Quiz 5: Service-Oriented Architecture II

- Due Oct 10 at 11:59pm
- Points 105
- Questions 3
- Available Oct 5 at 12am - Oct 10 at 11:59pm
- Time Limit 60 Minutes

This quiz was locked Oct 10 at 11:59pm.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	21 minutes	42 out of 105

Score for this quiz: 42 out of 105
Submitted Oct 10 at 10:29pm
This attempt took 21 minutes.

Move To... This element is a more accessible alternative to drag & drop reordering. Press Enter or Space to move this question.

Question 1
35 / 35 pts

1. What is the form of data abstraction that is defined with constructor-oriented designs?
    1.
2. What are the four ways that data abstraction may be defined in observer-oriented designs?
    1.
    2.
    3.
    4.

Answer 1:
Correct! Procedural data abstraction
Correct! 2540
Procedural data abstraction
Answer 2:
You Answered Abstract Data Types via Subtypes
Correct Answer 66117
Subtypes
Answer 3:
You Answered Abstract Data Types via Opaque Types
Correct Answer 54084
Opaque Types
Answer 4:
You Answered Abstract Data Types via Sealing
Correct Answer 25761
Sealing
Answer 5:
Correct! Partially Abstract Types
Correct! 62697

Partially Abstract Types
Move To... This element is a more accessible alternative to drag & drop reordering. Press Enter or Space to move this question.
Question 2
7 / 40 pts

1. What are the three relationships between interfaces and classes in Java (or C#)?
2. What is the type rule for subtyping of procedure (arrow) types?

Your Answer:

1. Subtyping and Inheritance, Specialization, Mixins

2. covariant ->

contravariant <-

what is Specialization, Mixins? 2. Unanswered

1.
class implements interface
class inherite class
interface subtype interface

2.
(A->B)<(X->Y)
if B<Y, X<Y

Move To... This element is a more accessible alternative to drag & drop reordering. Press Enter or Space to move this question.
Question 3
0 / 30 pts

For the example below, is it safe replace the service `foo` operation with the service operation `bar`, or to replace the service operation `bar` with the service operation `foo`? In other words, which of the following assignments is safe?

```
foo=bar;   // Is it safe?
bar=foo;   // Is it safe?
```

For each case, if it is not safe, explain what will go wrong. If it is safe, explain why it is safe.

```
class ContactInfo { String phone; String email; }
class ExtContactInfo extends ContactInfo { String url; }

String foo (ContactInfo c) {
   return "<contact>"+
          "<phone>"+c.phone+"</phone>"+
          "<email>"+c.email+"</email>"+
          "</contact>";
}
String bar (ExtContactInfo c) {
   return "<contact>"+
          "<phone>"+c.phone+"</phone>"+
          "<email>"+c.email+"</email>"+
          "<url>"+c.url+"</url>"+
          "</contact>";
}
```

foo: contactinfo -> string
bar: extcontactinfo -> string

Your Answer:

foo = bar is safe, covariant is safe

bar = foo is not safe, contravariant is not safe.

Incorrect answer

foo = bar? not safe
foo(new extcontactinfo)

bar = foo? safe
bar(new extcontactinfo)

Quiz Score: 42 out of 105

Previous Next
Submission Details:

Time: 21 minutes

Current Score: 42 out of 105

Kept Score: 42 out of 105