41 Lecture - CS201

Important Subjective

1. **What is a template function in C++?**
   A template function is a function that is designed to work with multiple data types by using template parameters.

2. **How do you declare a template function in C++?**
   You declare a template function by using the keyword "template" followed by the template parameter list and the function declaration.

3. **What is the purpose of a template parameter?**
   A template parameter is used to represent a data type or a constant value that can be used by the template function.

4. **How does template specialization work in C++?**
   Template specialization is a way to create a specialized version of a template function for a specific data type or value.

5. **What is a non-type template parameter in C++?**
   A non-type template parameter is a value that is used as a template argument, but is not a data type.

6. **How does template argument deduction work in C++?**
   Template argument deduction is the process of determining the data types of template arguments based on the function arguments.

7. **How do you overload a template function in C++?**
   You can overload a template function by defining a new function with the same name but different template parameters.

8. **What is the difference between a function template and a class template in C++?**
   A function template is a template function, whereas a class template is a template class that can contain member functions and data.

9. **What are the advantages of using template functions in C++?**
   Template functions provide code reusability, reduce development time, and allow for generic programming.

10. **What are the potential drawbacks of using template functions in C++?**
    Template functions can lead to longer compilation times, increased complexity, and can be difficult to understand for novice programmers.