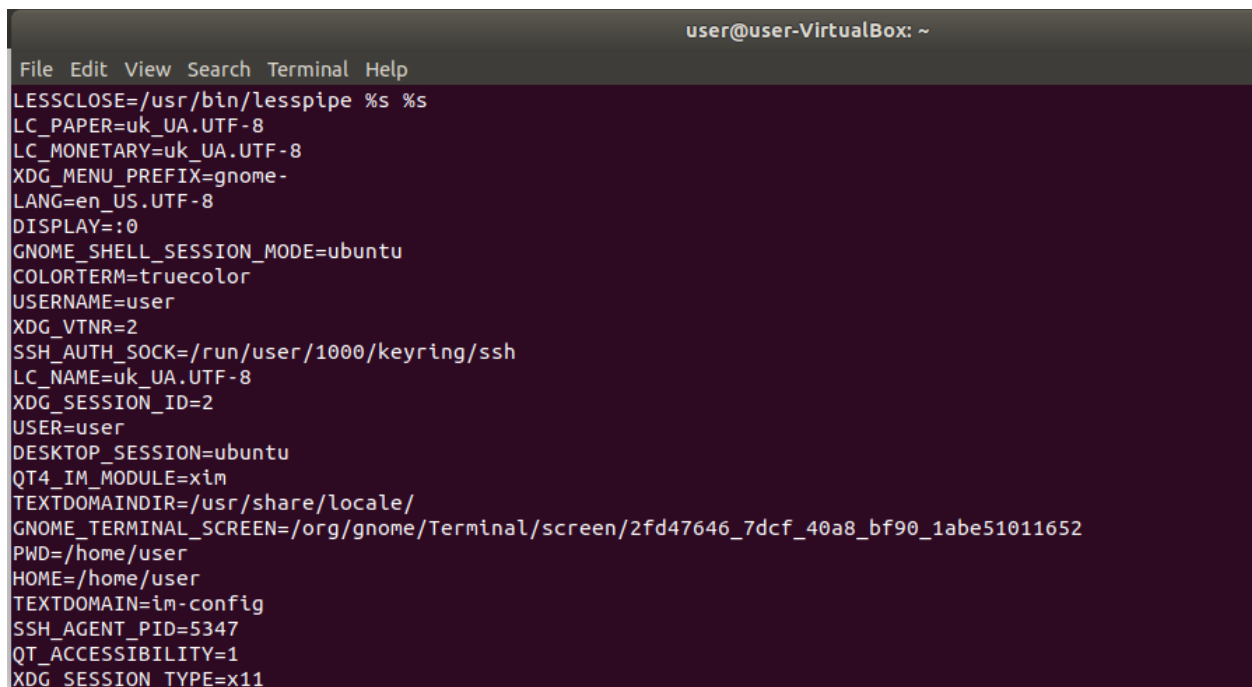EPAM University Programs
DevOps external course
Module 4 DevOps Introduction
TASK 4.2

1. Set up Linux Virtual Machine in VirtualBox.
2. Familiarize yourself with the commands and utilities listed in the presentation (switching between **virtual terminals** (consoles); **printenv**; content of **/etc/profile** and **~/.bash_profile**, **$echo $HISTFILE $HISTSIZE $HISTFILESIZE**, **who**, **w**, **whoami**, **id**). Make 5 screenshots.

```
                            user@user-VirtualBox: ~

 File  Edit  View  Search  Terminal  Help
LESSCLOSE=/usr/bin/lesspipe %s %s
LC_PAPER=uk_UA.UTF-8
LC_MONETARY=uk_UA.UTF-8
XDG_MENU_PREFIX=gnome-
LANG=en_US.UTF-8
DISPLAY=:0
GNOME_SHELL_SESSION_MODE=ubuntu
COLORTERM=truecolor
USERNAME=user
XDG_VTNR=2
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
LC_NAME=uk_UA.UTF-8
XDG_SESSION_ID=2
USER=user
DESKTOP_SESSION=ubuntu
QT4_IM_MODULE=xim
TEXTDOMAINDIR=/usr/share/locale/
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/2fd47646_7dcf_40a8_bf90_1abe51011652
PWD=/home/user
HOME=/home/user
TEXTDOMAIN=im-config
SSH_AGENT_PID=5347
QT_ACCESSIBILITY=1
XDG_SESSION_TYPE=x11
```

```
user@user-VirtualBox:~$ cat /etc/profile
# /etc/profile: system-wide .profile file for the Bourne shell (sh(1))
# and Bourne compatible shells (bash(1), ksh(1), ash(1), ...).

if [ "${PS1-}" ]; then
  if [ "${BASH-}" ] && [ "$BASH" != "/bin/sh" ]; then
    # The file bash.bashrc already sets the default PS1.
    # PS1='\h:\w\$ '
    if [ -f /etc/bash.bashrc ]; then
      . /etc/bash.bashrc
    fi
  else
    if [ "`id -u`" -eq 0 ]; then
      PS1='# '
    else
      PS1='$ '
    fi
  fi
fi

if [ -d /etc/profile.d ]; then
  for i in /etc/profile.d/*.sh; do
    if [ -r $i ]; then
      . $i
    fi
  done
  unset i
fi
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:~$ cat ~/.profile
# ~/.profile: executed by the command interpreter for login shells.
# This file is not read by bash(1), if ~/.bash_profile or ~/.bash_login
# exists.
# see /usr/share/doc/bash/examples/startup-files for examples.
# the files are located in the bash-doc package.

# the default umask is set in /etc/profile; for setting the umask
# for ssh logins, install and configure the libpam-umask package.
#umask 022

# if running bash
if [ -n "$BASH_VERSION" ]; then
    # include .bashrc if it exists
    if [ -f "$HOME/.bashrc" ]; then
        . "$HOME/.bashrc"
    fi
fi

# set PATH so it includes user's private bin if it exists
if [ -d "$HOME/bin" ] ; then
    PATH="$HOME/bin:$PATH"
fi

# set PATH so it includes user's private bin if it exists
if [ -d "$HOME/.local/bin" ] ; then
    PATH="$HOME/.local/bin:$PATH"
fi
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:~$ echo $HISTFILE $HISTSIZE $HISTFILESIZE
/home/user/.bash_history 1000 2000
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:~$ who
user     :0           2020-04-14 23:42 (:0)
user@user-VirtualBox:~$ w
 00:11:00 up 31 min,  1 user,  load average: 1,45, 1,65, 1,74
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
user     :0       :0               23:42    ?xdm?  6:59   0.02s /usr/lib/gdm3/gdm-x-session
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:~$ whoami
user
user@user-VirtualBox:~$ id
uid=1000(user) gid=1000(user) groups=1000(user),4(adm),24(cdrom),27(sudo),30(dip),46(plugdev),116(lpadmin),126(sambashare),12
7(lxd),997(microk8s),998(docker)
user@user-VirtualBox:~$
```

3. Familiarize yourself with the commands (*uname, hostname, uptime, shutdown, halt, reboot, init…*). Make 5 screenshots.

```
user@user-VirtualBox:~$ uname -a
Linux user-VirtualBox 5.3.0-45-generic #37~18.04.1-Ubuntu SMP Fri Mar 27 15:58:10 UTC 2020 x86_64 x86_64 x86_64 GNU/Linux
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:~$ uname -m
x86_64
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:~$ hostname
user-VirtualBox
```

```
user@user-VirtualBox:~$ uptime
 00:17:24 up 37 min,  1 user,  load average: 1,19, 1,33, 1,56
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:~$ uptime
 00:17:24 up 37 min,  1 user,  load average: 1,19, 1,33, 1,56
user@user-VirtualBox:~$ shutdown -r now
```

4. Familiarize yourself with the help commands (*man, info, find, locate, whereis, less|zless in /usr/share/doc*). Make 5 screenshots.

Man uname

```
UNAME(1)                                           User Commands

NAME
       uname - print system information

SYNOPSIS
       uname [OPTION]...

DESCRIPTION
       Print certain system information.  With no OPTION, same as -s.

       -a, --all
              print all information, in the following order, except omit -p and -i if unknown:

       -s, --kernel-name
              print the kernel name

       -n, --nodename
              print the network node hostname

       -r, --kernel-release
              print the kernel release

       -v, --kernel-version
              print the kernel version

       -m, --machine
              print the machine hardware name

       -p, --processor
 Manual page uname(1) line 1 (press h for help or q to quit)
```

Info ls

10.1 'ls': List directory contents
====================================

The 'ls' program lists information about files (of any type, including
directories). Options and file arguments can be intermixed arbitrarily,
as usual.

   For non-option command-line arguments that are directories, by
default 'ls' lists the contents of directories, not recursively, and
omitting files with names beginning with '.'. For other non-option
arguments, by default 'ls' lists just the file name. If no non-option
argument is specified, 'ls' operates on the current directory, acting as
if it had been invoked with a single argument of '.'.

   By default, the output is sorted alphabetically, according to the
locale settings in effect.(1) If standard output is a terminal, the
output is in columns (sorted vertically) and control characters are
output as question marks; otherwise, the output is listed one per line
and control characters are output as-is.

   Because 'ls' is such a fundamental program, it has accumulated many
options over the years. They are described in the subsections below;
within each section, options are listed alphabetically (ignoring case).
The division of options into the subsections is not absolute, since some
options affect more than one aspect of 'ls''s operation.

   Exit status:

```
user@user-VirtualBox:~$ find $HOME -mtime 0
/home/user
/home/user/.local/share
/home/user/.local/share/xorg
/home/user/.local/share/xorg/Xorg.0.log
/home/user/.local/share/app-info/xmls
/home/user/.local/share/app-info/xmls/extensions-web.xml
/home/user/.local/share/recently-used.xbel
/home/user/.local/share/gvfs-metadata
/home/user/.local/share/gvfs-metadata/root-dce1995e.log
/home/user/.local/share/gvfs-metadata/root
/home/user/.local/share/keyrings
/home/user/.local/share/evolution/addressbook/system
/home/user/.local/share/evolution/addressbook/system/contacts.db
/home/user/.local/share/gnome-shell
/home/user/.local/share/gnome-shell/application_state
/home/user/.ICEauthority
/home/user/.vboxclient-display.pid
/home/user/.vboxclient-seamless.pid
/home/user/.vboxclient-draganddrop.pid
/home/user/Pictures
/home/user/Pictures/Screenshot from 2020-04-15 00-07-57 - 1.png
/home/user/Pictures/Screenshot from 2020-04-15 00-06-24.png
/home/user/Pictures/Screenshot from 2020-04-15 00-08-37.png
/home/user/Pictures/Screenshot from 2020-04-15 00-05-46.png
/home/user/Pictures/Screenshot from 2020-04-15 00-06-39.png
/home/user/Pictures/Screenshot from 2020-04-15 00-06-37.png
/home/user/Pictures/Screenshot from 2020-04-15 00-07-46 - 1.png
/home/user/Pictures/Screenshot from 2020-04-15 00-08-33 - 2.png
```

```
user@user-VirtualBox:~$ locate .vbox*
/home/user/.vboxclient-display.pid
/home/user/.vboxclient-draganddrop.pid
/home/user/.vboxclient-seamless.pid
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:~$ whereis -m uname
uname: /usr/share/man/man1/uname.1.gz
user@user-VirtualBox:~$
```

```
user@user-VirtualBox:/usr/share/doc$ cd zip
user@user-VirtualBox:/usr/share/doc/zip$ ls -la
total 108
drwxr-xr-x     2 root root  4096 лют  3 20:24 .
drwxr-xr-x 1507 root root 69632 кві 14 23:57 ..
-rw-r--r--     1 root root   997 кві 22  2017 changelog.Debian.gz
lrwxrwxrwx     1 root root    10 бер 31 12:40 changelog.gz -> CHANGES.gz
-rw-r--r--     1 root root  3815 сер 17  2015 copyright
-rw-r--r--     1 root root  6675 чер 13  2008 TODO
-rw-r--r--     1 root root 15731 лип  2  2008 WHATSNEW
user@user-VirtualBox:/usr/share/doc/zip$ less WHATSNEW
```

File Edit View Search Terminal Help

What's New

Last updated 1 July 2008

This file is the full list of new features and major changes for Zip 3.0
by beta release. See the announcement file zip30.ann for a quick summary
of all features and changes in Zip 3.0. Also see the file README for
release information, INSTALL for installation procedures, and the manual
pages zip.txt, zipsplit.txt, zipcloak.txt, and zipnote.txt for how to use
the new features. The file CHANGES has all the day-to-day changes made
during development.

Below are some of the more significant items on the list for Zip 3.1
(see ToDo for a more complete list):

- AES encryption.
- Extended attributes for Windows, Linux, and Mac OS X.
- Support -d@ for deleting list of files.
- Decide if -R, -i and -x should use external rather than internal patterns.
- Though Unicode paths have been implemented and tested, Unicode comments
  are not yet supported (except for comments on UTF-8 native systems which
  are supported).
- Verbose mode -v may still need work.
- When pattern is directory add end / automatically.
- Add C# example for Zip 3.0 (need to be converted to new DLLs) - original