

Week 2 Self Review Exercises

1. What is a problem domain?
2. What are problem domain models?
3. What is the purpose of domain modeling?
4. What is the object-oriented approach to representing a problem domain model?
5. Describe the two types of class diagrams.
6. Name the 2 main categories of domain objects and given an example of each of these.
7. In the software engineering context, what sources can you normally use to find domain objects?
8. In UML, what notation is used to present the type of domain objects? Describe this notation.
9. What the relationships that can exist between classes of objects?
10. In a UML class diagram, the number of associations between the classes of objects are known as _____ .
11. What is an association class?
12. Explain what you understand by the phrase “realizing a use case” and how object-oriented analysis and design have major roles in this.
13. Which of the following is not a standard UML diagram?
 - A. Class diagram
 - B. Use case diagram
 - C. Entity-relationship diagram
 - D. Sequence diagram
14. In UML, which diagram shows the interaction between objects in sequential order?
 - A. Class diagram
 - B. Sequence diagram
 - C. State diagram
 - D. Activity diagram
15. What does a 'solid diamond' symbol represent in a UML Class diagram?
 - A. Dependency
 - B. Association
 - C. Aggregation
 - D. Composition

16. In a UML domain model, what does an 'open arrowhead' represent?
 - A. Inheritance
 - B. Interface implementation
 - C. Dependency
 - D. Association
17. Which UML diagram is used to represent the dynamic behavior of a system, focusing on the flow of messages between objects?
 - A. Class diagram
 - B. Sequence diagram
 - C. State diagram
 - D. Activity diagram
18. In UML, which diagram would you use to model the static structure of a system showing classes and their relationships at a particular point?
 - A. Class diagram
 - B. Object diagram
 - C. Component diagram
 - D. Deployment diagram
19. What does a 'stereotype' in a UML model typically represent?
 - A. A predefined property of a model element
 - B. An extension of the vocabulary of UML
 - C. A graphical representation of an object
 - D. The physical manifestation of a class
20. What is the purpose of 'use case diagrams' in UML?
 - A. To show the internal structure of a class
 - B. To describe the static view of an application
 - C. To illustrate the interactions between the system and external entities
 - D. To depict the lifecycle of an object
21. Which UML diagram would best describe the sequence of events that occur during a particular use case?
 - A. Use case diagram
 - B. Sequence diagram
 - C. Collaboration diagram
 - D. Activity diagram