

```
ahmed@ahmed: ~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ pro.exe
Index: 2
Element not found
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$
```

```
ahmed@ahmed: ~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ pro.exe
Index: 2
Element not found
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ $PATH
bash: /home/ahmed/x-tools/aarch64-rpi4-linux-gnu/bin:/home/ahmed/.local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin: No such file or directory
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$
```

the pro.exe is executed directly from bash because the binary is stored in a directory which is found in environment variable \$PATH. So once it's written, the kernel will search for it in directories specified in the \$PATH.

1. List the available shells in your system.

```
ahmed@ahmed: ~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ head /etc/shells
# /etc/shells: valid login shells
/bin/sh
/bin/bash
/bin/rbash
/bin/dash
/usr/bin/sh
/usr/bin/bash
/usr/bin/rbash
/usr/bin/dash
/bin/zsh
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$
```

2. List the environment variables in your current shell.

```
ahmed@ahmed: ~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ env
SHELL=/bin/bash
SESSION_MANAGER=local/ahmed:@/tmp/.ICE-unix/2019,unix/ahmed:/tmp/.ICE-unix/2019
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_DESKTOP_SESSION_ID=this-is-deprecated
LC_ADDRESS=en_US.UTF-8
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=en_US.UTF-8
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
nvidia-smi
XMODIFIERS=@im=ibus
DESKTOP_SESSION=ubuntu
LC_MONETARY=en_US.UTF-8
GTK_MODULES=gail:atk-bridge
DBUS_STARTER_BUS_TYPE=session
PHD=/home/ahmed/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1
LOGNAME=ahmed
XDG_SESSION_DESKTOP=ubuntu
XDG_SESSION_TYPE=wayland
SYSTEMD_EXEC_PID=2019
XAUTORITY=/run/user/1000/.mutter-Xwaylandauth.ZR1Q2
HOME=/home/ahmed
USERNAME=ahmed
IM_CONFIG_PHASE=1
LC_PAPER=en_US.UTF-8
LANG=en_US.UTF-8
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:mi=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:*.lzo=01;31:*.xz=01;31:*.zst=01;31:*.tztz=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;3
1:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wln=01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjp
eg=01;35:*.gif=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;3
5:*.svgz=01;35:*.nng=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;3
5:*.pl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.qnx=01;35:*.qnx=01;35:*.aac=00;36:*.au=00;36:*.flac=00;36:*.m4a=00
```

3- Display your current shell name.

```
ahmed@ahmed: ~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ echo $SHELL
/bin/bash
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$
```

4. Execute the following command :

echo \ then press enter

What is the purpose of \ ?

it causes the newline to be neglected and to continue reading input in the next line

```
ahmed@ahmed: ~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ echo \
> ahmed abdalla
ahmed abdalla
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$
```

5. Create a Bash shell alias named PrintPath for the “echo \$PATH” command

```
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ alias PrintPath='echo $PATH'
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$ PrintPath
/home/ahmed/x-tools/aarch64-rpi4-linux-gnu/bin:/home/ahmed/.local/bin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local
/games:/snap/bin:/snap/bin
ahmed@ahmed:~/Android_Automotive/Embedded_linux/Linux_administration/Day_2/Q1$
```