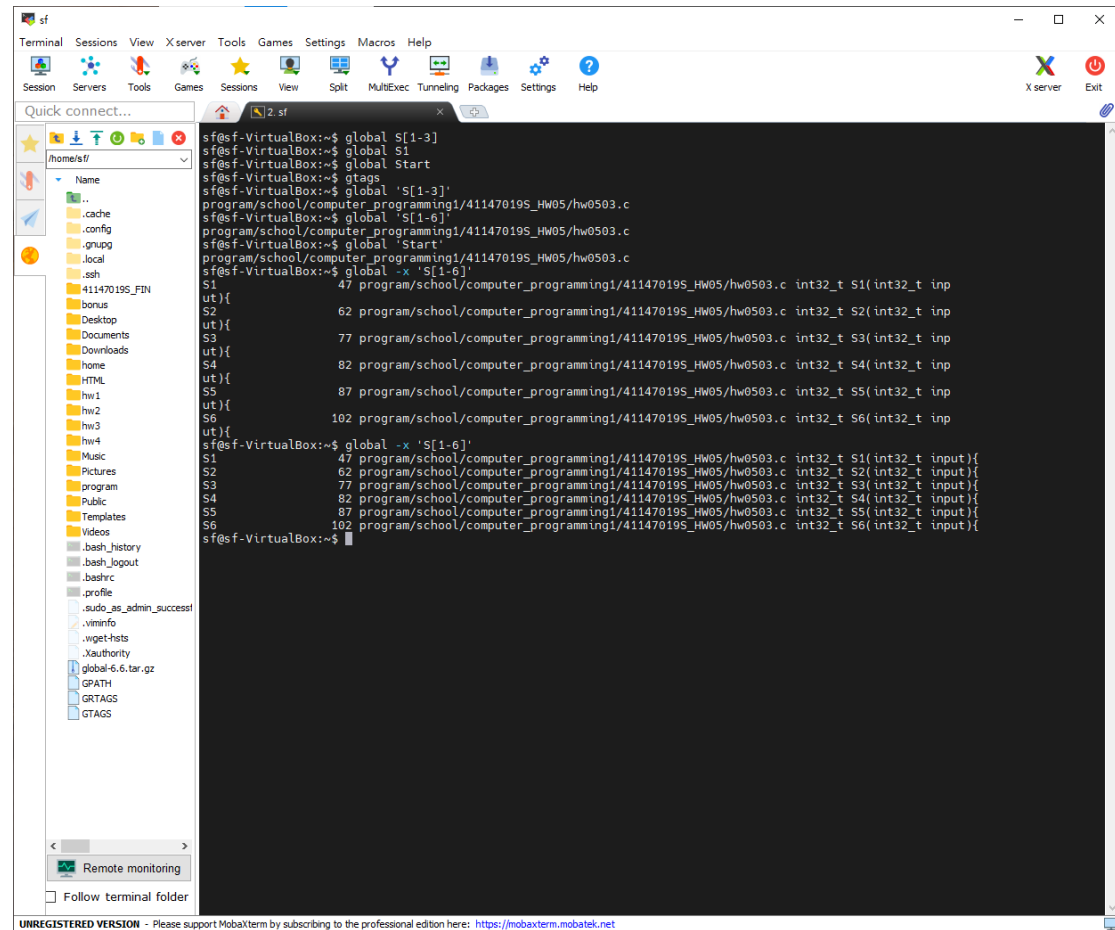
```
sf@sf-VirtualBox:~$ global calculate
home/sf/program/school/computer_programming1/41147019S_HW04/mine.c
hw3/41147019S_HW03/resistance.c
hw4/41147019S_HW04/mine.c
program/school/computer_programming1/41147019S_HW04/mine.c
sf@sf-VirtualBox:~$ global -r calculate
home/sf/program/school/computer_programming1/41147019S_HW04/mine.c
home/sf/program/school/computer_programming1/41147019S_HW04/mine.h
hw3/41147019S_HW03/hw0303.c
hw3/41147019S_HW03/resistance.c
hw3/41147019S_HW03/resistance.h
hw4/41147019S_HW04/mine.c
hw4/41147019S_HW04/mine.h
program/school/computer_programming1/41147019S_HW04/mine.c
program/school/computer_programming1/41147019S_HW04/mine.h
sf@sf-VirtualBox:~$
```

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(4). (-x)

global -x {function}

會顯示詳細資訊



The screenshot shows a MobaXterm terminal window with a file explorer on the left and a terminal pane on the right. The terminal pane displays the following commands and output:

```
sf@sf-VirtualBox:~$ global S[1-3]
sf@sf-VirtualBox:~$ global S1
sf@sf-VirtualBox:~$ global Start
sf@sf-VirtualBox:~$ gtags
sf@sf-VirtualBox:~$ global 'S[1-3]'
program/school/computer_programming1/41147019S_HW05/hw0503.c
sf@sf-VirtualBox:~$ global 'S[1-6]'
program/school/computer_programming1/41147019S_HW05/hw0503.c
sf@sf-VirtualBox:~$ global 'Start'
program/school/computer_programming1/41147019S_HW05/hw0503.c
sf@sf-VirtualBox:~$ global -x 'S[1-6]'
S1      47 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S1(int32_t inp
ut){
S2      62 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S2(int32_t inp
ut){
S3      77 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S3(int32_t inp
ut){
S4      82 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S4(int32_t inp
ut){
S5      87 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S5(int32_t inp
ut){
S6     102 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S6(int32_t inp
ut){
sf@sf-VirtualBox:~$ global -x 'S[1-6]'
S1      47 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S1(int32_t input){
S2      62 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S2(int32_t input){
S3      77 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S3(int32_t input){
S4      82 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S4(int32_t input){
S5      87 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S5(int32_t input){
S6     102 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S6(int32_t input){
sf@sf-VirtualBox:~$
```

At the bottom of the terminal window, there is a message: "UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>"

(5). (-a)

global -a {function}

會顯示絕對路徑

The screenshot shows a MobaXterm terminal window with a file explorer on the left and a terminal session on the right. The terminal session is as follows:

```
sf@sf-VirtualBox:~$ global S[1-3]
sf@sf-VirtualBox:~$ global S1
sf@sf-VirtualBox:~$ global Start
sf@sf-VirtualBox:~$ gtags
sf@sf-VirtualBox:~$ global 'S[1-3]'
program/school/computer_programming1/41147019S_HW05/hw0503.c
sf@sf-VirtualBox:~$ global 'S[1-6]'
program/school/computer_programming1/41147019S_HW05/hw0503.c
sf@sf-VirtualBox:~$ global 'Start'
program/school/computer_programming1/41147019S_HW05/hw0503.c
sf@sf-VirtualBox:~$ global -x 'S[1-6]'
S1      47 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S1(int32_t inp
ut){
S2      62 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S2(int32_t inp
ut){
S3      77 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S3(int32_t inp
ut){
S4      82 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S4(int32_t inp
ut){
S5      87 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S5(int32_t inp
ut){
S6     102 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S6(int32_t inp
ut){
sf@sf-VirtualBox:~$ global -x 'S[1-6]'
S1      47 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S1(int32_t input){
S2      62 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S2(int32_t input){
S3      77 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S3(int32_t input){
S4      82 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S4(int32_t input){
S5      87 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S5(int32_t input){
S6     102 program/school/computer_programming1/41147019S_HW05/hw0503.c  int32_t S6(int32_t input){
sf@sf-VirtualBox:~$
sf@sf-VirtualBox:~$
sf@sf-VirtualBox:~$ global -a Start
/home/sf/program/school/computer_programming1/41147019S_HW05/hw0503.c
sf@sf-VirtualBox:~$
```

The file explorer on the left shows the directory structure of the file being edited, with the terminal window showing the absolute path for the function definitions.

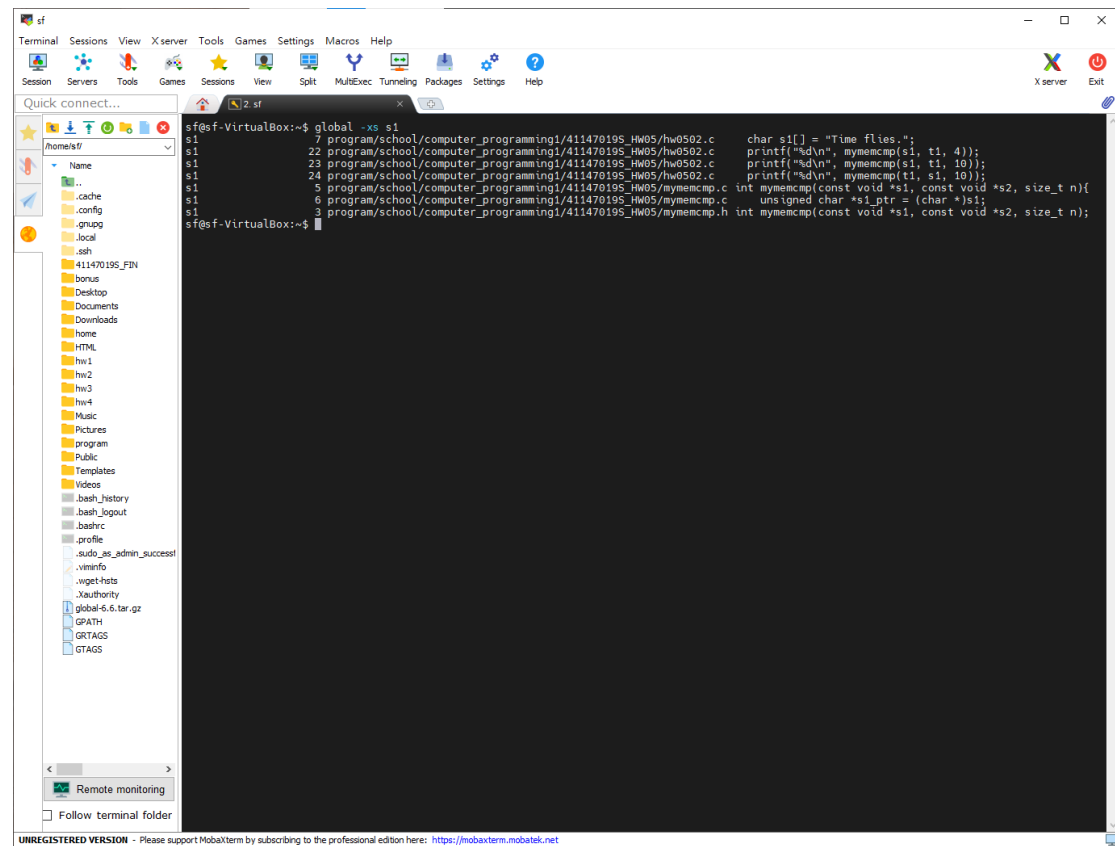
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(6). (-s)

global -s {symbol}

尋找沒有在 GTAGS 被定義的符號

想看詳細資訊就加 (-xs)



The screenshot shows a MobaXterm terminal window with a file explorer on the left and a terminal pane on the right. The terminal pane displays the following commands and output:

```
sf@sf-VirtualBox:~$ global -s s1
s1 7 program/school/computer_programming1/411470195_HW05/hw0502.c      char s1[] = "Time flies.";
s1 22 program/school/computer_programming1/411470195_HW05/hw0502.c      printf("%d\n", mymemcmp(s1, t1, 4));
s1 23 program/school/computer_programming1/411470195_HW05/hw0502.c      printf("%d\n", mymemcmp(s1, t1, 10));
s1 24 program/school/computer_programming1/411470195_HW05/hw0502.c      printf("%d\n", mymemcmp(t1, s1, 10));
s1 5 program/school/computer_programming1/411470195_HW05/mymemcmp.c      int mymemcmp(const void *s1, const void *s2, size_t n){
s1 6 program/school/computer_programming1/411470195_HW05/mymemcmp.c      unsigned char *s1_ptr = (char *)s1;
s1 3 program/school/computer_programming1/411470195_HW05/mymemcmp.h      int mymemcmp(const void *s1, const void *s2, size_t n);

sf@sf-VirtualBox:~$
```

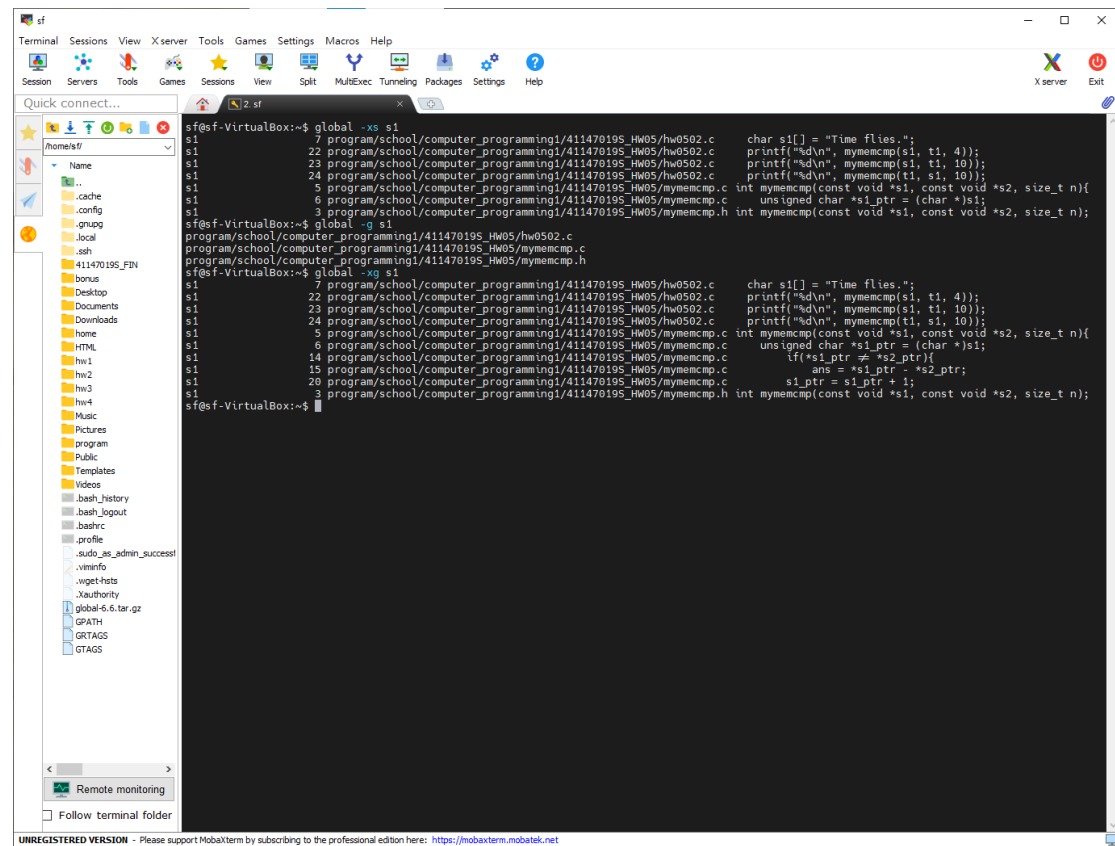
The file explorer on the left shows the directory structure of the user's home directory, including folders like .cache, .config, .local, .ssh, and files like .bash_history, .bash_logout, .profile, .sudo_as_admin_successful, .viminfo, .wget-hsts, .xauthority, global-s.6.tar.gz, GPATH, GRTAGS, and GTAGS.

(7). (-g)

global -g {symbol}

定位具有指定模式的行

想看詳細資訊就加 (-xg)



The screenshot shows a MobaXterm terminal window with a file explorer on the left and a terminal pane on the right. The terminal pane displays a shell script being edited or executed. The script includes a function named `mymemcmp` and a `global` command. The `global` command is used to declare a global variable `s1` and to set a pattern for the `global` command to match lines in the script. The `global` command is used to declare a global variable `s1` and to set a pattern for the `global` command to match lines in the script. The `global` command is used to declare a global variable `s1` and to set a pattern for the `global` command to match lines in the script.

```
sf@sf-VirtualBox:~$ global -xg s1
s1 7 program/school/computer_programming1/411470195_HW05/hw0502.c
s1 22 program/school/computer_programming1/411470195_HW05/hw0502.c
s1 23 program/school/computer_programming1/411470195_HW05/hw0502.c
s1 24 program/school/computer_programming1/411470195_HW05/hw0502.c
s1 5 program/school/computer_programming1/411470195_HW05/mymemcmp.c
s1 6 program/school/computer_programming1/411470195_HW05/mymemcmp.c
s1 3 program/school/computer_programming1/411470195_HW05/mymemcmp.h
sf@sf-VirtualBox:~$ global -g s1
program/school/computer_programming1/411470195_HW05/hw0502.c
program/school/computer_programming1/411470195_HW05/mymemcmp.c
program/school/computer_programming1/411470195_HW05/mymemcmp.h
sf@sf-VirtualBox:~$ global -xg s1
s1 7 program/school/computer_programming1/411470195_HW05/hw0502.c
s1 22 program/school/computer_programming1/411470195_HW05/hw0502.c
s1 23 program/school/computer_programming1/411470195_HW05/hw0502.c
s1 24 program/school/computer_programming1/411470195_HW05/hw0502.c
s1 5 program/school/computer_programming1/411470195_HW05/mymemcmp.c
s1 6 program/school/computer_programming1/411470195_HW05/mymemcmp.c
s1 14 program/school/computer_programming1/411470195_HW05/mymemcmp.c
s1 15 program/school/computer_programming1/411470195_HW05/mymemcmp.c
s1 20 program/school/computer_programming1/411470195_HW05/mymemcmp.c
s1 3 program/school/computer_programming1/411470195_HW05/mymemcmp.h
sf@sf-VirtualBox:~$
```

The script content shown in the terminal is as follows:

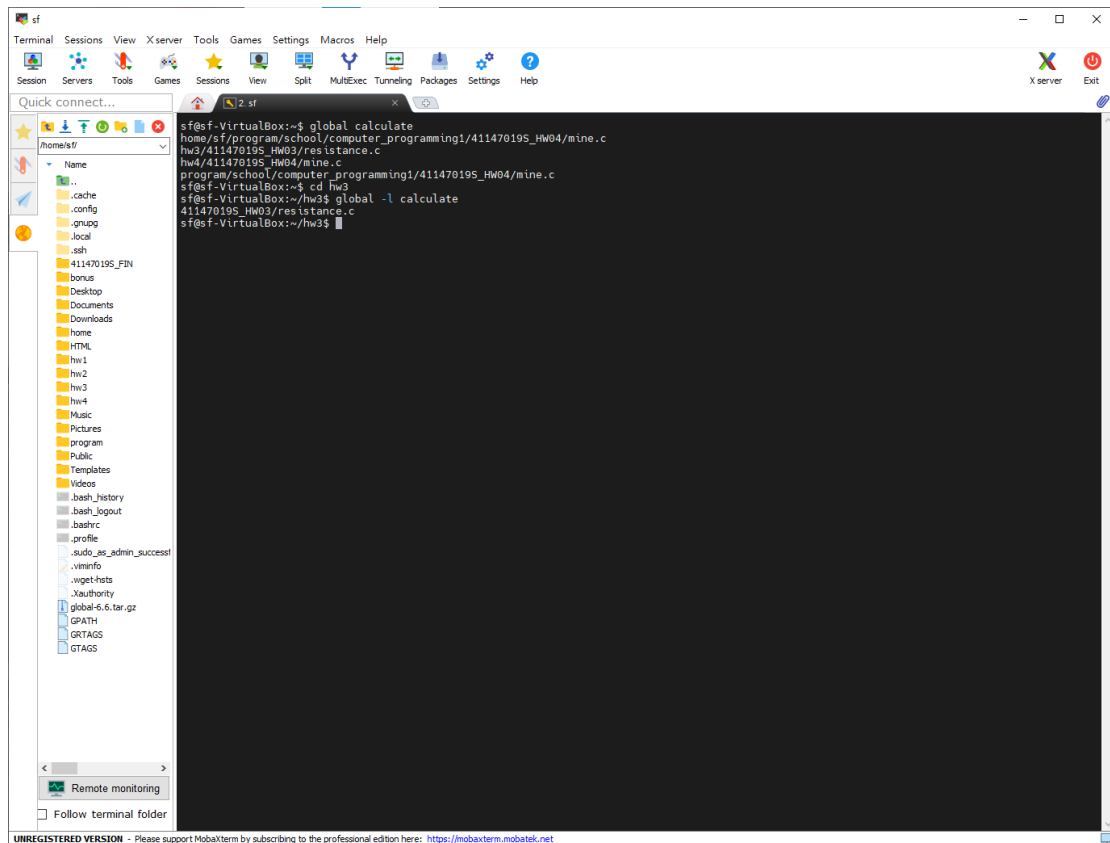
```
char s1[] = "Time flies.";
printf("%d\n", mymemcmp(s1, t1, 4));
printf("%d\n", mymemcmp(s1, t1, 10));
printf("%d\n", mymemcmp(t1, s1, 10));
int mymemcmp(const void *s1, const void *s2, size_t n){
    unsigned char *s1_ptr = (char *)s1;
    int mymemcmp(const void *s1, const void *s2, size_t n);
}
```

(8). (-l)

global -l {function}

只在該目錄下尋找函式

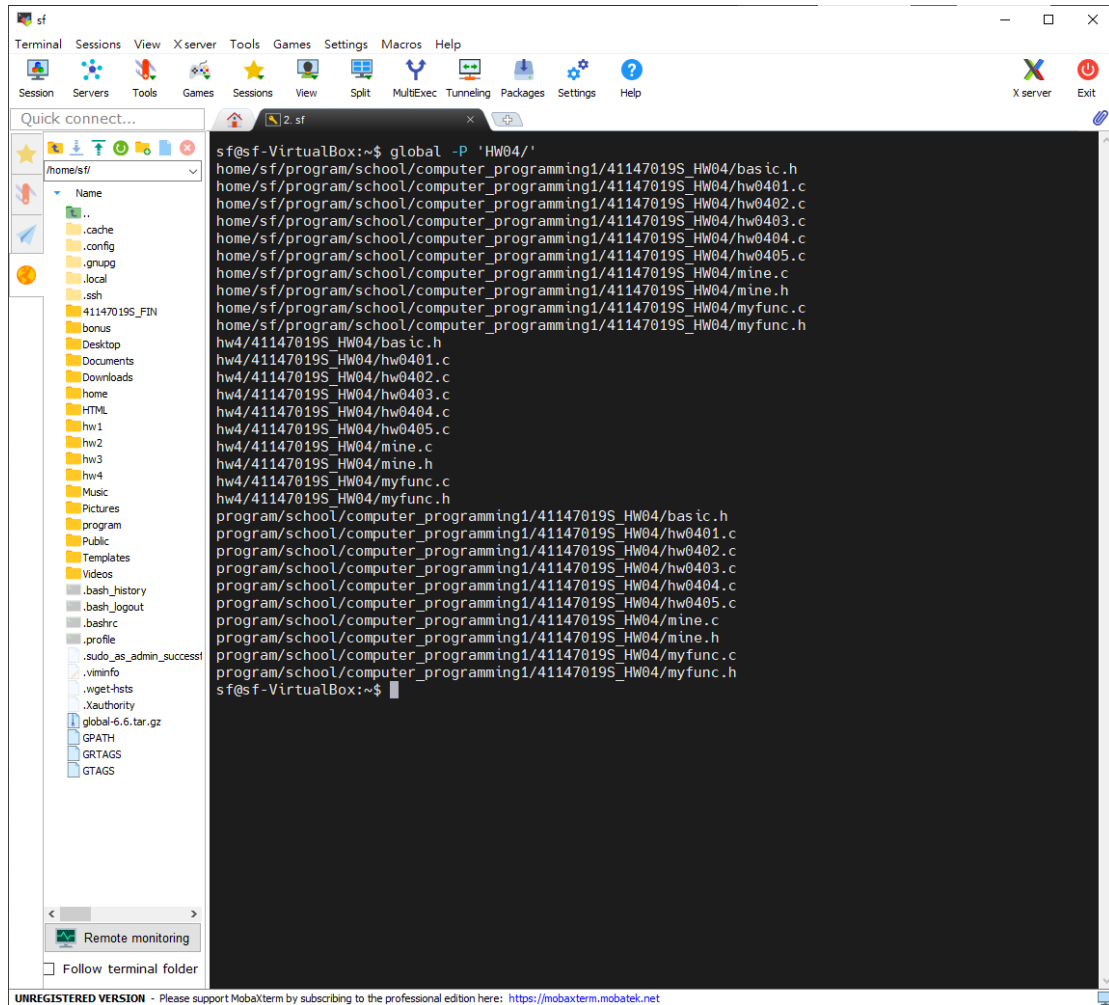
底下的圖為在根目錄和其中一個子目錄加(-l)的差別



(9). (-P)

global -P {file}

定位包含指定模式的路徑名



The screenshot shows a MobaXterm window with a terminal session. The command `global -P 'HW04/'` has been executed, resulting in a list of file paths that contain the pattern 'HW04/'. The paths are listed in two columns, with the first column showing the full path and the second column showing a truncated version of the same path. The paths are as follows:

```
sf@sf-VirtualBox:~$ global -P 'HW04/'
home/sf/program/school/computer_programming1/41147019S_HW04/basic.h
home/sf/program/school/computer_programming1/41147019S_HW04/hw0401.c
home/sf/program/school/computer_programming1/41147019S_HW04/hw0402.c
home/sf/program/school/computer_programming1/41147019S_HW04/hw0403.c
home/sf/program/school/computer_programming1/41147019S_HW04/hw0404.c
home/sf/program/school/computer_programming1/41147019S_HW04/hw0405.c
home/sf/program/school/computer_programming1/41147019S_HW04/mine.c
home/sf/program/school/computer_programming1/41147019S_HW04/mine.h
home/sf/program/school/computer_programming1/41147019S_HW04/myfunc.c
home/sf/program/school/computer_programming1/41147019S_HW04/myfunc.h
hw4/41147019S_HW04/basic.h
hw4/41147019S_HW04/hw0401.c
hw4/41147019S_HW04/hw0402.c
hw4/41147019S_HW04/hw0403.c
hw4/41147019S_HW04/hw0404.c
hw4/41147019S_HW04/hw0405.c
hw4/41147019S_HW04/mine.c
hw4/41147019S_HW04/mine.h
hw4/41147019S_HW04/myfunc.c
hw4/41147019S_HW04/myfunc.h
program/school/computer_programming1/41147019S_HW04/basic.h
program/school/computer_programming1/41147019S_HW04/hw0401.c
program/school/computer_programming1/41147019S_HW04/hw0402.c
program/school/computer_programming1/41147019S_HW04/hw0403.c
program/school/computer_programming1/41147019S_HW04/hw0404.c
program/school/computer_programming1/41147019S_HW04/hw0405.c
program/school/computer_programming1/41147019S_HW04/mine.c
program/school/computer_programming1/41147019S_HW04/mine.h
program/school/computer_programming1/41147019S_HW04/myfunc.c
program/school/computer_programming1/41147019S_HW04/myfunc.h
sf@sf-VirtualBox:~$
```

The terminal window also shows a file explorer on the left side, displaying the contents of the `~/home/sf/` directory. The file explorer shows a list of files and folders, including `.cache`, `.config`, `.gnupg`, `.local`, `.ssh`, `41147019S_FIN`, `bonus`, `Desktop`, `Documents`, `Downloads`, `home`, `HTML`, `hw1`, `hw2`, `hw3`, `hw4`, `Music`, `Pictures`, `program`, `Public`, `Templates`, `Videos`, `.bash_history`, `.bash_logout`, `.bashrc`, `.sudo_as_admin_success`, `.viminfo`, `.wget-hsts`, `.Xauthority`, `global-6.6.tar.gz`, `GPATCH`, `GRTAGS`, and `GTAGS`.

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3.轉成網頁

下 **htags -v** 使產生 HTML 檔案

到 HTML 檔案裡打開 index.html 便能看到網頁

The image shows the Mobaxterm application window. The top menu bar includes 'Terminal', 'Sessions', 'View', 'Xserver', 'Tools', 'Games', 'Settings', 'Macros', and 'Help'. Below the menu is a toolbar with icons for Session, Servers, Tools, Games, Sessions, View, Split, MultiExec, Tunneling, Packages, Settings, and Help. On the right side, there are buttons for 'X server' and 'Exit'. The main window is divided into two panes. The left pane, titled 'Quick connect...', shows a file explorer view of the local file system at '/home/sf/HTML/'. The file list includes folders like 'cgi-bin', 'D', 'defines', 'files', 'I', 'J', 'R', 'S', and files like '.htaccess', 'defines.html', 'FILEMAP', 'files.html', 'help.html', 'index.html' (which is selected), 'mains.html', 'rebuild.sh', 'search.html', and 'style.css'. The right pane shows a terminal window with the title '2.sf'. The terminal output shows the command 'sf@sf-VirtualBox:~\$ htags -v' and its execution. It reports 'Htags started Using /home/sf/GTAGS.' and then lists 51 definitions being added, such as 'BASIC_H', 'BLU', 'GRN', 'LOGIC_H', 'DRN', 'RED', 'RESET', 'S1', 'S2', 'S3', 'S4', 'S5', 'S6', 'SMALTEM_H', 'Start', 'YEL', 'all_print', 'andGate', 'cal_n_derivatives', 'calculate', 'cell_calculate', 'change', 'change_board', 'communicate', 'count_calculate', 'division', 'find_good_cells', 'first_line', 'fullAdder', 'get_point', 'get_stddev', 'halfAdder', 'judge', 'last_line', 'lower_part', 'main', 'max', 'mean', 'median', 'memory_alloc', 'middle_line', 'mtn', 'mtnus', 'money', 'multiplier', 'mymem_alloc', 'mymem_free', 'mymem_reallocate', 'mymem_set', 'mymem_set_array', and 'mymemcmp'. At the bottom of the application, there is a status bar that reads 'UNREGISTERED VERSION - Please support Mobaxterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net'.

[illegible]