

软件需求工程2020秋冬

填空题(每题2分，共20分)

1. UML is a modeling language standardized by _ Group
2. In class diagrams, the symbol "#" is used to present _
3. The relationship between Actor and Use case is _
4. A well designed OO system supports _ and _
5. The basic principle of OO design include _ (four principles)

单项选择题(每题4分，共20分)

1. Life line is one part of which diagram?
2. The relationship between sequence diagram and interaction diagram is similar to the relationship between?
(选项包括class and object, UML and Java, Java and high-level programming language, class and actor)
3. Which symbol is used to represent notions in UML?
4. What class diagram will generate code as "public class Order {public Customer recipient;}"?
(选项的图类似于数据库的一对一，多对一，一对多关系图)
5. There are 3 levels of class diagrams. From abstraction to conerete, the levels are:
A.conceptual level, specification level, implementation level
B.specification level, implementation level, conceptual level
C.view level, control level, model level
D.control level, model level, view level

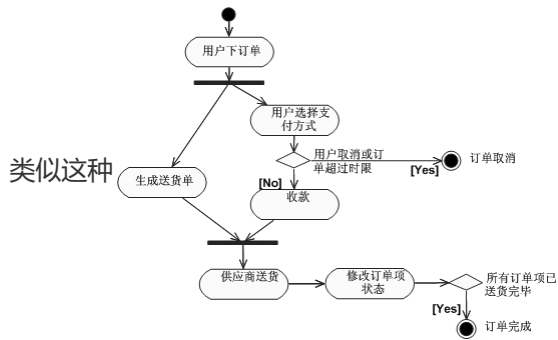
多项选择题(每题4分，共20分)

1. For the following diagram, what description is correct?
(分析一个类图，是一个接口带一个抽象方法，然后两个子类进行实现)
2. Which are the components of state machine in UML
A.Name
B.Transition
C.condition
D.event
3. Which diagrams are used in STATIC modeling?
A.State machine diagram
B.class diagram
C.Sequence diagram

D.use case

4. For the following activity diagram, what description is WRONG?

(分析一个活动图，主要在于状态分支的考察)



5. Which is not the basic elements of activity diagram?

fork, branch, swimline, time event

判断题(每题2分，共10分)

1. In UML, the sequence diagram is equivalent to collaboration diagram .
2. If there is an association relationship between two classes, it should be the only association relationship between these two classes .
3. The behavior of a class is determined by its attributes.
4. Activity diagram can be used to represent the concurrent behavior explicitly.
5. Use case is used to describe the functional requirement of a system, which describes the functions from outside of the system and doesn't care about how to implement them.

五、应用题(每题8分，共40分)

1. Explain the differences between sequence diagram and collaboration diagram.
2. Explain the important effects of class diagram in UML.
3. Draw the state machine diagram of the GUI (Including initializing, working, protecting, shut down)
4. Draw the sequence diagram of an ATM:
 - a. the customer inserts card into the ATM.
 - b. the customer inputs name, password, and withdraw amount on the ATM.
 - c. ATM sends the information to the bank's computer for verifying.
 - d. ATM displays the remaining amount in the account.
 - e. ATM verifies that the withdraw amount is less than the remaining amount.
 - f. ATM sends cash to the customer.
5. Answer questions based on following diagram:

Class: ReaderManager

Methods:

- ◆new Reader)

- ◆Modify Reader)

- ◆delete Reader()

a. Classname is:

b. Operations(methods) in the class are:

c. Visibility of these operations is:

d. What kind of class is it? What is the function of this kind of class?