

INSTALLING ARCH LINUX FROM SCRATCH

1. INTRODUCTION

In this report, I will discuss the purpose of shells and the information gathered while installing and working with different shells. I will also write a simple copy command and add it to the system's path.

2. THE PURPOSE AND INFORMATION WE GOT BY INSTALLING SHELLS

A. What I installed

I installed three different graphical shells: **Gnome Shell**, **KDE Plasma**, and **Xfce**.

I also installed three different command-line shells: **Bash**, **Zsh**, and **sh**.

B. The purpose of installing shell

Shell is a program that provides an interface between a computer's operating system (OS) and the user.

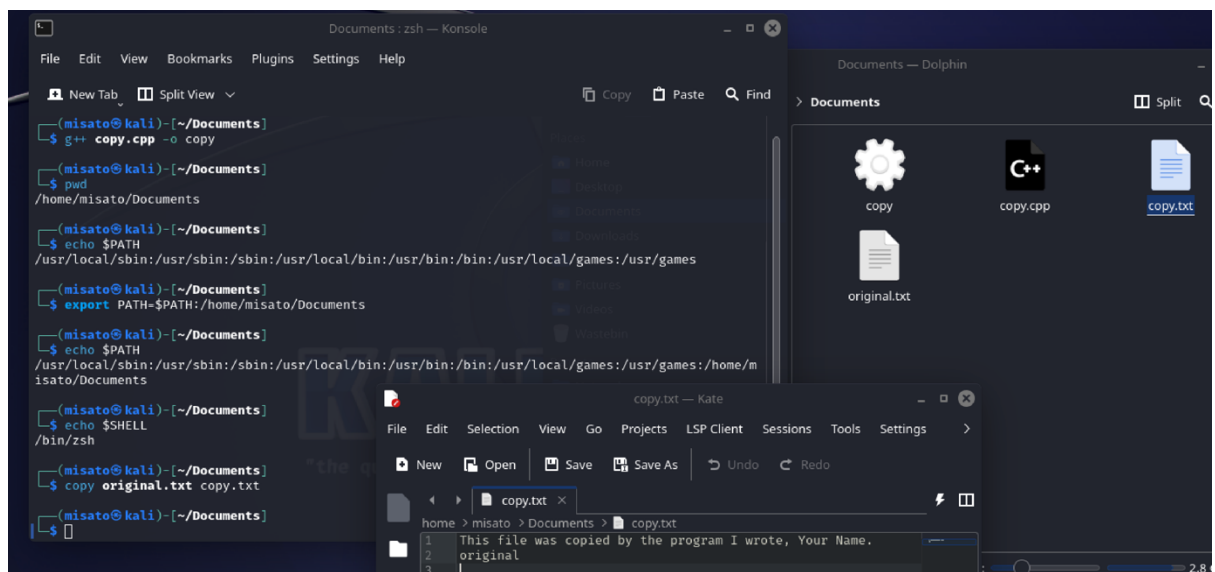
Shell basically provides a command line interface (CLI). It allows users to control the system by entering commands through a terminal window. The shell is also used to execute files called shell scripts. This allows multiple commands to be executed at once, automating tasks and making repetitive tasks more efficient.

C. Writeing a simple copy command and adding it to the system's path

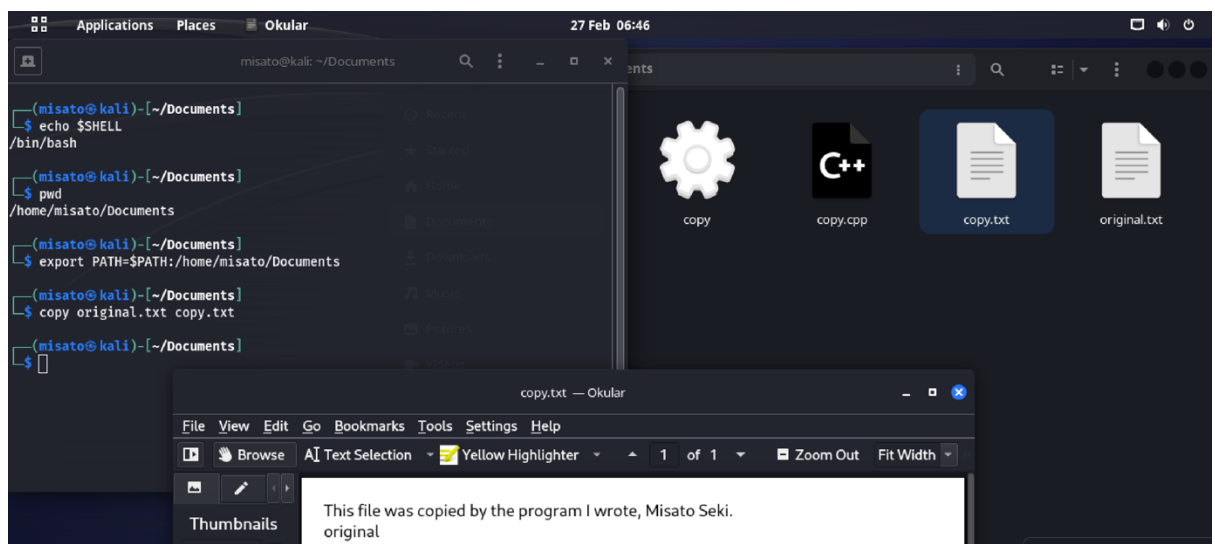
First, the program was saved as a text file using a text editor and compiled on the command line. Then, the directory which this program was saved was set as the system path.

Finally, the command "copy original.txt copy.txt" was run in each shell and I checked the behavior.

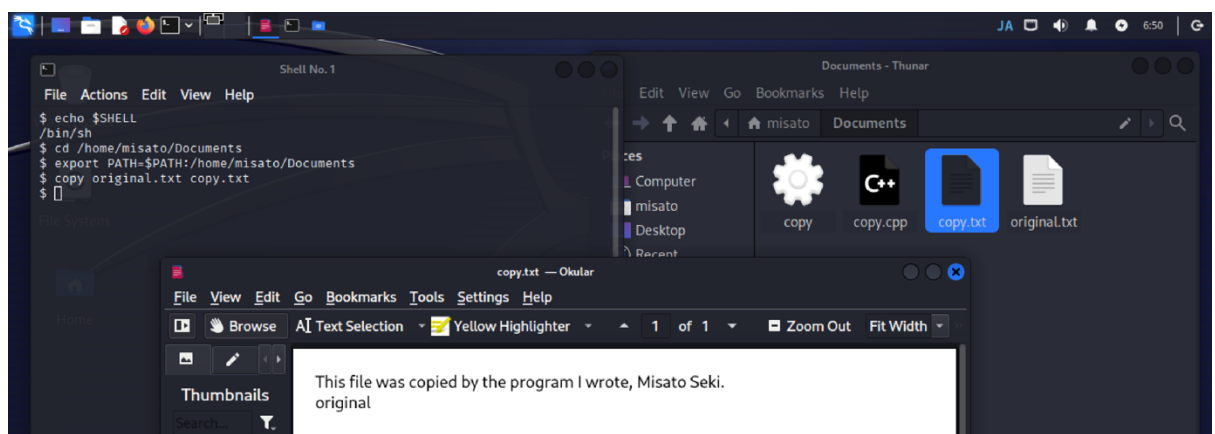
KDE Plasma * zsh



Gnome*bash



Xfce*sh



D. The information getting by installing different shells

GNOME is said to be a desktop environment optimized for an intuitive interface, **KDE Plasma** is a desktop environment with advanced features and high customizability, and **Xfce** is a lightweight and fast desktop environment.

After actually using those, I found that **KDE Plasma** is user-friendly, with small but useful features (e.g., copy/paste buttons in the terminal).

It is said that **sh** is a simple and fast shell, **dash** is good at executing fast shell scripts, and **zsh** is a shell with rich extensions.

In this experiment, the processing time was slightly longer when using **zsh**, while the other two were very fast.

3. WHAT I LEARNED

By installing and working with different shells, I gained a deeper understanding of their strengths and weaknesses. Additionally, I found the convenience of shell script by creating a simple copy command and adding it to the system's path