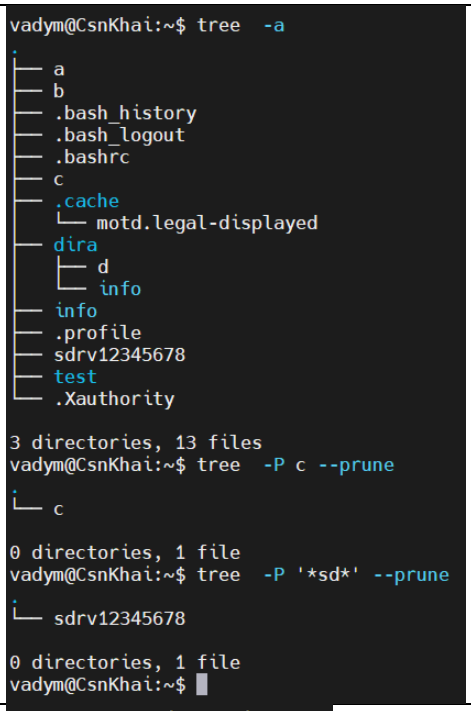
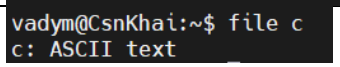
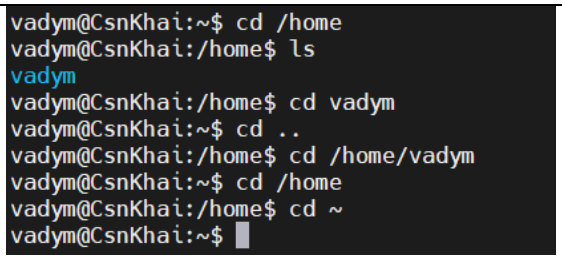
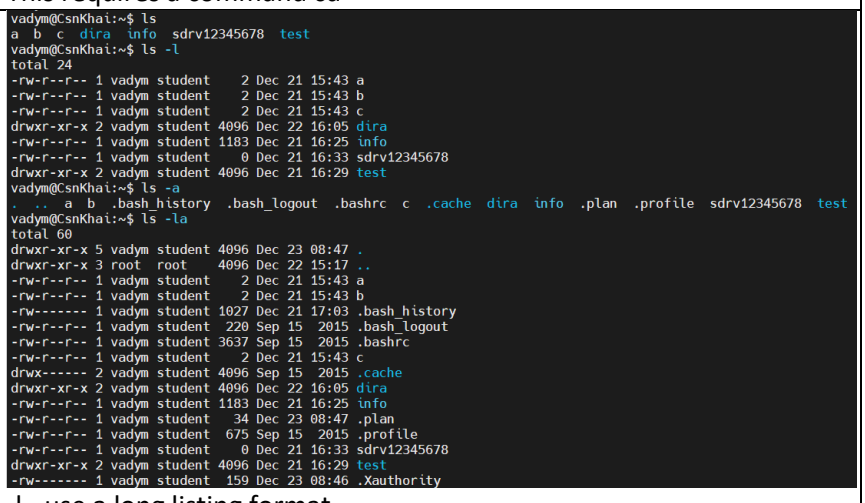
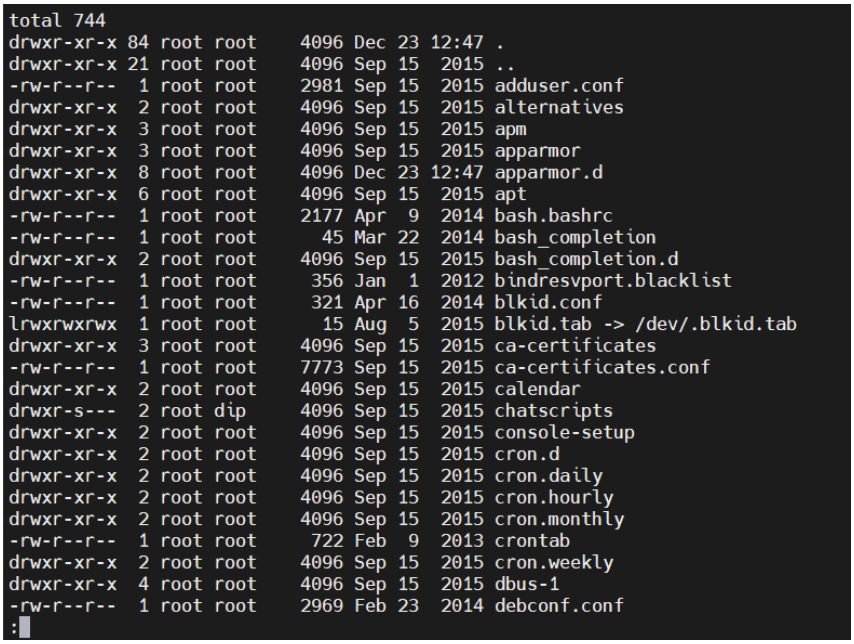
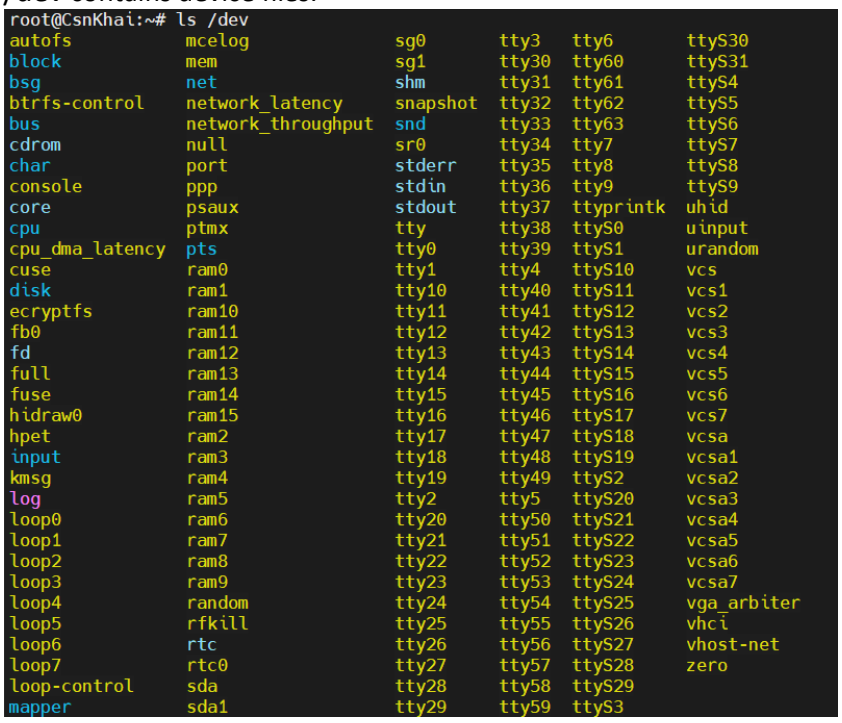
Task1.Part2

1) Examine the **tree** command. Master the technique of applying a template, for example, display all files that contain a character **c**, or files that contain a specific sequence of characters. List subdirectories of the root directory up to and including the second nesting level.	
2) What command can be used to determine the type of file (for example, text or binary)? Give an example.	
3) Master the skills of navigating the file system using relative and absolute paths. How can you go back to your home directory from anywhere in the filesystem?	 This requires a command cd ~
4) Become familiar with the various options for the ls command. Give examples of listing directories using different keys. Explain the information displayed on the terminal using the -l and -a switches.	 -l - use a long listing format -a - providing visibility to hidden files

5) Perform the following sequence of operations: - create a subdirectory in the home directory; - in this subdirectory create a file containing information about directories located in the root directory (using I/O redirection operations); - view the created file; - copy the created file to your home directory using relative and absolute addressing. - delete the previously created subdirectory with the file requesting removal; - delete the file copied to the home directory.	vadym@CsnKhai:~$ mkdir test vadym@CsnKhai:~$ ls -d /.*/ /*/ > test/listd vadym@CsnKhai:~$ cp test/listd . vadym@CsnKhai:~$ cp /home/vadym/test/listd /home/vadym vadym@CsnKhai:~$ rm -rf test vadym@CsnKhai:~$ mkdir test vadym@CsnKhai:~$ ls -d /.*/ /*/ > test/listd vadym@CsnKhai:~$ cat test/listd /./ /../ /bin/ /boot/ /dev/ /etc/ /home/ /lib/ /lost+found/ /media/ /mnt/ /opt/ /proc/ /root/ /run/ /sbin/ /srv/ /sys/ /tmp/ /usr/ /var/ vadym@CsnKhai:~$ cp test/listd . vadym@CsnKhai:~$ cp /home/vadym/test/listd /home/vadym vadym@CsnKhai:~$ rm -rf test vadym@CsnKhai:~$ rm listd
6) Perform the following sequence of operations: - create a subdirectory test in the home directory; - copy the .bash_history file to this directory while changing its name to labwork2; - create a hard and soft link to the labwork2 file in the test subdirectory; - how to define soft and hard link, what do these concepts; - change the data by opening a symbolic link. What changes will happen and why - rename the hard link file to hard_lnk_labwork2; - rename the soft link file to symb_lnk_labwork2 file; - then delete the labwork2. What changes have occurred and why?	vadym@CsnKhai:~$ mkdir test vadym@CsnKhai:~$ cp .bash_history test/labwork2 vadym@CsnKhai:~$ cd test/ vadym@CsnKhai:~/test$ ln labwork2 hard vadym@CsnKhai:~/test$ ln -s labwork2 soft vadym@CsnKhai:~/test$ ls -li total 8 60840 -rw------- 2 vadym student 1027 Dec 23 10:00 hard 60840 -rw------- 2 vadym student 1027 Dec 23 10:00 labwork2 60841 lrwxrwxrwx 1 vadym student 8 Dec 23 10:08 soft -> labwork2 vadym@CsnKhai:~/test$ mv hard hard_lnk_labwork2 vadym@CsnKhai:~/test$ mv soft symb_lnk_labwork2 vadym@CsnKhai:~/test$ rm labwork2 vadym@CsnKhai:~/test$ ls hard_lnk_labwork2 symb_lnk_labwork2 vadym@CsnKhai:~/test$ cat symb_lnk_labwork2 cat: symb_lnk_labwork2: No such file or directory I can use ls to define soft and hard link. Ls shows that hard and labwork2 files have the same inode, so it is the hadr link. Ls also shows that soft file is the soft link of labwork2. When I deleted file I couldn't see its contents from soft link.
7) Using the locate utility, find all files that contain the squid and traceroute sequence.	updatedb locate -b squid traceroute

	/usr/share/man/man1/traceroute.db.1.gz /usr/share/man/man1/traceroute6.db.1.gz /usr/share/man/man8/squid3.8.gz /usr/share/man/man8/tcptraceroute.8.gz /usr/share/man/man8/tcptraceroute.db.8.gz /usr/share/man/man8/traceroute6.8.gz /usr/share/man/man8/traceroute6.iputils.8.gz /var/cache/apt/archives/squid-langpack_20121005-1_all.deb /var/cache/apt/archives/squid3-common_3.3.8-1ubuntu6.11_all.deb /var/cache/apt/archives/squid3_3.3.8-1ubuntu6.11_i386.deb /var/cache/apt/archives/squid_3.3.8-1ubuntu6.11_i386.deb /var/cache/apt/archives/traceroute_1%3a2.0.20-0ubuntu0.1_i386.deb /var/lib/dpkg/alternatives/tcptraceroute /var/lib/dpkg/alternatives/traceroute /var/lib/dpkg/alternatives/traceroute6 /var/lib/dpkg/info/squid-langpack.list /var/lib/dpkg/info/squid-langpack.md5sums /var/lib/dpkg/info/squid.list /var/lib/dpkg/info/squid.md5sums /var/lib/dpkg/info/squid3-common.list /var/lib/dpkg/info/squid3-common.md5sums /var/lib/dpkg/info/squid3-common.postinst /var/lib/dpkg/info/squid3.conffiles /var/lib/dpkg/info/squid3.list /var/lib/dpkg/info/squid3.md5sums /var/lib/dpkg/info/squid3.postinst /var/lib/dpkg/info/squid3.postrm /var/lib/dpkg/info/squid3.preinst /var/lib/dpkg/info/squid3.prerm /var/lib/dpkg/info/traceroute.list /var/lib/dpkg/info/traceroute.md5sums /var/lib/dpkg/info/traceroute.postinst /var/lib/dpkg/info/traceroute.prerm /var/log/squid3 /var/log/upstart/squid3.log
8) Determine which partitions are mounted in the system, as well as the types of these partitions.	root@CsnKhai:~# parted -l Model: ATA VBOX HARDDISK (scsi) Disk /dev/sda: 1611MB Sector size (logical/physical): 512B/512B Partition Table: msdos Number Start End Size Type File system Flags 1 1049kB 1610MB 1609MB primary ext4 boot
9) Count the number of lines containing a given sequence of characters in a given file.	vadym@CsnKhai:~$ grep finger .bash_history -c 6
10) Using the find command, find all files in the /etc directory containing the host character sequence	root@CsnKhai:~# find /etc -name *host* /etc/hosts /etc/hosts.allow /etc/ssh/ssh_host_ed25519_key.pub /etc/ssh/ssh_host_ecdsa_key.pub /etc/ssh/ssh_host_rsa_key /etc/ssh/ssh_host_rsa_key.pub /etc/ssh/ssh_host_ecdsa_key /etc/ssh/ssh_host_dsa_key.pub /etc/ssh/ssh_host_dsa_key /etc/ssh/ssh_host_ed25519_key /etc/init/hostname.conf /etc/hostname /etc/hosts.deny /etc/host.conf /etc/dbus-1/system.d/org.freedesktop.hostname1.conf
11) List all objects in /etc that contain the ss character sequence. How can I duplicate a similar command using a bunch of grep?	root@CsnKhai:~# ls -a /etc | grep "ss" insserv insserv.conf insserv.conf.d issue issue.net nsswitch.conf passwd passwd- ssh ssl upstart-xsessions

12) Organize a screen-by-screen print of the contents of the /etc directory. Hint: You must use stream redirection operations.	Ls -al /etc | less 
13) What are the types of devices and how to determine the type of device? Give examples.	Linux supports three types of device: character, block and network. /dev contains device files.  For example dev/console is the system console, dev/sd is SCSI hard drives
14) How to determine the type of file in the system, what types of files are there?	File types: - ordinary files and directories; - files of physical devices; - named pipes; - sockets; -symbolic links

	Ls and file utilities can detect file type.
	
	`root@CsnKhai:~# file /dev/*`
	`/dev/autofs: character special`
	`/dev/block: directory`
	`/dev/bsg: directory`
	`/dev/btrfs-control: character special`
	`/dev/bus: directory`
	`/dev/cdrom: symbolic link to 'sr0'`
	`/dev/char: directory`
	`/dev/console: character special`
	`/dev/core: symbolic link to '/proc/kcore'`
	`/dev/cpu: directory`
	`/dev/cpu_dma_latency: character special`
	`/dev/cuse: character special`
	`/dev/disk: directory`
	`/dev/ecryptfs: character special`
	`/dev/fb0: character special`
	`/dev/fd: symbolic link to '/proc/self/fd'`
	`/dev/full: character special`
	`/dev/fuse: character special`
	`/dev/hidraw0: character special`
	`/dev/hpet: character special`
	`/dev/input: directory`
	`/dev/kmsg: character special`
	`/dev/log: socket`
	`/dev/loop0: block special`
	`/dev/loop1: block special`
	`/dev/loop2: block special`
	`/dev/loop3: block special`
	`/dev/loop4: block special`
	`/dev/loop5: block special`

	`root@CsnKhai:~# ls -du /etc/*/ | head -5`
	`/etc/modprobe.d/`
	`/etc/cron.hourly/`
	`/etc/console-setup/`
	`/etc/opt/`
	`/etc/fstab.d/`