

1. Написать скрипт, который удаляет из текстового файла пустые строки и заменяет маленькие символы на большие. Воспользуйтесь tr или SED.

```
eugenia@eugenia-VirtualBox: ~  
GNU nano 4.8 script1.sh Modified  
#!/bin/bash  
sed '/^#\|^$|^| *#/d' ./text.txt | sed -e 's/\(.*\)/\U\1/'
```

```
eugenia@eugenia-VirtualBox: ~  
eugenia@eugenia-VirtualBox:~$ ./script1.sh > changedtext.txt  
eugenia@eugenia-VirtualBox:~$ cat text.txt  
A computer is a digital electronic machine that can be programmed to carry out sequences of arithmetic or logical operations (computation) automatically. Modern computers can perform generic sets of operations known as programs. These programs enable computers to perform a wide range of tasks. A computer system is a "complete" computer that includes the hardware, operating system (main software), and peripheral equipment needed and used for "full" operation. This term may also refer to a group of computers that are linked and function together, such as a computer network or computer cluster.  
  
A broad range of industrial and consumer products use computers as control systems. Simple special-purpose devices like microwave ovens and remote controls are included, as are factory devices like industrial robots and computer-aided design, as well as general-purpose devices like personal computers and mobile devices like smartphones. Computers power the Internet, which links billions of other computers and users.  
eugenia@eugenia-VirtualBox:~$ cat changedtext.txt  
A COMPUTER IS A DIGITAL ELECTRONIC MACHINE THAT CAN BE PROGRAMMED TO CARRY OUT SEQUENCES OF ARITHMETIC OR LOGICAL OPERATIONS (COMPUTATION) AUTOMATICALLY. MODERN COMPUTERS CAN PERFORM GENERIC SETS OF OPERATIONS KNOWN AS PROGRAMS. THESE PROGRAMS ENABLE COMPUTERS TO PERFORM A WIDE RANGE OF TASKS. A COMPUTER SYSTEM IS A "COMPLETE" COMPUTER THAT INCLUDES THE HARDWARE, OPERATING SYSTEM (MAIN SOFTWARE), AND PERIPHERAL EQUIPMENT NEEDED AND USED FOR "FULL" OPERATION. THIS TERM MAY ALSO REFER TO A GROUP OF COMPUTERS THAT ARE LINKED AND FUNCTION TOGETHER, SUCH AS A COMPUTER NETWORK OR COMPUTER CLUSTER.  
A BROAD RANGE OF INDUSTRIAL AND CONSUMER PRODUCTS USE COMPUTERS AS CONTROL SYSTEMS. SIMPLE SPECIAL-PURPOSE DEVICES LIKE MICROWAVE OVENS AND REMOTE CONTROLS ARE INCLUDED, AS ARE FACTORY DEVICES LIKE INDUSTRIAL ROBOTS AND COMPUTER-AIDED DESIGN, AS WELL AS GENERAL-PURPOSE DEVICES LIKE PERSONAL COMPUTERS AND MOBILE DEVICES LIKE SMARTPHONES. COMPUTERS POWER THE INTERNET, WHICH LINKS BILLIONS OF OTHER COMPUTERS AND USERS.  
eugenia@eugenia-VirtualBox:~$
```

2. Создать однострочный скрипт, который создаст директории для нескольких годов (2010–2017), в них — поддиректории для месяцев (от 01 до 12), и в каждый из них запишет несколько файлов с произвольными записями. Например, 001.txt, содержащий текст «Файл 001», 002.txt с текстом «Файл 002» и т. д.

```
eugenia@eugenia-VirtualBox: ~/tmp/2010  
eugenia@eugenia-VirtualBox:~$ mkdir -p tmp/201{0..7}/{01..12} && for year in {2010..2017}; do for month in {01..12}; do for file_number in {001..003}; do echo "Файл $file_number" > ~/tmp/$year/$month/$file_number.txt; done; done; done  
eugenia@eugenia-VirtualBox:~$ ls  
changedtext.txt Desktop Documents Downloads Music Pictures Public script1.sh script2.sh snap Templates text.txt tmp Videos  
eugenia@eugenia-VirtualBox:~$ cd tmp  
eugenia@eugenia-VirtualBox:~/tmp$ ls  
2010 2011 2012 2013 2014 2015 2016 2017  
eugenia@eugenia-VirtualBox:~/tmp$ cd 2010  
eugenia@eugenia-VirtualBox:~/tmp/2010$ ls  
01 02 03 04 05 06 07 08 09 10 11 12  
eugenia@eugenia-VirtualBox:~/tmp/2010$
```

4. Используя grep, проанализировать файл /var/log/syslog, отобразив события на своё усмотрение.

```
eugenia@eugenia-VirtualBox:~$ grep "^Apr 14 21" /var/log/syslog
Apr 14 21:44:22 eugenia-VirtualBox rsyslogd: [origin software="rsyslogd" swVersion="8.2001.0" x-pid="571" x-info="https://www.rsyslog.com"] rsyslogd was HUPed
Apr 14 21:44:22 eugenia-VirtualBox udisksd[581]: Failed to load the 'mdraid' libblockdev plugin
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: logrotate.service: Succeeded.
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Finished Rotate log files.
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Reached target Network.
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Starting Network Manager Wait Online...
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Condition check resulted in Manage Sound Card State (restore and store) being skipped.
Apr 14 21:44:22 eugenia-VirtualBox ModemManager[652]: <info> ModemManager (version 1.12.8) starting in system bus...
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Starting Save/Restore Sound Card State...
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Starting OpenVPN service...
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Condition check resulted in fast remote file copy program daemon being skipped.
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Starting Hostname Service...
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Starting Permit User Sessions...
Apr 14 21:44:22 eugenia-VirtualBox systemd[1]: Started Unattended Upgrades Shutdown.
Apr 14 21:44:22 eugenia-VirtualBox alsactl[679]: /usr/sbin/alsactl: load_state:1683: Cannot open /var/lib/alsa/asound.state for reading: No such file or directory
Apr 14 21:44:22 eugenia-VirtualBox alsactl[679]: alsa-lib main.c:1014:(snd_use_case_mgr_open) error: failed to import hw:0 use case configuration -2
Apr 14 21:44:22 eugenia-VirtualBox alsactl[679]: Found hardware: "ICH" "Analog Devices AD1980" "AC97a:41445370" "0x1028" "0x0177"
Apr 14 21:44:22 eugenia-VirtualBox alsactl[679]: Hardware is initialized using a generic method
```

5. Создать разовое задание на перезагрузку операционной системы, используя at.

```
eugenia@eugenia-VirtualBox:~$ echo '/usr/sbin/reboot -r now' | at 11:00 PM today
warning: commands will be executed using /bin/sh
job 1 at Thu Apr 14 23:00:00 2022
```