19 Lecture - CS301

Important Subjective

1. **What is the purpose of the const keyword in programming?**
   Answer: The const keyword is used to declare variables that cannot be modified once they are initialized.

2. **Why is using const variables beneficial in a program?**
   Answer: Using const variables can help prevent bugs and improve program stability.

3. **Can const variables be modified after they are initialized?**
   Answer: No, const variables cannot be modified after they are initialized.

4. **What happens if you try to modify a const variable in C++?**
   Answer: The compiler generates an error.

5. **Is the const keyword required when passing a variable by reference in C++?**
   Answer: Yes, the const keyword is required when passing a variable by reference in C++.

6. **Can a member function of a C++ class be declared as const?**
   Answer: Yes, a member function of a C++ class can be declared as const.

7. **What is the difference between a const pointer and a pointer to a const variable in C++?**
   Answer: A const pointer is a pointer that cannot be modified to point to a different memory address, while a pointer to a const variable is a pointer that cannot be used to modify the value of the variable it points to.

8. **Can a const variable be initialized with a value at runtime in C++?**
   Answer: No, a const variable must be initialized with a value at compile-time in C++.

9. **What are some examples of variables that are commonly declared as const in C++?**
   Answer: Constants used in mathematical calculations, physical constants, and program-specific constants are all examples of variables that are commonly declared as const in C++.

10. **Is the const keyword used in other programming languages besides C++?**
    Answer: Yes, the const keyword is used in many programming languages besides C++.