16 Lecture - CS101

Important Mcqs

1. **What is data abstraction in software development?**
   a) The process of revealing implementation details to the user
   b) The process of hiding implementation details from the user
   c) The process of optimizing software for speed
   d) The process of documenting software code

Answer: b) The process of hiding implementation details from the user

2. **How does data abstraction help in managing complexity?**
   a) By revealing implementation details
   b) By making the code more complicated
   c) By providing a simplified view of the system
   d) By slowing down the software system

Answer: c) By providing a simplified view of the system

3. **What are abstract data types?**
   a) Data types that are not used in programming
   b) Data types that can only be used in one programming language
   c) Data structures that encapsulate data and operations
   d) Data structures that are not used in programming

Answer: c) Data structures that encapsulate data and operations

4. **Which programming paradigm uses classes and interfaces for data abstraction?**
   a) Functional programming
   b) Procedural programming
   c) Object-oriented programming
   d) Imperative programming

Answer: c) Object-oriented programming

5. **What is modular programming?**
   a) A programming paradigm that uses functions and procedures
   b) A programming paradigm that focuses on speed optimization
   c) A programming paradigm that focuses on revealing implementation details
   d) A programming paradigm that doesn't use abstraction

Answer: a) A programming paradigm that uses functions and procedures

6. **How does data abstraction help in improving software quality?**
   a) By making the code more complex
   b) By reducing the likelihood of errors and bugs

c) By slowing down the software system
d) By making it difficult to maintain the software system

Answer: b) By reducing the likelihood of errors and bugs

7. **What are APIs?**
   a) Sets of functions or methods that can be used to interact with a software system
   b) Sets of data structures that encapsulate data and operations
   c) Sets of programming paradigms
   d) Sets of optimization techniques for software systems

Answer: a) Sets of functions or methods that can be used to interact with a software system

8. **What is the role of libraries in data abstraction?**
   a) Libraries provide pre-built code that can be used to perform specific tasks
   b) Libraries provide a simplified view of the software system
   c) Libraries provide a detailed view of the software system
   d) Libraries provide only data structures for use in programming

Answer: a) Libraries provide pre-built code that can be used to perform specific tasks

9. **How does data abstraction make software systems easier to use for end-users?**
   a) By revealing implementation details
   b) By making the software system more complex
   c) By providing a simplified view of the software system
   d) By slowing down the software system

Answer: c) By providing a simplified view of the software system

10. **What is the difference between data abstraction and data encapsulation?**
    a) Data abstraction is the process of hiding implementation details, while data encapsulation is the process of combining data and methods into a single unit
    b) Data abstraction and data encapsulation are the same things
    c) Data abstraction is the process of revealing implementation details, while data encapsulation is the process of hiding implementation details
    d) Data abstraction is not used in programming

Answer: a) Data abstraction is the process of hiding implementation details, while data encapsulation is the process of combining data and methods into a single unit