

Hello friends,


I hope you're all doing well.

The following exercises are not exam questions, but rather open-ended prompts whose answers can often be found online, through chatbots, or even in technical interviews. These are intended to encourage deeper exploration and self-directed learning based on your current knowledge.


We've selected these questions based on real-world experience and past exam patterns to help you better understand the types of concepts that appear in the LPIC exam. Many of the questions don't have a single correct answer — instead, they are designed to broaden your perspective and understanding.

Please be kind and patient with yourself as you write and research your responses.

Please complete the following exercises using the same format as the directory structure below. Combine your answers into a single PDF file named **answer.pdf** and submit a pull request.

 Reference format:

[https://github.com/devopsdoctors/Academy/tree/main/L1-JavanPahlevanan/Exercises/T\(x\)/name-family\(emailAddress\)/answer.pdf](https://github.com/devopsdoctors/Academy/tree/main/L1-JavanPahlevanan/Exercises/T(x)/name-family(emailAddress)/answer.pdf)

 Sample answer file:

[https://github.com/devopsdoctors/Academy/tree/main/L1-JavanPahlevanan/Exercises/T1/ali-farhadian\(alifrd49@gmail.com\)/answer.pdf](https://github.com/devopsdoctors/Academy/tree/main/L1-JavanPahlevanan/Exercises/T1/ali-farhadian(alifrd49@gmail.com)/answer.pdf)

1. The command `netstat -nat` lists all current TCP connections. How can I count the number of connections in each state?
2. How can we read the `stdin`, `stdout`, and `stderr` streams of a running process using the `cat` command?
3. What is an inode and what is its purpose?
4. When a new file is created using the `touch` command, what happens step-by-step in the filesystem, especially in terms of the inode?
5. What does the `stat` command show about a file's inode, and how should we interpret that information?
6. When using the `mv` command, what changes occur at the inode level? Under what conditions does the inode stay the same or change?
7. When you run `ls`, how does it retrieve the names of all files and directories in the current directory?
8. When you run the `top` command, it shows process states such as running, sleeping, zombie, and stopped. Can you explain what each state means and when it occurs?
9. If your server shows a high load average and a high number of context switches, what could this indicate?
10. Try running `atop`, `htop`, and `nmon`. Where do these tools retrieve their data from?