

Task 4: Using grep to Search within Files

Objective

Utilize the grep command to search text within files and redirect the output to another file.

Task Description

Search for all occurrences of the word "Linux" in the file LinuxHistory.txt and redirect the matching lines to a new file named LinuxInstances.txt.

Command Used

```
grep "Linux" LinuxHistory.txt > LinuxInstances.txt
```

Explanation

The grep command searches for lines containing the word Linux in the given file. The output redirection operator (>) saves the result into LinuxInstances.txt instead of displaying it on the terminal.

Verification Command

```
cat LinuxInstances.txt
```

Expected Output

The LinuxInstances.txt file will contain all lines from LinuxHistory.txt that include the word Linux.

Screenshot Section

1. Execution of grep command & output verification using cat command

```
student@student-virtual-machine: $ cd 25SUB4508_56133/
student@student-virtual-machine:/25SUB4508_56133$ ll
total 28
drwxrwxr-x  4 student student 4096 Dec 20 11:24 .
drwxr-x--- 26 student student 4096 Dec 18 16:05 ../
drwxrwxr-x  2 student student 4096 Dec 18 16:30 day_06/
dr-xr-xr-x  2 student student 4096 Dec 16 12:53 day_09/
-rw-rw-r--  1 student student  309 Dec 17 12:47 first_nano.cpp
-rw-rw-r--  1 student student   0 Dec 16 15:47 hello.cpp
-rw-rw-r--  1 student student 1148 Dec 17 16:51 LinuxHistory.txt
-rwrxr-xr-x  1 student student   0 Dec 16 15:32 test_1.txt*
-rw-rw-r--  1 student student  147 Dec 17 12:50 test_2.txt
student@student-virtual-machine:/25SUB4508_56133$ grep "Linux" LinuxHistory.txt > LinuxInstances.txt
student@student-virtual-machine:/25SUB4508_56133$ cat LinuxInstances.txt
Origins of Linux:
- 1991: Linux was created by Linus Torvalds, a Finnish computer science student, who wanted to develop a free and open-source operating system as a hobby.
- Linux Kernel: The first version, Linux 0.01, was released on September 17, 1991. It was minimalistic but had the potential to grow into a full operating system.
- Collaboration: Torvalds released the Linux kernel under the GNU General Public License (GPL), allowing programmers worldwide to contribute to its development.
- GNU Project: The combination of the Linux kernel and the GNU tools (from the Free Software Foundation) formed the complete GNU/Linux operating system.
GNU/Linux Philosophy:
- Open Source: Linux is open-source, allowing anyone to contribute to its development.
- Community and Collaboration: Linux thrives on a global community of developers and users working together to improve the system.
student@student-virtual-machine:/25SUB4508_56133$
```

External References

- Linux Operating System
- Terminal / Shell
- grep command
- cat command
- Text editor (nano / vi)
- Microsoft Word / LibreOffice Writer

Conclusion

This task demonstrates how grep can efficiently search text within files and redirect results for documentation or further processing.