20 Lecture - CS304

Important Mcqs

1. **Which operator is used to access elements of an array or container class?**
   a) () operator
   b) {} operator
   c) [] operator
   d) -> operator
   Answer: c) [] operator

   What is the parameter type for an overloaded subscript operator function?
   a) int
   b) char
   c) string
   d) Depends on the type of the elements being accessed
   Answer: d) Depends on the type of the elements being accessed

   Which of the following is a valid use of the subscript operator?
   a) accessing the nth character of a string
   b) accessing the nth element of an array
   c) accessing the nth element of a vector
   d) all of the above
   Answer: d) all of the above

   What is the return type of the subscript operator function?
   a) void
   b) int
   c) char
   d) Depends on the type of the elements being accessed
   Answer: d) Depends on the type of the elements being accessed

   Which of the following is true regarding the subscript operator overloading?
   a) Only one overload of the subscript operator is allowed per class.
   b) The overload function must be a member function of the class.
   c) The overload function must be a friend function of the class.
   d) The overload function must take two parameters.
   Answer: b) The overload function must be a member function of the class.

   What is the purpose of subscript operator overloading?
   a) To provide a custom element access behavior for user-defined classes.
   b) To access private data members of a class.
   c) To perform arithmetic operations on array elements.
   d) None of the above.
   Answer: a) To provide a custom element access behavior for user-defined classes.

   Which of the following is a disadvantage of using the subscript operator?
   a) It can lead to out-of-bounds access.

b) It is slower than pointer arithmetic.
c) It cannot be used with containers like maps and sets.
d) It cannot be overloaded for user-defined classes.
Answer: a) It can lead to out-of-bounds access.

Which of the following is true regarding the subscript operator overloading for a container class?
a) The operator function must return a reference to the element being accessed.
b) The operator function must return a copy of the element being accessed.
c) The operator function must take a single parameter of type int.
d) The operator function is not allowed to modify the container.
Answer: a) The operator function must return a reference to the element being accessed.

Which of the following is a valid example of subscript operator overloading?
a) int operator[](int i);
b) void operator[](int i);
c) int& operator[](int i);
d) int* operator[](int i);
Answer: c) int& operator[](int i);

What happens if the subscript operator function returns a copy of the element being accessed?
a) The copy is returned by value and can be modified independently of the original element.
b) The copy is returned by reference and any modifications made to it will affect the original element.
c) The program will not compile.
d) None of the above.
Answer: a) The copy is returned by value and can be modified independently of the original element.