

VM Linux

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Abstract—This document is a report on a task titled "VM Linux." In this document, I have detailed the process of completing the task, the learning journey, the problems encountered and their solutions, as well as the issues that could not be resolved temporarily and the prospective solutions to be implemented in the future.

Index Terms—CentOS VM installation,environmental configuration,C++ programming, program compilation, program execution.

I. Task Completion Process

A. Installation of CentOS VM

1) Download and install a virtual machine manager:



Fig. 1. VM Workstation Pro

2) Download the latest version of CentOS ISO files from the official CentOS website.:

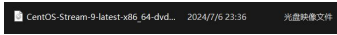


Fig. 2. CentOS ISO File

3) Create a new virtual machine in the Virtual Machine Manager and install CentOS.:

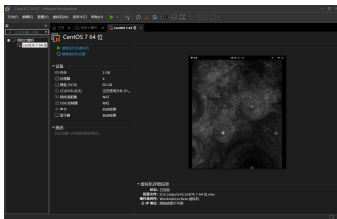


Fig. 3. New CentOS Virtual Machine

B. Configure Compilation Environment

1) Start the virtual machine and log in to the CentOS system.:

2) Open the terminal and update the software package.:

3) Install GCC and g++ compilers.:

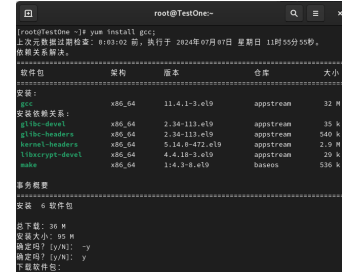


Fig. 4. Installation(1)

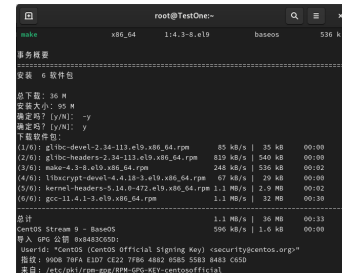


Fig. 5. Installation(2)

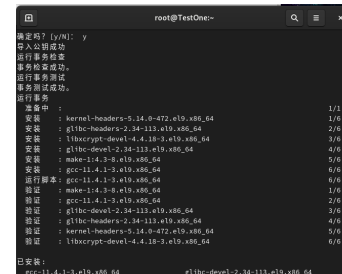


Fig. 6. Installation(3)



Fig. 7. Installation(4)

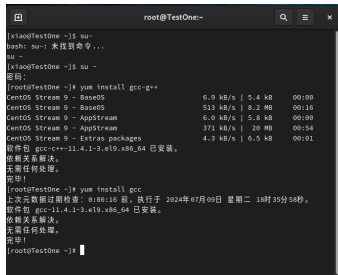


Fig. 8. Installation(5)

C. Writing C++Programs Using the Command Line

1) Create a new directory to store your C++program and enter it.:

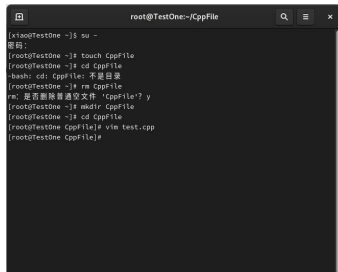


Fig. 9. Terminal Code(1)

2) Create and write C++source code files using a command-line editor. :

3) Save the file and exit the editor.:

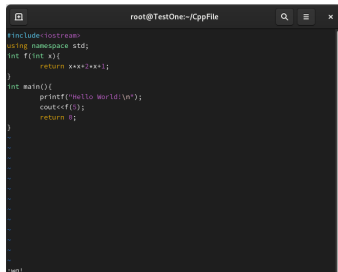


Fig. 10. Cpp File

D. Compile and run programs

- 1) Check the files in the current directory to ensure that the source code files exist.:
- 2) Compile C++programs.:



Fig. 11. Terminal Code(2)

3) Run the compiled program.:

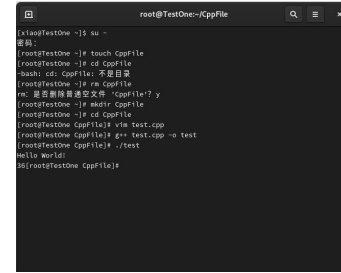


Fig. 12. Terminal Code(3)

II. Questions and Solutions

A. Log on CentOS

I discovered an issue where entering the root password on the CentOS terminal didn't produce any visible changes. Later, I found out on CSDN that passwords entered at the CentOS terminal do not display.

B. Usage of Overleaf

The biggest trouble I encountered was using Overleaf, especially when inserting images. So, I divided my problems into different parts and tackled them one by one, learning from simpler to more complex tasks through practice. For instance, I broke down the image insertion issue into three parts. First, I learned basic operations like setting parameters, uploading images, and whether there were time-saving shortcuts (such as dragging multiple images for upload). Second, I figured out how to arrange the images so that they are in suitable positions and of appropriate sizes. Third, I explored advanced image composition techniques, such as inserting two images side by side (considering the document's aesthetics, I did not apply this here). Eventually, I felt proficient enough in editing images and only searched online when facing new challenges. However, difficulties persisted; for example, I failed to keep images in desired positions despite using methods I found online that involved adding [H]. After analyzing the traits of these images, I realized they belonged to subsubsections but found no solutions in my search. Left with no alternative, I devised a solution based on this characteristic, reasoning that changing lines could make images follow the content I specified. Following this

idea, I tried various approaches like pressing the "Enter" key and using "

," and finally discovered that ' ' was effective. This experience reinforced my learning philosophy: "In doing we learn."

C. Other small problems

Most of the time, I use platforms like Zhihu, Bilibili, and CSDN to acquire knowledge step by step and seek solutions to problems. Although I am aware of the benefits of international websites, I am not very adept at using them. However, I plan to make a conscious effort to utilize these resources more frequently from now on.

III. Remaining problem and solutions

A. Not proficient in using AI

Frankly speaking, I'm not aware of how to use AI wisely, as a result, AI is like a fool when answering my questions. Maybe it is because I'm not good at asking. I intend to use it more and see how others use it.