

Object-Oriented Methodology Quiz 07

2024 Fall Semester

21 CST H3Art

Final Score: 100/100

1. Which of the following is typically used as input to the code generation process?

A. Interaction diagram and DCD

B. Package diagram

C. Conceptual Class diagram

D. State diagram

2. Which of the following is NOT a way to achieve visibility from one object to another?

A. Attribute visibility

B. Protected visibility

C. Parameter visibility

D. Global visibility

3. How is a collection class used to implement one-to-many relationships in object-oriented programming?

A. By defining a single attribute for each related object.

B. By using a primitive data type.

C. By introducing a collection object like a List or Map.

D. By defining multiple methods for accessing related objects.

4. What is the motivation behind the recommendation to implement classes from least-coupled to most-coupled?

A. To make the code more complex.

B. To ensure that dependencies are met.

C. To reduce the total number of classes.

D. To make the code easier to test.

5. Which visibility type exists when an object is passed as a parameter to a method?

A. Attribute visibility

B. Parameter visibility

C. Local visibility

D. Global visibility

6. Which diagram is used to depict messages between objects?

A. Class diagram

B. deployment diagram

C. Interaction diagram

D. Use case diagram

7. Which of the following is a key point of Test-Driven Development?

A. Write production code first, then tests.

B. Write test code first, then production code.

- C. Skip writing tests to save time.
- D. Only write tests for critical code.

8. Which of the following is NOT an advantage of TDD?

- A. Getting the unit tests written.
- B. Increasing the likelihood of bugs in the code.**
- C. Clarification of detailed interface and behavior.
- D. Provable, repeatable, automated verification.

9. Which of the following refactoring techniques involves transforming a long method into a shorter one by factoring out a portion into a private helper method?

- A. Extract Method**
- B. Extract Constant
- C. Introduce Explaining Variable
- D. Replace Constructor Call with Factory Method

10. Which of the following is a goal of good programming that can be achieved through refactoring?

- A. Increasing code duplication.
- B. Decreasing code clarity.
- C. Making long methods longer.
- D. Removing hard-coded literal constants.**

11. What is a common code smell?

- A. Duplicated code**
- B. Well-commented code
- C. Short methods
- D. Clear and concise code

12. What is the relationship between refactoring and TDD?

- A. Refactoring is done before TDD.
- B. TDD supports the refactoring process.**
- C. Refactoring is not related to TDD.
- D. TDD is done after refactoring.

13. Which of the following is a refactoring technique that involves replacing a literal constant with a constant variable?

- A. Extract Method
- B. Extract Constant**
- C. Introduce Explaining Variable
- D. Inline Variable

14. Which of the following is NOT a code smell?

- A. Duplicated code
- B. Long methods
- C. High coupling between many objects
- D. Well-documented code**

15. Visibility is not related to the issue of scope.



16. Attribute visibility is relatively permanent because it persists as long as the objects exist.



17. Local visibility is the most common form of visibility in object-oriented systems.



18. It is recommended starting with the most-coupled classes when implementing code.



19. Interaction diagrams can be used as input to the code generation process.



20. Test-Driven Development involves writing production code before unit testing code.



21. In object-oriented programming, one-to-many relationships are typically implemented using primitive data types.



22. Global visibility is the least common form of visibility in object-oriented systems.



23. TDD is not applicable to the Unified Process.



24. Refactoring changes the external behavior of existing code.



25. Refactoring is a disciplined method of rewriting or restructuring existing code.



26. Refactoring does not involve re-executing tests after each transformation.



27. Code smells are hints that something may be wrong in the code.



28. Duplicate code is not considered a code smell.



29. Introduce Explaining Variable is a type of refactoring that clarifies the purpose of an expression.



30. In TDD, the term "green bar" refers to a visual cue indicating that all tests have passed.



31. What is visibility in the context of object-oriented design?

A. The ability of an object to move.

B. The ability of an object to see or have a reference to another object.

C. The number of objects in a system.

D. The security level of an object.

32. Which form of visibility is the least common in object-oriented systems?

A. Attribute visibility

B. Parameter visibility

C. Local visibility

D. Global visibility

33. Which of the following is NOT a common way to achieve local visibility?

A. Create a new local instance and assign it to a local variable.

B. Pass an object as a parameter to a method.

C. Assign the returning object from a method invocation to a local variable.

D. Declare an object as a static variable within a method.

34. What is the preferred method to achieve global visibility in an object-oriented language?

A. Use a global variable.

B. Use the Singleton pattern.

C. Make all objects publicly accessible.

D. Define all classes as static.

35. What is the primary purpose of the Implementation Model in the Unified Process?

A. To define user stories.

B. To generate source code and other implementation artifacts.

C. To design the database schema.

D. To manage project timelines.

36. During the mapping process from designs to code, which of the following is NOT typically created?

A. Class and interface definitions.

B. Method definitions.

C. Detailed documentation of every interaction.

D. Collection classes for one-to-many relationships.

37. Attribute visibility is the most temporary form of visibility.



38. Local visibility persists only within the scope of the method in which it is declared.



39. Parameter visibility can be transformed into attribute visibility by assigning the parameter to an attribute within a method.



40. Collection classes such as ArrayList and HashMap are used to implement one-to-many relationships in object-oriented programming.

