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**We're moving to Discord!**

In a few days, we will be leaving Slack in favor of Discord 🇬🇧

👉 **Click here for more information (/concepts/100033)**

0x02. Shell, I/O Redirections and filters

DevOps

Shell

Bash

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⚙️ Weight: 1

📅 Project will start Oct 2, 2023 7:00 AM, must end by Oct 3, 2023 7:00 AM

✓ Checker will be released at Oct 2, 2023 1:00 PM

☑️ An auto review will be launched at the deadline

About Bash projects

Unless stated, all your projects will be auto-corrected with Ubuntu 20.04 LTS.

Resources

Read or watch:

- Shell, I/O Redirection (/rltoken/fGOQQXRKbvOcd1qLRxHzLQ)
- Special Characters (/rltoken/c1pz13vke3HPH0S8iALbtw)

man or help:

- echo
- cat
- head
- tail
- find
- wc
- sort
- uniq
- grep
- tr
- rev
- cut
- passwd (5) (*i.e. man 5 passwd*)



Learning Objectives

At the end of this project, you are expected to be able to explain to anyone (/ritoken/ayxcWT-Mmymhm03Z98LaWQ), **without the help of Google**:

Shell, I/O Redirection

- What do the commands `head`, `tail`, `find`, `wc`, `sort`, `uniq`, `grep`, `tr` do
- How to redirect standard output to a file
- How to get standard input from a file instead of the keyboard
- How to send the output from one program to the input of another program
- How to combine commands and filters with redirections

Special Characters

- What are special characters
- Understand what do the white spaces, single quotes, double quotes, backslash, comment, pipe, command separator, tilde and how and when to use them

Other Man Pages

- How to display a line of text
- How to concatenate files and print on the standard output
- How to reverse a string
- How to remove sections from each line of files
- What is the `/etc/passwd` file and what is its format
- What is the `/etc/shadow` file and what is its format

Copyright - Plagiarism

- You are tasked to come up with solutions for the tasks below yourself to meet with the above learning objectives.
- You will not be able to meet the objectives of this or any following project by copying and pasting someone else's work.
- You are not allowed to publish any content of this project.
- Any form of plagiarism is strictly forbidden and will result in removal from the program.

Requirements

General

- Allowed editors: `vi`, `vim`, `emacs`
- All your scripts will be tested on Ubuntu 20.04 LTS
- All your scripts should be exactly two lines long (`$ wc -l file` should print 2)
- All your files should end with a new line (why?
(<http://unix.stackexchange.com/questions/18743/whats-the-point-in-adding-a-new-line-to-the-end-of-a-file/18789>))
- The first line of all your files should be exactly `#!/bin/bash`
- A `README.md` file, at the root of the folder of the project, describing what each script is doing
- You are not allowed to use backticks, `&&`, `||` or `;`
- All your files must be executable
- You are not allowed to use `sed` or `awk`



More Info

Read your `/etc/passwd` and `/etc/shadow` files.

Note: You do not have to learn about `fmt`, `pr`, `du`, `gzip`, `tar`, `lpr`, `sed` and `awk` yet.

Quiz questions

Question #0

Which symbol should I use to start a comment?

- ☐ `&`
- ☒ `#`
- ☐ `//`
- ☐ `!`

Question #1

Which symbol should I use to escape a special character?

- ☒ `\`
- ☐ `#`
- ☐ `$`
- ☐ `!`

Question #2

Which command should I use to display the entire file content?

- ☐ `grep`
- ☐ `tail`
- ☐ `head`
- ☒ `cat`

Question #3

Which symbol should I use to redirect the standard output to a file (appending to the file)?

- ☐ `>>`
- ☒ `&`
- ☐ `>`



☐ 2>
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Question #4

Which symbol should I use to redirect the standard output to a file (overwrite the file)?

- ☐ >>
- ☐ &
- ☒ >
- ☐ 2>

Question #5

Which symbol should I use to redirect the error output to the standard output?

- ☐ 1>&2
- ☒ 2>&1
- ☐ 2>

Question #6

Which command should I use to display the last 11 lines of a file?

- ☐ head -n 11 my_file
- ☐ tail 11 my_file
- ☒ tail -n 11 my_file
- ☐ head 11 my_file

Submit answers

4 errors

Please make sure to validate all quiz questions before moving on to project tasks