Q1.

1. The operating system is something that manages the hardware components for the user.
2. Kernel is something that manages the processes, resources, and hardware.
3. Shell is an interface between the users and the kernel, which provides a command-line interpreter.
4. High-level programming language is more user friendly, while assembly language has higher efficiency and consumes less system resources.

Q5.

Online GDB

Pro: easy to access

Con: hard to save file, single file only/

CLion

Pro: Easy to use, friendly for beginners

Con: Plugins are relatively less

Visual Studio

Pro: have many functions

Con: hard to learn how to use it