Note- All In-Chapter Exercise and Problem solutions were verified using the PC-BSD 10.0 and Solaris 11.1 systems.

In-Chapter Exercises Solutions

2.1 No answer required.
2.2 The **whatis** command for **passwd** gave us an abbreviated display of just a few of the apropos commands.
2.3 There was no Korn shell, the Bourne shell was in /bin/sh, Bash was in /usr/local/bin/bash, C shell was in /usr/local/bin/csh, and there was no z shell.
2.4 The **whoami** and **who** commands gave the same username. The fields of the **who** command are username, terminal, date and time of login.
2.5 If the hostname is a single word, then it is logical to assume you are on a standalone computer. If it is in the format of an Internet domain name, e.g. hostname@domain.domain..., you are on a network.
2.6 No answer required.
2.7 On our PC-BSD system running the C shell, the default aliases were h (history 100), j (jobs -l), la)ls -a), lf (ls -FA), ll (ls -lA), and ls (ls -G). The simplest way to reinstate the default aliases is to close the terminal window yu are working in, and open a new one. You can also log out, and log back into a new session.
2.8 On our PC-BSD 10.0 system, 39 users with different passwords could log on to our system, including a user named "nobody". On our Solaris 11.1 system, 29 users, including "nobody".
2.9 On Solaris 11.1-
There is no whereis command!
On PC-BSD 10.0-
No ksh,zsh, or rc. sh was in /bin/sh, csh was in /bin/csh, bash was in usr/local//bin/bash, and tcsh was in /bin/tcsh.
2.10 On Solaris 11.1-
There is no man page for rc, but man pages for the rest of the shells listed in the table. The command to examine the man page is **man the name of the shell**.
On PC-BSD 10.0-
There is no man page for rc as a shell, rc is a comman. But there are man pages for the rest of the shells listed in the table.
The command to examine the man page is **man the name of the shell**.

2.11 The settings of all the environmental variables for the shell you are running, most importantly the path variable setting!

On Solaris 11.1 where bash is the login shell-
```
A__z='"*SHLVL'
BASH=/usr/bin/bash
BASHOPTS=cmdhist:expand_aliases:extquote:force_fignore:hostcomplete:inte
ractive_comments:progcomp:promptvars:sourcepath:xpg_echo
BASH_ALIASES=()
BASH_ARGC=()
BASH_ARGV=()
BASH_CMDS=()
BASH_LINENO=()
```

```
BASH_SOURCE=()
BASH_VERSINFO=([0]="4" [1]="1" [2]="11" [3]="2" [4]="release" [5]="i386-
pc-solaris2.11")
BASH_VERSION='4.1.11(2)-release'
COLORTERM=gnome-terminal
COLUMNS=80
DBUS_SESSION_BUS_ADDRESS=unix:path=/tmp/dbus-qzeSCeRRrY,guid=
187b473a669afc724c9752db54135522
DESKTOP_SESSION=gnome
DIRSTACK=()
DISPLAY=:0.0
EDITOR=gedit
EUID=100
GDMSESSION=gnome
GDM_KEYBOARD_LAYOUT=us
GDM_LANG=en_US.UTF-8
GNOME_DESKTOP_SESSION_ID=this-is-deprecated
GNOME_KEYRING_CONTROL=/var/tmp/keyring-T0AsKF
GROUPS=()
GTK_RC_FILES=/etc/gtk/gtkrc:/home/bob/.gtkrc-1.2-gnome2
G_BROKEN_FILENAMES=yes
G_FILENAME_ENCODING=@locale,UTF-8
HISTFILE=/home/bob/.bash_history
HISTFILESIZE=500
HISTSIZE=500
HOME=/home/bob
HOSTNAME=solaris
HOSTTYPE=i386
IFS=$' \t\n'
LANG=en_US.UTF-8
LINES=24
LOGNAME=bob
MACHTYPE=i386-pc-solaris2.11
MAIL=/var/mail/bob
MAILCHECK=60
OPTERR=1
OPTIND=1
ORBIT_SOCKETDIR=/var/tmp/orbit-bob
OSTYPE=solaris2.11
PAGER='/usr/bin/less -ins'
PATH=/usr/bin:/usr/sbin:/home/bob
PIPESTATUS=([0]="0" [1]="0")
PPID=7669
PS1='\u@\h:\w\$ '
PS2='> '
PS4='+ '
PWD=/home/bob
SESSION_MANAGER=local/solaris:/tmp/.ICE-unix/1959
SHELL=/usr/bin/bash
SHELLOPTS=braceexpand:emacs:hashall:histexpand:history:interactive-
comments:monitor
SHLVL=2
SSH_AGENT_PID=1997
SSH_AUTH_SOCK=/var/tmp/keyring-T0AsKF/ssh
TERM=xterm
UID=100
USER=bob
USERNAME=bob
WINDOWID=56623107
WINDOWPATH=7
```

```
XAUTHORITY=/tmp/gdm-auth-cookies-KyaGnc/auth-for-bob-OyaGnc/database
XDG_SESSION_COOKIE=df29e648580a5b67899208be00000114-1410553122.459705-
1883204429
_=
_AST_FEATURES='UNIVERSE - att'
```

On PC-BSD 10.0, where csh is the login shell-

```
addsuffix
anyerror
argv    ()
autocorrect
autoexpand
autolist    ambiguous
autorehash
complete    enhance
correct     cmd
csubstnonl
cwd    /usr/home/bob
dirstack    /usr/home/bob
echo_style  bsd
edit
euid  1001
euser bob
filec
gid   1001
group bob
history     100
home  /usr/home/bob
killring    30
mail  /var/mail/bob
owd
path  (/usr/local/share/pcbsd/bin /sbin /bin /usr/sbin /usr/bin
/usr/games /usr/pbi/bin /usr/local/sbin /usr/local/bin /usr/home/bob/bin
/usr/home/bob /usr/local/include/X11)
prompt      %{\033]0;%n@%m:%~\007%}[%B%n@%m%b] %B%~%b%#
prompt2     %R?
prompt3     CORRECT>%R (y|n|e|a)?
savehist    100
shell /bin/csh
shlvl 1
status      0
tcsh  6.18.01
term  xterm
tty   pts/1
uid   1001
user  bob
version     tcsh 6.18.01 (Astron) 2012-02-14 (x86_64-amd-FreeBSD)
options wide,nls,dl,al,kan,sm,rh,color,filec
```

2.12 On Solaris 11.1 where bash is the login shell-
```
SUNW_VARLEN 128
argv  ()
cwd    /home/bob
home  /home/bob
path  (/usr/bin /usr/sbin /home/bob)
prompt      solaris%
shell /bin/csh
```

```
status      0
term   xterm
user   bob
```

On PC-BSD 10.0, where csh is the login shell

```
BASH=/usr/local/bin/bash
BASHOPTS=cmdhist:complete_fullquote:colonbreakswords:expand_aliases:extq
uote:force_fignore:hostcomplete:interactive_comments:progcomp:promptvars
:sourcepath
BASH_ALIASES=()
BASH_ARGC=()
BASH_ARGV=()
BASH_CMDS=()
BASH_LINENO=()
BASH_SOURCE=()
BASH_VERSINFO=([0]="4" [1]="3" [2]="18" [3]="2" [4]="release" [5]
="amd64-portbld-freebsd10.0")
BASH_VERSION='4.3.18(2)-release'
BLOCKSIZE=K
CLICOLOR=true
COLORFGBG='15;0'
COLUMNS=92
DBUS_SESSION_BUS_ADDRESS=unix:path=/tmp/dbus-gywdQeU44A,guid=
858ee1b0c7cc951ec079fefc541606c9
DIRSTACK=()
DISPLAY=:0
EDITOR=vi
EUID=1001
GROUP=bob
GROUPS=()
GS_LIB=/usr/home/bob/.fonts
GTK2_RC_FILES=/etc/gtk-2.0/gtkrc:/usr/home/bob/.gtkrc-
2.0:/usr/home/bob/.kde4/share/config/gtkrc-2.0
GTK_RC_FILES=/etc/gtk/gtkrc:/usr/home/bob/.gtkrc:/usr/home/bob/.kde4/sha
re/config/gtkrc
HISTFILE=/usr/home/bob/.bash_history
HISTFILESIZE=500
HISTSIZE=500
HOME=/usr/home/bob
HOST=pcbsd-2823
HOSTNAME=pcbsd-2823
HOSTTYPE=FreeBSD
IFS=$' \t\n'
KDE_FULL_SESSION=true
KDE_MULTIHEAD=false
KDE_SESSION_UID=1001
KDE_SESSION_VERSION=4
KONSOLE_DBUS_SERVICE=:1.45
KONSOLE_DBUS_SESSION=/Sessions/1
KONSOLE_DBUS_WINDOW=/Windows/1
KONSOLE_PROFILE_NAME=Shell
LANG=en_US.UTF-8
LANGUAGE=
LC_ALL=en_US.UTF-8
LINES=61
LOGNAME=bob
MACHTYPE=x86_64
MAIL=/var/mail/bob
MAILCHECK=60
MANPATH=/usr/share/man:/usr/local/man:/usr/share/openssl/man:/usr/local/
```

```
lib/perl5/5.16/man:/usr/local/lib/perl5/5.16/perl/man
MORE=-erX
OPTERR=1
OPTIND=1
OSTYPE=FreeBSD
PAGER=more
PATH=/usr/local/share/pcbsd/bin:/sbin:/bin:/usr/sbin:/usr/bin:/usr/games
:/usr/pbi/bin:/usr/local/sbin:/usr/local/bin:/usr/home/bob/bin:/usr/home
/bob:/usr/local/include/X11
PCDM_SESSION=KDE
PIPESTATUS=([0]="0")
PPID=1875
PROFILEHOME=
PS1='[\u@\h \w]\$ '
PS2='> '
PS4='+ '
PWD=/usr/home/bob
QT_PLUGIN_PATH=/usr/home/bob/.kde4/lib/kde4/plugins/:/usr/local/lib/kde4
/plugins/
RC_PID=21
SESSION_MANAGER=local/pcbsd-2823:/tmp/.ICE-unix/1681
SHELL=/bin/csh
SHELLOPTS=braceexpand:emacs:hashall:histexpand:history:interactive-
comments:monitor
SHELL_SESSION_ID=63b57e80fe174c7687a1d87e80acffb6
SHLVL=2
TERM=xterm
UID=1001
USER=bob
USERNAME=bob
VENDOR=amd
WINDOWID=56623187
WINDOWPATH=9
XAUTHORITY=/tmp/.PCDMAuth-a39feaa34bbe2cf0b5fd
XCURSOR_PATH='/usr/local/share/icons::
~/.icons:/usr/local/share/icons:/usr/local/share/pixmaps:/usr/local/lib/
X11/icons'
XCURSOR_THEME=Jimmac
XDG_CONFIG_DIRS=/usr/local/etc/xdg:/usr/pbi/etc/xdg:/etc/xdg:/usr/local/
etc/xdg:/usr/local/etc/xdg/xfce4
XDG_CURRENT_DESKTOP=KDE
XDG_DATA_DIRS=/usr/local/share:/share:/usr/share:/usr/pbi/share:/usr/loc
al/share:/usr/share:/usr/local/share:/usr/local/share/gnome
_=copy
```