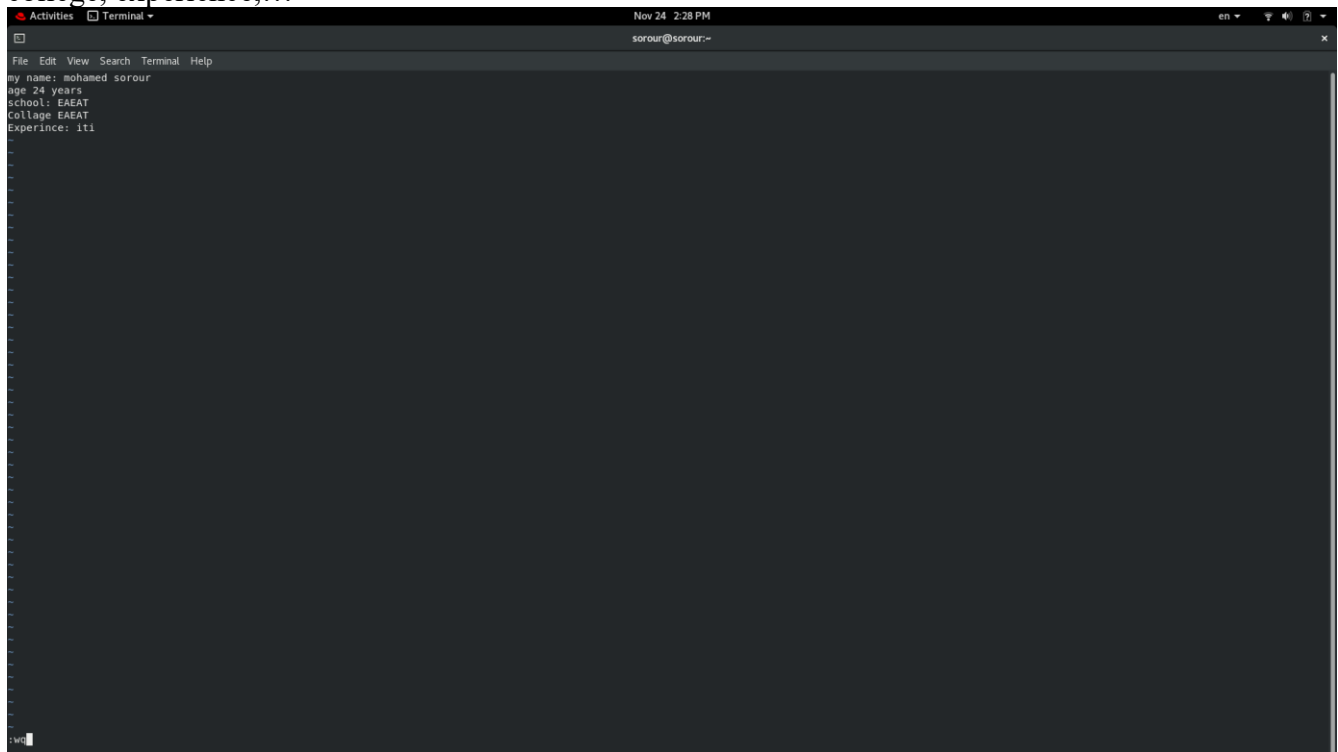


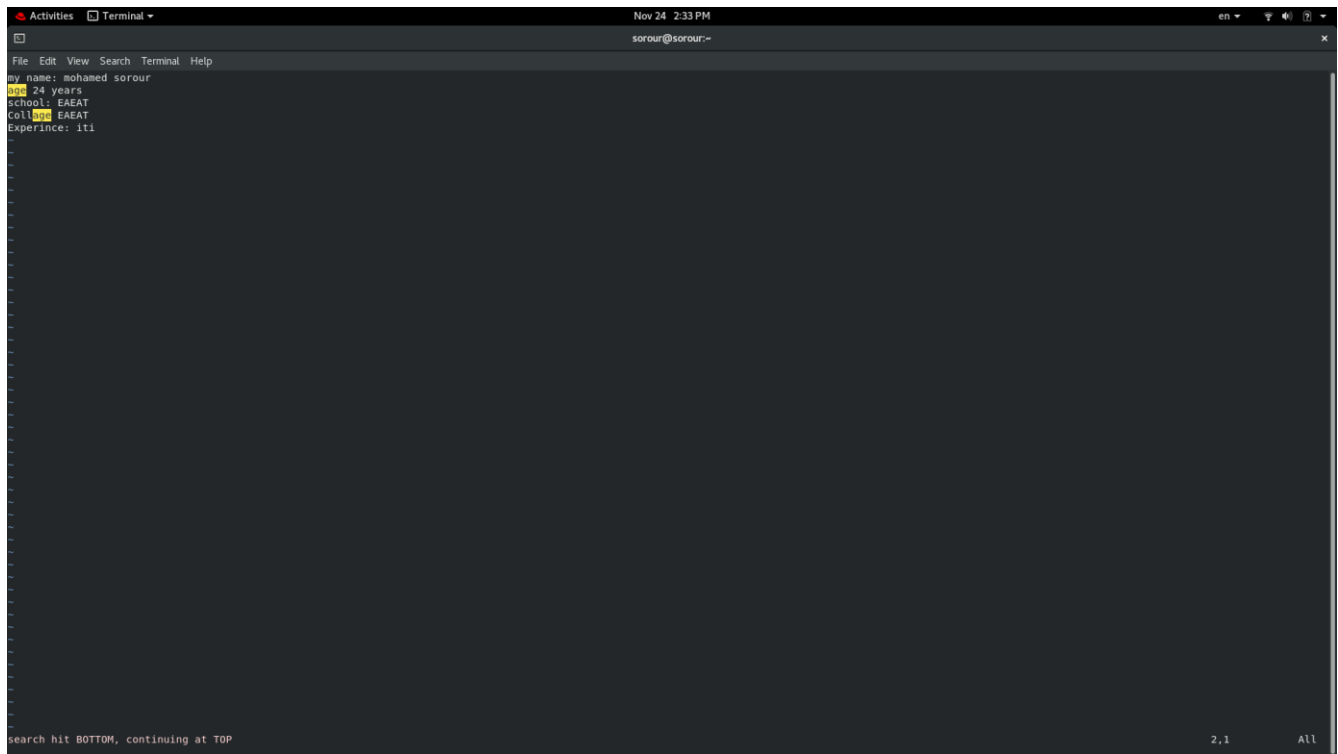
1. Using vi write your CV in the file mycv. Your CV should include your name, age, school, college, experience,...

A screenshot of a terminal window. The title bar shows 'Activities', 'Terminal', and the date/time 'Nov 24 2:28 PM'. The terminal content shows a file named 'mycv' with the following text: 'my name: mohamed sorour', 'age 24 years', 'school: EAEAT', 'College EAEAT', and 'Experince: iti'. The terminal has a dark background and a light-colored cursor at the end of the last line.

```
my name: mohamed sorour
age 24 years
school: EAEAT
College EAEAT
Experince: iti
```

2. Open mycv file using vi command then: Without using arrows state how to:

- Move the cursor down one line at time. → **j**
- Move the cursor up one line at time. → **k**
- Search for word age

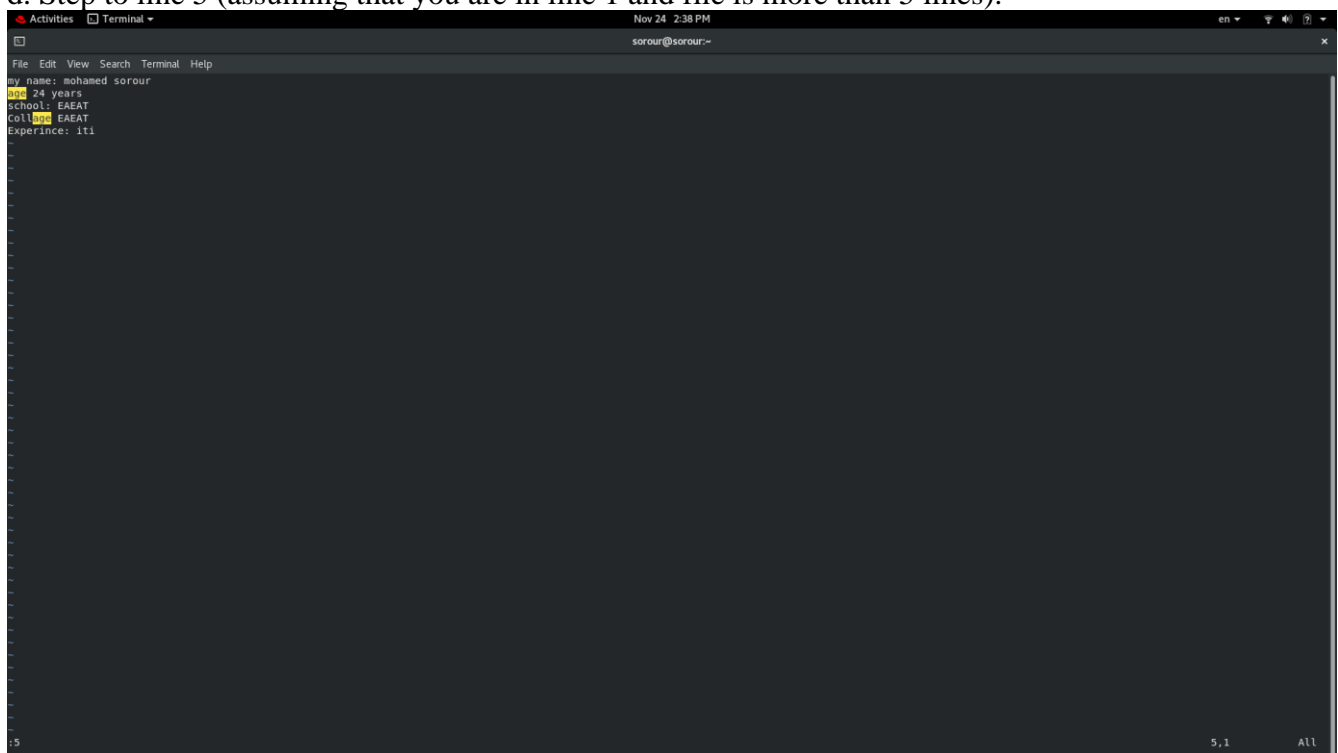


```
my name: mohamed sorour
age: 24 years
school: EAEAT
College: EAEAT
Experience: iti
```

search hit BOTTOM, continuing at TOP

2,1 ALL

d. Step to line 5 (assuming that you are in line 1 and file is more than 5 lines).

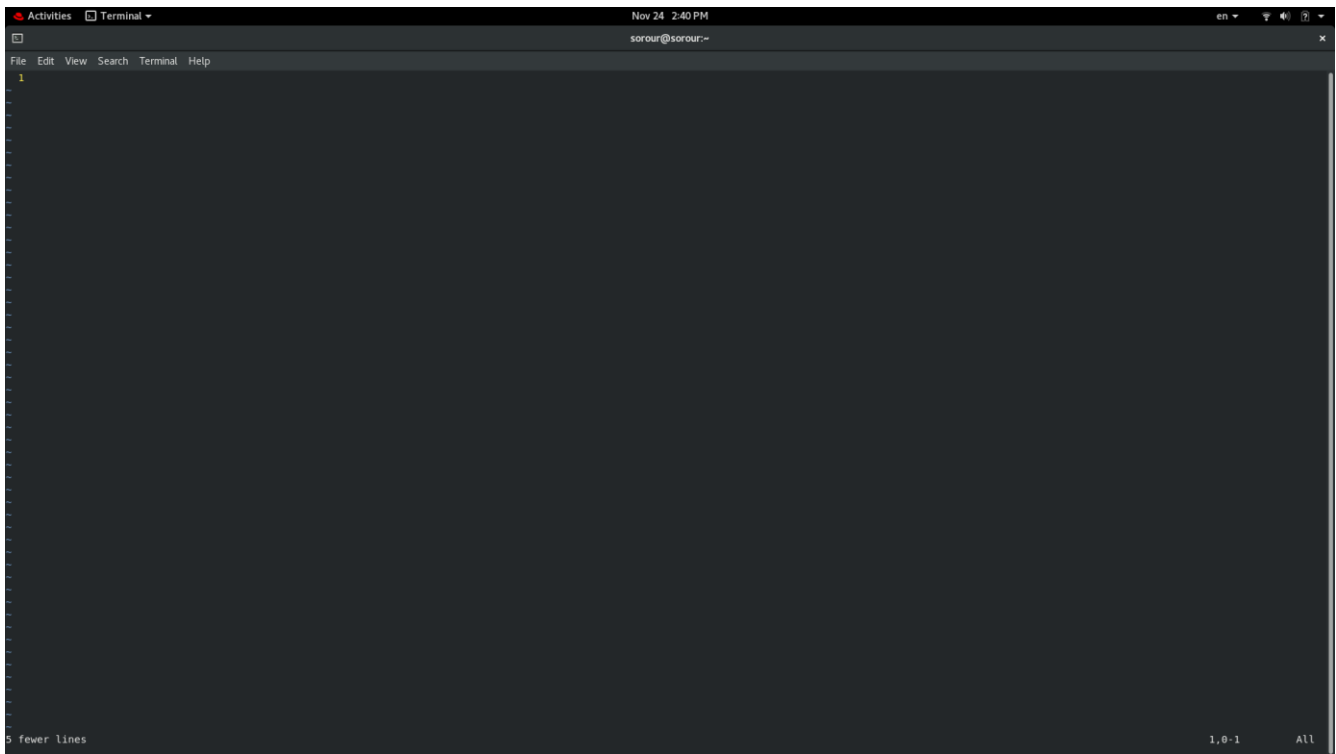


```
my name: mohamed sorour
age: 24 years
school: EAEAT
College: EAEAT
Experience: iti
```

5,1 ALL

e. Delete the line you are on and line 5.

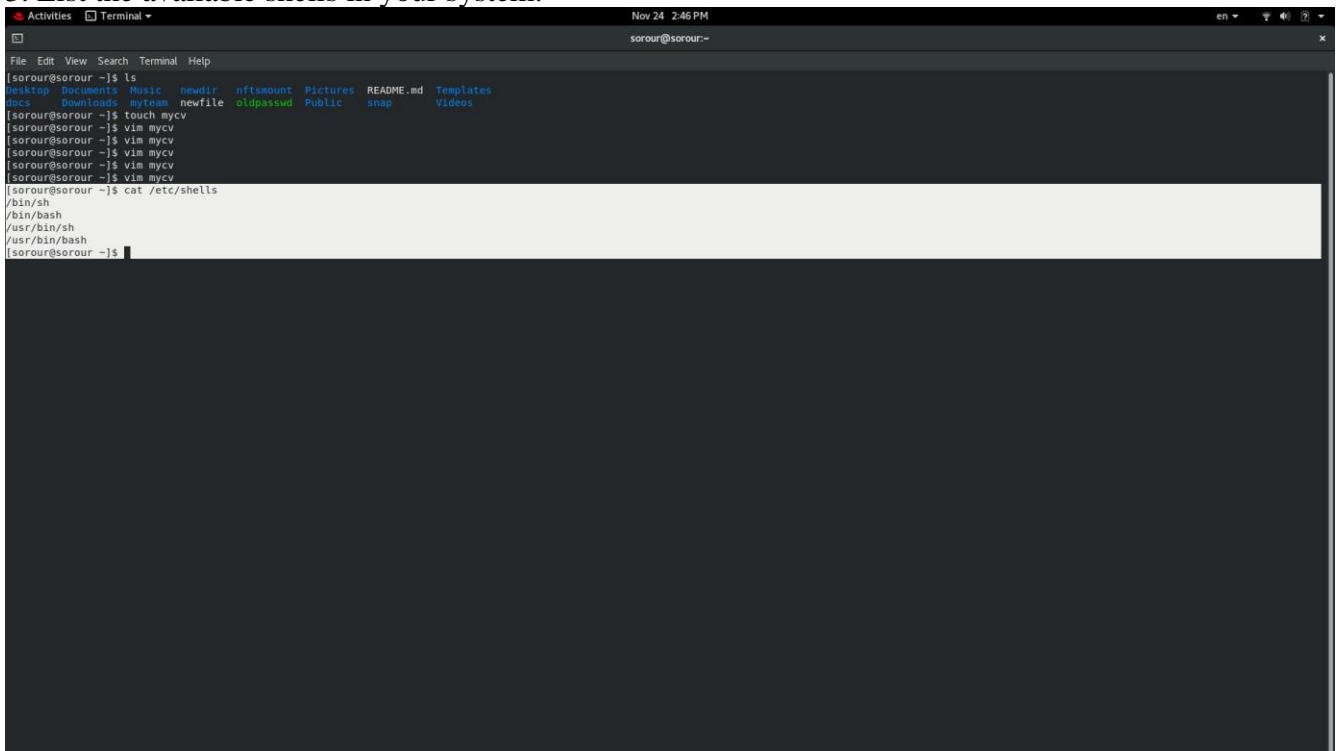
→ 1,5 del



A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 24 2:40 PM, en, 1.0-1, ALL). The main area is dark gray with a single line of text "1" at the top left, indicating the current line number. The bottom status bar shows "5 fewer lines".

f. How to step to the end of line and change to writing mode in one-step. → A

3. List the available shells in your system.



A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 24 2:46 PM, en, 1.0-1, ALL). The main area is dark gray. The user has entered the command `ls`, which outputs a list of files and directories: `Desktop Documents Music newdir ntfsmount Pictures README.md Templates`. The user then enters the command `touch mycv`, followed by several `vim mycv` commands. Finally, the user enters the command `cat /etc/shells`, which outputs the following text: `/bin/sh
/bin/bash
/usr/bin/sh
/usr/bin/bash`. The prompt `~$` is visible at the bottom left.

4. List the environment variables in your current shell.

→ `printenv`

```
Nov 24 2:47 PM
sorour@sorour:~$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/usr/sbin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
games:x:5:12:games:/usr/games:/usr/sbin/nologin
ftp:x:14:14:ftp:/var/ftp:/usr/sbin/nologin
sorour:x:1000:1000:sorour:/home/sorour:/bin/bash
MAIL=/var/spool/mail/sorour
TERM=xterm-256color
QT_IM_MODULE=ibus
XMODIFIERS=@im=ibus
XDG_CURRENT_DESKTOP=GNOME
GNOME_TERMINAL_SERVICE=:1.79
XDG_SEAT=seat0
SHLVL=2
GNOME_SESSION=gnome
GNOME_DESKTOP_SESSION_ID=this-is-deprecated
LOGNAME=sorour
DBUS_SESSION_BUS_ADDRESS=unix:path=/run/user/1000/bus
XDG_RUNTIME_DIR=/run/user/1000
XAUTHORITY=/run/user/1000/.mutter-xwaylandauth.LEZSV1
PATH=/home/sorour/.local/bin:/home/sorour/bin:/usr/local/bin:/usr/sbin:/var/lib/snapd/snap/bin
HISTSIZE=1000
GJS_DEBUG_TOPICS=JS ERROR;JS LOG
SESSION_MANAGER=local/unix:@/tmp/.ICE-unix/2599,unix/unix:/tmp/.ICE-unix/2599
LESSOPEN=||/usr/bin/lesspipe.sh %s
BASH_FUNC_which=() { alias;
eval $(which declare) } | /usr/bin/which --tty-only --read-alias --read-functions --show-tilde --show-dot $@
}
=/usr/bin/printenv
[sorour@sorour ~]$
```

5. List all of the environment variables for the bash shell. → **man bash**

```
Nov 24 2:52 PM
sorour@sorour:~$ man bash
NAME
    bash - GNU Bourne-Again Shell
SYNOPSIS
    bash [options] [command_string | file]
COPYRIGHT
    Bash is Copyright (C) 1989-2016 by the Free Software Foundation, Inc.
DESCRIPTION
    Bash is an sh-compatible command language interpreter that executes commands read from the standard input or from a file. Bash also incorporates useful features from the Korn and C shells (ksh and csh).
    Bash is intended to be a conformant implementation of the Shell and Utilities portion of the IEEE POSIX specification (IEEE Standard 1003.1). Bash can be configured to be POSIX-conformant by default.
OPTIONS
    All of the single-character shell options documented in the description of the set builtin command can be used as options when the shell is invoked. In addition, bash interprets the following options when it is invoked:
    -c If the -c option is present, then commands are read from the first non-option argument command_string. If there are arguments after the command_string, the first argument is assigned to $0 and any remaining arguments are assigned to the positional parameters. The assignment to $0 sets the name of the shell, which is used in warning and error messages.
    -i If the -i option is present, the shell is interactive.
    -l Make bash act as if it had been invoked as a login shell (see INVOCATION below).
    -r If the -r option is present, the shell becomes restricted (see RESTRICTED SHELL below).
    -s If the -s option is present, or if no arguments remain after option processing, then commands are read from the standard input. This option allows the positional parameters to be set when invoking an interactive shell.
    -D A list of all double-quoted strings preceded by $ is printed on the standard output. These are the strings that are subject to language translation when the current locale is not C or POSIX. This implies the -n option; no commands will be executed.
    [-*IO [shopt_option] shopt_option is one of the shell options accepted by the shopt builtin (see SHELL BUILTIN COMMANDS below). If shopt_option is present, -O sets the value of that option; +O unsets it. If shopt_option is not supplied, the names and values of the shell options accepted by shopt are printed on the standard output. If the invocation option is +O, the output is displayed in a format that may be reused as input.
    -- A -- signals the end of options and disables further option processing. Any arguments after the -- are treated as filenames and arguments. An argument of - is equivalent to --.
    Bash also interprets a number of multi-character options. These options must appear on the command line before the single-character options to be recognized.
    --debugger Arrange for the debugger profile to be executed before the shell starts. Turns on extended debugging mode (see the description of the extdebug option to the shopt builtin below).
    --dump-po-strings Equivalent to -D, but the output is in the GNU gettext po (portable object) file format.
    --dump-strings Equivalent to -D.
    --help Display a usage message on standard output and exit successfully.
    --init-file file Execute commands from file instead of the standard personal initialization file ~/.bashrc if the shell is interactive (see INVOCATION below).
    --login Equivalent to -l.
Manual page bash(1) line 1 (press h for help or q to quit)
```

6. What are the commands that list the value of a specific variable?

```
Activities Terminal Nov 24 3:14 PM
sorour@sorour:~
File Edit View Search Terminal Help
HISTCONTROL=ignoredups
DISPLAY=:0
HOSTNAME=sorour
COLORTERM=truecolor
USERNAME=sorour
XDG_VTNR=2
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
which declare=declare -f
XDG_SESSION_ID=2
USER=sorour
DESKTOP_SESSION=gnome
WAYLAND_DISPLAY=wayland-0
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/ef660061_ebfa_471b_9a9c_33de061167de
PWD=/home/sorour
SSH_ASKPASS=/usr/libexec/openssh/gnome-ssh-askpass
HOME=/home/sorour
XDG_SESSION_TYPE=wayland
XDG_DATA_DIRS=/home/sorour/.local/share/flatpak/exports/share:/var/lib/flatpak/exports/share:/usr/local/share/:/usr/share/:/var/lib/snapd/desktop
XDG_SESSION_DESKTOP=gnome
GJS_DEBUG_OUTPUT=stderr
MAIL=/var/spool/mail/sorour
VTE_VERSION=5204
SHELL=/bin/bash
TERM=xterm-256color
QT_IM_MODULE=ibus
XMODIFIERS=@im=ibus
XDG_CURRENT_DESKTOP=GNOME
GNOME_TERMINAL_SERVICE=:1.79
XDG_SEAT=seat0
SHLVL=2
GDMSESSION=gnome
GNOME_DESKTOP_SESSION_ID=this-is-deprecated
LOGNAME=sorour
DBUS_SESSION_BUS_ADDRESS=unix:path=/run/user/1000/bus
XDG_RUNTIME_DIR=/run/user/1000
AAUTHORITY=/run/user/1000/.mutter-kwaylandauth.LEZSV1
PATH=/home/sorour/.local/bin:/home/sorour/bin:/usr/local/bin:/usr/local/sbin:/usr/bin:/usr/sbin:/var/lib/snapd/snap/bin
HISTSIZE=1000
GJS_DEBUG_TOPICS=JS ERROR;JS LOG
SESSION_MANAGER=local/unix:@/tmp/.ICE-unix/2599,unix/unix:/tmp/.ICE-unix/2599
LESSOPEN=||/usr/bin/lesspipe.sh %s
BASH_FUNC_which%%=() { alias;
eval $(which declare) ) | /usr/bin/which --tty-only --read-alias --read-functions --show-tilde --show-dot $@
}
=/usr/bin/printenv
[sorour@sorour ~]$ man bash

[sorour@sorour ~]$ printenv bash
[sorour@sorour ~]$ printenv $HOME
[sorour@sorour ~]$ printenv HOME
/home/sorour
[sorour@sorour ~]$ echo $HOME
/home/sorour
[sorour@sorour ~]$
```

7. Display your current shell name. → echo \$0

```
Activities Terminal Nov 28 12:35 PM
sorour@sorour:~
File Edit View Search Terminal Help
Hello ya SOROUR!, Good Morning, Current Date is:
Mon Nov 28 12:35:19 EET 2022
Eng. SOROUR ->>> echo $0
bash
Eng. SOROUR ->>>
```

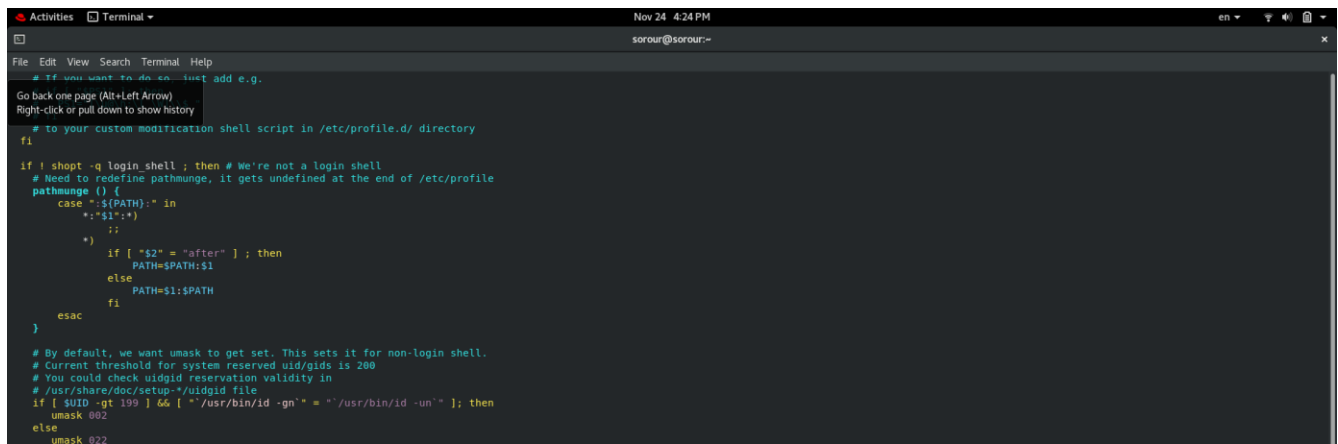
8. State the initialization files of: sh, ksh, bash.

.sh → shell script | */etc/bashrc*

ksh → korn shell | */etc/.kshrc*

bash → bourne again shell | */etc/bashrc*

9. Edit in your profile to display date at login and change your prompt permanently.

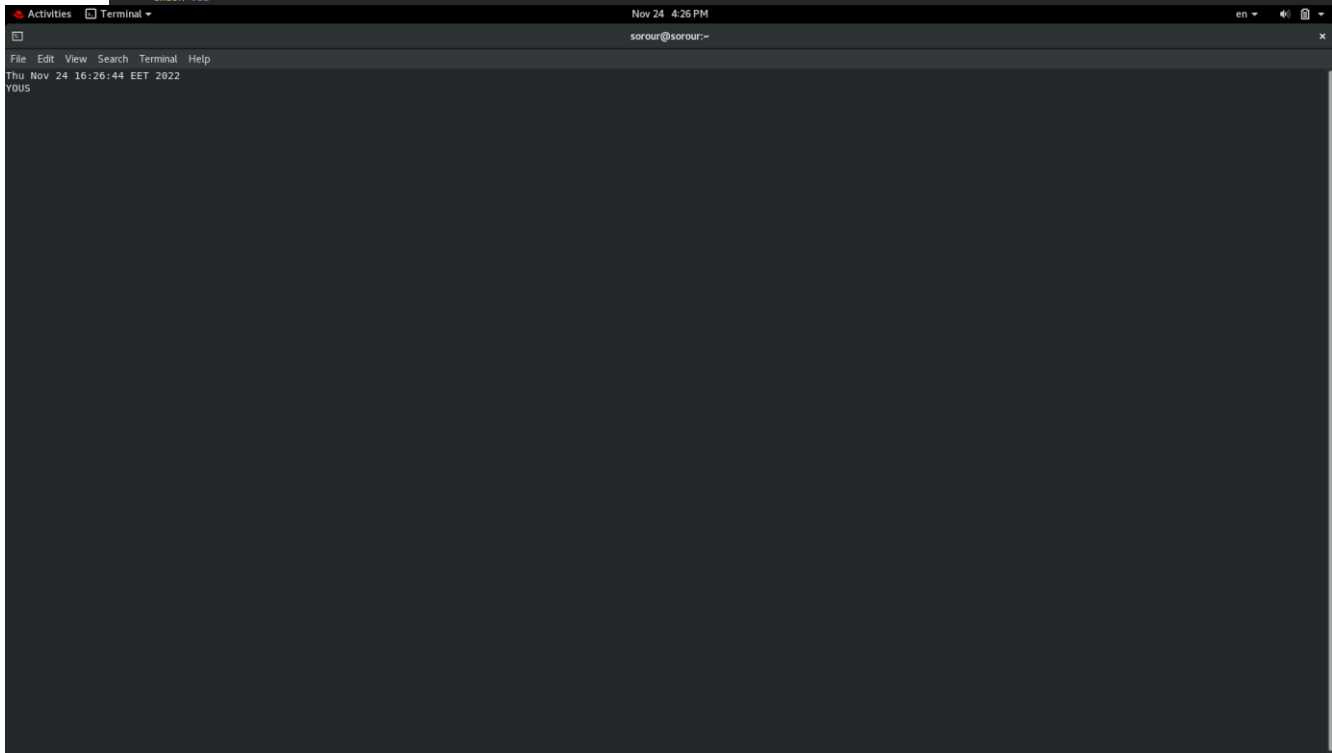


A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 24 4:24 PM, en, and window controls). The prompt is 'sorour@sorour:~'. The terminal content shows a script for modifying the shell profile. It includes comments about adding custom modifications to /etc/profile.d/ and a function 'pathmunge' that updates the PATH variable. It also sets umask to 002 and includes a check for SUID bit on /usr/bin/id.

```
# If you want to do so, just add e.g.
# to your custom modification shell script in /etc/profile.d/ directory
fi

if ! shopt -q login_shell ; then # We're not a login shell
# Need to redefine pathmunge, it gets undefined at the end of /etc/profile
pathmunge () {
  case "${PATH}" in
    *)
      ;;
    *)
      if [ "$2" = "after" ] ; then
        PATH=$PATH:$1
      else
        PATH=$1:$PATH
      fi
    esac
  }

# By default, we want umask to get set. This sets it for non-login shell.
# Current threshold for system reserved uid/gids is 200
# You could check uidgid reservation validity in
# /usr/share/doc/setup*/uidgid file
if [ $UID -gt 199 ] && [ "$(id -gn)" = "$(id -un)" ]; then
  umask 002
else
  umask 022
```



A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Nov 24 4:26 PM, en, and window controls). The prompt is 'sorour@sorour:~'. The terminal content shows the output of the script execution, including the date and time, and the prompt change.

```
Thu Nov 24 16:26:44 EET 2022
YOUS
```

10. Execute the following command :

`echo \` then press enter

What is the purpose of `\` ? → to add an option e.g. `\b`

Notice the prompt `>` what is that? and how can you change it from `>` to `:.:`. → by entering an option e.g. `b`

11. Create a Bash shell alias named `ls` for the `ls -l` command

