

UBUNTU COMMANDS

OPERATING SYSTEMS LABS



ASSIGNMENT # 01

Submitted By

Tahawar ihsan

(19P-0097)

Submitted to

MR. MUHAMMAD ABDULLAH

(INSTRUCTOR CS)

DEPARTMENT OF COMPUTER SCIENCE

FAST NATIONAL UNIVERSITY OF COMPUTER AND

EMERGING SCINCES, PESHAWAR

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Export

Export: Set export attribute for shell variables

DESCRIPTION

export- command is one of the bash shell BUILTINS commands, which means it is part of your shell. The export command is fairly simple to use as it has straightforward syntax with only three available command options. In general, the export command marks an environment variable to be exported with any newly forked child processes and thus it allows a child process to inherit all marked variables

The **export** command is a built-in utility of Linux Bash shell. It is used to ensure the environment variables and functions to be passed to child processes. It does not affect the existing environment variable.

Environment variables are set when we open a new shell session. At any time, if we change any variable value, the shell has no way to select that change. The export command allows us to update the current session about the changes that have been made to the exported variable. We do not need to wait to start a new shell session.

Syntax:

export [-f] [-n] [name[=value] ...] or export -p

Options

| Tag | Description |
|-----------|--|
| -p | List of all names that are exported in the current shell |
| -n | Remove names from export list |
| -f | Names are exported as functions |

Example1: The export command without any argument

The basic export command will display all the exported environment variables of your system. It is executed as follows:

\$ export

```
tahawar@tahawar-VirtualBox: ~$ export
declare -x COLORTERM="truecolor"
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus"
declare -x DESKTOP_SESSION="ubuntu"
declare -x DISPLAY=":0"
declare -x GNOME_SESSION="ubuntu"
declare -x GJS_DEBUG_OUTPUT="stderr"
declare -x GJS_DEBUG_TOPICS="JS ERROR;JS LOG"
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"
declare -x GNOME_SETUP_DISPLAY="1"
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/1315cb56_b2fb_42bf_bdf5_b8cd6c1b9d82"
declare -x GNOME_TERMINAL_SERVICE=":1.118"
declare -x GTK_MODULES="gail:atk-bridge"
declare -x HOME="/home/tahawar"
declare -x IM_CONFIG_PHASE="1"
declare -x LANG="en_US.UTF-8"
declare -x LC_ADDRESS="ur_PK"
declare -x LC_IDENTIFICATION="ur_PK"
declare -x LC_MEASUREMENT="ur_PK"
declare -x LC_MONETARY="ur_PK"
declare -x LC_NAME="ur_PK"
declare -x LC_NUMERIC="ur_PK"
declare -x LC_PAPER="ur_PK"
declare -x LC_TELEPHONE="ur_PK"
declare -x LC_TIME="ur_PK"
declare -x LESSCLOSE="/usr/bin/lesspipe %s %s"
declare -x LESSOPEN="| /usr/bin/lesspipe %s"
declare -x LOGNAME="tahawar"
declare -x LS_COLORS="rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33:01:cd=40;33;01:or=40;31;01:ml=00:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lzh=01;31:*.lzm=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.zst=01;31:*.tzst=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.tz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=
```

```
01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wim=01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.glf=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;35:*.webp=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=00;36:*.flac=00;36:*.m4a=00;36:*.mid=00;36:*.midi=00;36:*.mka=00;36:*.mp3=00;36:*.mpc=00;36:*.ogg=00;36:*.ra=00;36:*.wav=00;36:*.oga=00;36:*.opus=00;36:*.spx=00;36:*.xspf=00;36:"
declare -x OLDPWD="/home/tahawar/Desktop"
declare -x PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin"
declare -x PWD="/home/tahawar"
declare -x QT_ACCESSIBILITY="1"
declare -x QT_IM_MODULE="ibus"
declare -x SESSION_MANAGER="local/tahawar-VirtualBox:@/tmp/.ICE-unix/2195,unix/tahawar-VirtualBox:/tmp/.ICE-unix/2195"
declare -x SHELL="/bin/bash"
declare -x SHLVL="2"
declare -x SSH_AGENT_LAUNCHER="gnome-keyring"
declare -x SSH_AUTH_SOCK="/run/user/1000/keyring/ssh"
declare -x TERM="xterm-256color"
declare -x USER="tahawar"
declare -x USERNAME="tahawar"
declare -x VTE_VERSION="6203"
declare -x WAYLAND_DISPLAY="wayland-0"
declare -x XAUTHORITY="/run/user/1000/.mutter-Xwaylandauth.HAOPB1"
declare -x XDG_CONFIG_DIRS="/etc/xdg/xdg-ubuntu:/etc/xdg"
declare -x XDG_CURRENT_DESKTOP="ubuntu:GNOME"
declare -x XDG_DATA_DIRS="/usr/share/ubuntu:/usr/local/share:/usr/share:/var/lib/snapd/desktop"
declare -x XDG_MENU_PREFIX="gnome-"
declare -x XDG_RUNTIME_DIR="/run/user/1000"
declare -x XDG_SESSION_CLASS="user"
declare -x XDG_SESSION_DESKTOP="ubuntu"
declare -x XDG_SESSION_TYPE="wayland"
declare -x XMODIFIERS="@im=ibus"
declare -x var1="freefall"
```

```
declare -x XDG_DATA_DIRS="/usr/share/ubuntu:/usr/local/share:/usr/share:/var/lib/snapd/desktop"
declare -x XDG_MENU_PREFIX="gnome-"
declare -x XDG_RUNTIME_DIR="/run/user/1000"
declare -x XDG_SESSION_CLASS="user"
declare -x XDG_SESSION_DESKTOP="ubuntu"
declare -x XDG_SESSION_TYPE="wayland"
declare -x XMODIFIERS="@im=ibus"
declare -x var1="freeforall"
```

Example2: Display all exported variable on current shell

To display all the exported environment variable of the current shell, execute the command with -p option as follows:

```
$ export -p
```

```
tahawar@tahawar-VirtualBox: ~  
tahawar@tahawar-VirtualBox:~$ export -p  
declare -x COLORTERM="truecolor"  
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus"  
declare -x DESKTOP_SESSION="ubuntu"  
declare -x DISPLAY=":0"  
declare -x GDMSESSION="ubuntu"  
declare -x GJS_DEBUG_OUTPUT="stderr"  
declare -x GJS_DEBUG_TOPICS="JS ERROR;JS LOG"  
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"  
declare -x GNOME_SETUP_DISPLAY=":1"  
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"  
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/1315cb56_b2fb_42bf_bdf5_b8cd6c1b9d82"  
declare -x GNOME_TERMINAL_SERVICE=":1.118"  
declare -x GTK_MODULES="gall:atk-bridge"  
declare -x HOME="/home/tahawar"  
declare -x IM_CONFIG_PHASE="1"  
declare -x LANG="en_US.UTF-8"  
declare -x LC_ADDRESS="ur_PK"  
declare -x LC_IDENTIFICATION="ur_PK"  
declare -x LC_MEASUREMENT="ur_PK"  
declare -x LC_MONETARY="ur_PK"  
declare -x LC_NAME="ur_PK"  
declare -x LC_NUMERIC="ur_PK"  
declare -x LC_PAPER="ur_PK"  
declare -x LC_TELEPHONE="ur_PK"  
declare -x LC_TIME="ur_PK"  
declare -x LESSCLOSE="/usr/bin/lesspipe %s %s"  
declare -x LESSOPEN="| /usr/bin/lesspipe %s"  
declare -x LOGNAME="tahawar"  
declare -x LS_COLORS="rs=0:di=01;34;ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;o1=01;35:cd=40;33;o1=01;or=40;31;o1=01;ml=00:su=37;41;sg=30;43:ca=30;41;tw=30;42;ow=34;42;ts=37;44;ex=01;32:*tar=01;31*:tgz=01;31*:arc=01;31*:arj=01;31*:taz=01;31*:lha=01;31*:lza=01;31*:lzma=01;31*:ltxz=01;31*:txz=01;31*:tzo=01;31*:t7z=01;31*:zip=01;31*:zoi=01;31*:dz=01;31*:gz=01;31*:lrz=01;31*:lzo=01;31*:xz=01;31*:zoo=01;31":e=0"
```

Example3: Using export with functions

To use a function with the export command, use the -f option. If we do not use this option, it will be considered as a variable, not function.

Syntax:

```
$ export -f function_name
```

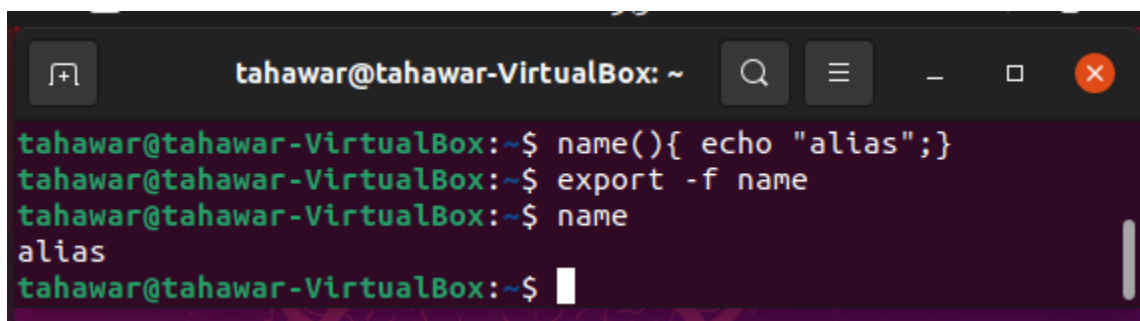
We are exporting a function 'name' as follows:

```
$ name() { echo "alias";}
```

To export the above function, execute the command as follows: `$ export -f name`

Now, invoke the bash shell to execute the function: `$ bash`

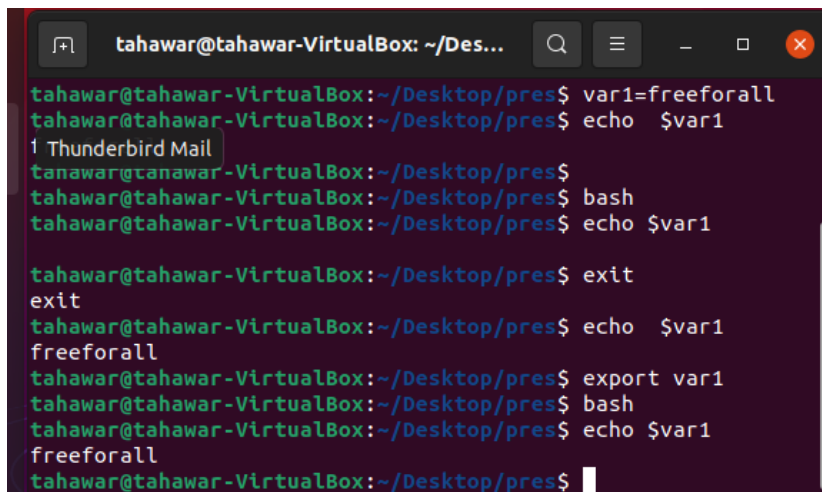
To call the function, enter the function name: `$ name`

A terminal window titled 'tahawar@tahawar-VirtualBox: ~' with search, menu, and window control icons. The terminal shows the following commands and output:

```
tahawar@tahawar-VirtualBox:~$ name(){ echo "alias";}  
tahawar@tahawar-VirtualBox:~$ export -f name  
tahawar@tahawar-VirtualBox:~$ name  
alias  
tahawar@tahawar-VirtualBox:~$
```

Example4: Assign a value before exporting a function or variable:

The export command allows us to assign a value before exporting a function. Consider the below command:

A terminal window titled 'tahawar@tahawar-VirtualBox: ~/Des...' with search, menu, and window control icons. The terminal shows the following commands and output:

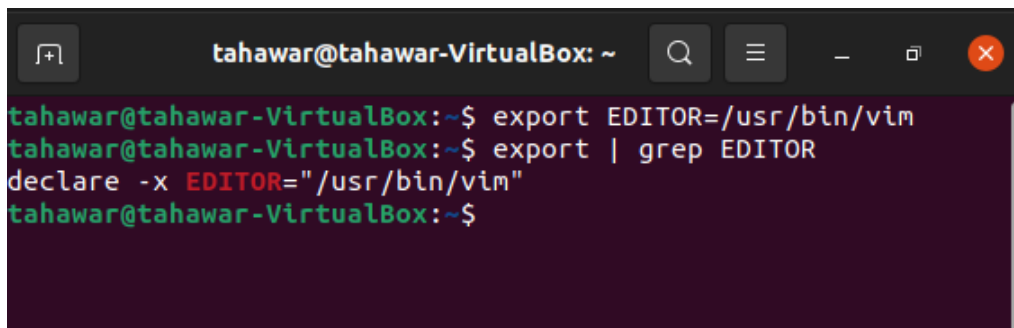
```
tahawar@tahawar-VirtualBox:~/Desktop/pres$ var1=freeforall  
tahawar@tahawar-VirtualBox:~/Desktop/pres$ echo $var1  
1 Thunderbird Mail  
tahawar@tahawar-VirtualBox:~/Desktop/pres$  
tahawar@tahawar-VirtualBox:~/Desktop/pres$ bash  
tahawar@tahawar-VirtualBox:~/Desktop/pres$ echo $var1  
  
tahawar@tahawar-VirtualBox:~/Desktop/pres$ exit  
exit  
tahawar@tahawar-VirtualBox:~/Desktop/pres$ echo $var1  
freeforall  
tahawar@tahawar-VirtualBox:~/Desktop/pres$ export var1  
tahawar@tahawar-VirtualBox:~/Desktop/pres$ bash  
tahawar@tahawar-VirtualBox:~/Desktop/pres$ echo $var1  
freeforall  
tahawar@tahawar-VirtualBox:~/Desktop/pres$
```

Example5: Set vim as default editor:

The vim editor is the most widely used text editor for the Linux systems. We can set the vim as default text editor by using the export command.

To set the vim as a default text editor, execute the following command:

1. export **EDITOR**=/usr/bin/vim
2. export | grep EDITOR

A terminal window titled 'tahawar@tahawar-VirtualBox: ~' with search, menu, and window control icons. The terminal shows the following commands and output:

```
tahawar@tahawar-VirtualBox:~$ export EDITOR=/usr/bin/vim
tahawar@tahawar-VirtualBox:~$ export | grep EDITOR
declare -x EDITOR="/usr/bin/vim"
tahawar@tahawar-VirtualBox:~$
```

Example6: Set an environment variable

To create a new variable, use the export command followed by a variable name and its value.

Syntax:

```
$ export NAME=VALUE
```

To create a new variable, 'sys,' execute the command as follows:

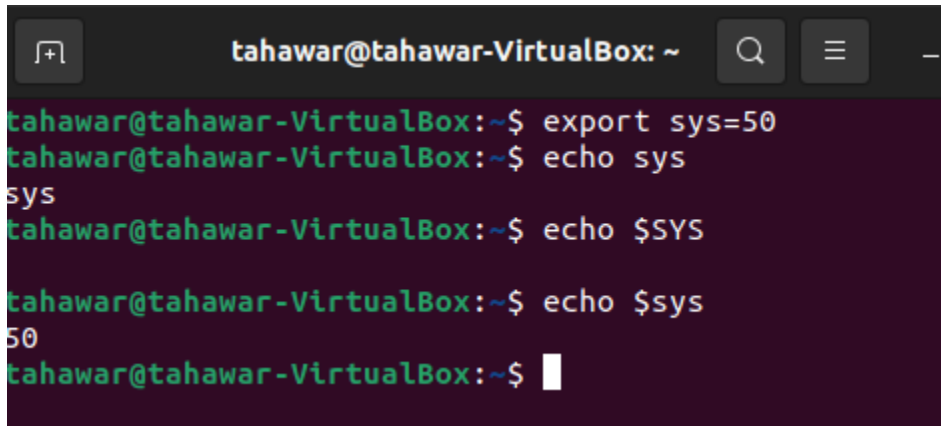
```
$ export sys=50
```

The echo command is used to display the variable:

```
$ cho sys
```

To display the value of the variable, use the \$ symbol before the variable name

```
$ echo $sys
```

A terminal window titled 'tahawar@tahawar-VirtualBox: ~' with search and menu icons. It shows a series of commands and their outputs: 'export sys=50', 'echo sys' (output: 'sys'), 'echo \$SYS' (output: 'SYS'), 'echo \$sys' (output: '50'), and the prompt returns to '\$ '.

Example-7:

To set colorful prompt

```
$ export PS1='\[\e[1;32m\][\u@\h \W]\$'\[\e[0m\] '
```

output:

the colour of prompt will change to green.

Example-8:

To remove names from exported list, use -n option

```
$ export -n EDITOR
```

note: in Example-3 we have set EDITOR=/usr/bin/vim, and have seen it in exported list.

output:

```
$ export | grep EDITOR
```

note: no output after grepping all exported variables, as EDITOR exported variable is removed from exported list.