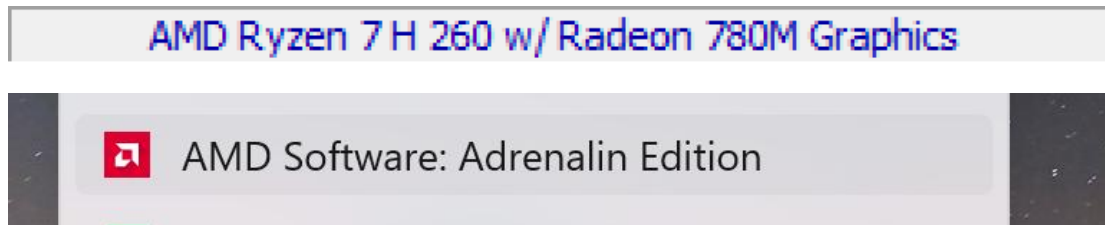


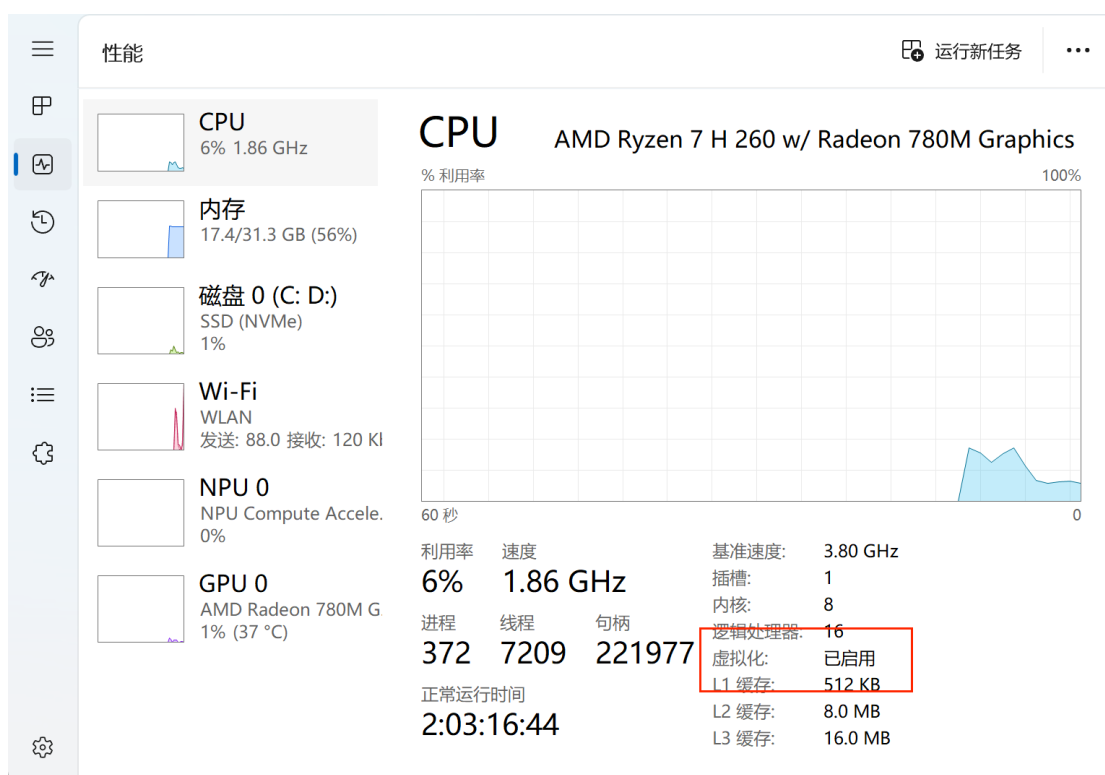
Lab 1:

1. Check if your processor supports Intel/AMD virtualization technology. Enable Intel virtualization technology in BIOS if possible.

AMD.



Already enabled.



2. The cloud is almost everywhere in our lives now. What do you think are the fundamental reasons behind its success? Name three pros and three cons of cloud.

Fundamental reasons include scalability, cost-efficiency, and accessibility.

Pros: Reduced upfront costs, on-demand resource scaling, simplified maintenance.

Cons: Security concerns, internet dependency, potential vendor lock-in.

3. What is the primary function of a hypervisor in virtualization?

To create, manage, and monitor virtual machines, enabling multiple operating systems to run simultaneously on a single physical host by abstracting and allocating hardware resources.

4. What is a virtual machine (VM)?

A virtualized computing environment that emulates a physical computer, running its own operating system and applications while sharing the physical host's hardware resources through a hypervisor.

5. What are the benefits of using virtual machines?

Hardware resource optimization, isolation between systems, easier backup and recovery, simplified testing environments, and reduced physical infrastructure costs.

6. List five use cases of virtual machines.

Software development and testing, server consolidation, legacy application support, disaster recovery, and educational environments.

7. In virtualization, what is the guest operating system? b)

- a) The main operating system running on the physical machine
- b) The operating system installed on a virtual machine
- c) The operating system running on a remote server
- d) The operating system running on a mobile device

8. What does virtual machine isolation mean? c)

- a) Virtual machines can communicate directly with the physical hardware.
- b) Virtual machines share the same resources and cannot be isolated.
- c) Virtual machines run independently and are isolated from each other and the host system.
- d) Virtual machines can only be accessed locally.

9. What is the benefit of virtual machine portability? c)

- a) It allows virtual machines to communicate with each other easily.
- b) It ensures faster boot times for virtual machines.
- c) It allows virtual machines to be moved between different physical machines with compatible hypervisors.
- d) It reduces the need for hardware virtualization.

10. What is the purpose of cloning a virtual machine?

To create an exact copy of a virtual machine quickly, enabling consistent deployment of identical environments for testing, scaling, or backup purposes.