IOWA STATE UNIVERSITY

My ISU    Courses    Organizations    Content Collection    My Library    Jay Patel    1 ▼

🏠 | Quizzes    Review Test Submission: Q3-design

# Review Test Submission: Q3-design

| | |
|---|---|
| User | Jay Patel |
| Course | COM_S 309 All Sections (Spring 2017) |
| Test | Q3-design |
| Started | 3/25/17 2:14 PM |
| Submitted | 3/25/17 2:28 PM |
| Status | Completed |
| Attempt Score | 36 out of 36 points |
| Time Elapsed | 14 minutes out of 1 hour |
| Results Displayed | All Answers, Submitted Answers, Correct Answers, Feedback, Incorrectly Answered Questions |

## Question 1

1 out of 1 points

Which of the below pairs represent a 'has-a' relationship ?

✅ Wall - Brick

✅ Television - Screen

Answers: Animal - Dog

✅ Wall - Brick

✅ Television - Screen

Person - Student

## Question 2

1 out of 1 points

Which one of the following is not a benefit of Observer pattern?

Selected Answer:
✅ b.
Allows addition of new observers without any change in the code of subject

Answers:
a. Allows separation of system into different modules

✅ b.
Allows addition of new observers without any change in the code of subject

c. Allows clients treat individual objects and composite objects uniformly

d. Defines higher level system that makes subsystem easier to use

## Question 3

1 out of 1 points

Suppose you and your friend are working on a project. Your friend is the developer and you are the tester. What feature must your design have in order to let you test modules even before the software is completely built?

| Selected Answer: | ✅ c.<br>The code should be modular. Stubs and Drivers would be used to test each module. |

Answers:
  a. Cohesion must be kept low so that modules do not have high interaction.

  b. Testing should never start before the build is complete.

  ✅ c.
  The code should be modular. Stubs and Drivers would be used to test each module.

  d. The modules must have high interaction to make data flow easier.

## Question 4

1 out of 1 points

Which pattern allows you to define new operations without changing the classes of the elements on which it operates?

Selected Answer:     ✅ b. Visitor

Answers:
  a. Observer

  ✅ b. Visitor

  c. Facade

  d. MVC

## Question 5

1 out of 1 points

Which pattern is used to separate the application logic from the UI?

Selected Answer:     ✅ b. MVC

Answers:
  a. Observer

  ✅ b. MVC

  c. Facade

  d. Decorator

## Question 6

1 out of 1 points

'Mammal' and 'Intelligent' are two interfaces with a set of behaviors each. 'Human' is a concrete class which has behaviors common with these interfaces. Relation between the two interfaces and the Human class should be that of -

Selected Answer:   ✅ a. Realization

Answers:   ✅ a. Realization

b. has-a relation

c. Aggregation

d. Composition

## Question 7

1 out of 1 points

You have designed a class to describe an Animal. In which compartment should a behavior (e.g. foodHabit) of the animal be specified?

Selected Answer:   ✅ b. Bottom compartment

Answers:   a. Middle  compartment

✅ b. Bottom compartment

c. Upper and Middle compartments

d. Upper compartment

## Question 8

1 out of 1 points

V-Model shows how to develop software and is a good way because it incorporates lots of testing including unit testing, integration testing, system testing, and acceptance testing phases.

Selected Answer: ✅ False

Answers:   True

✅ False

## Question 9

1 out of 1 points

In his Chemistry course, Jack learnt that a molecule is made up of atoms. He decided to draw class diagrams for this. What relationship could he specify between his Atom and Molecule classes?

Selected Answers: ✅ a. Composition

✅ c. has-a relation

Answers: ✅ a. Composition

b. Aggregation

✅ c. has-a relation

d. is-a relation

**Question 10**

1 out of 1 points

Which one of the following is a behavioral design pattern?

Selected Answer:     ✓ a. Observer

Answers:             ✓ a. Observer

                      b. Facade

                      c. Decorator

                      d. Builder

**Question 11**

1 out of 1 points

In a software development project, would you recommend involvment of testers when the solution is being designed?

Selected
Answer:
      ✓ d.
      Yes; Preventing errors early can prevent them from flowing downstream and saves
      time and money.

Answers:     a.
             Yes; Very few errors occur in upstream processes, so they can be prevented easily
             by testers.

             b. No; It becomes hard to 'Build on Budget' if testing is included,

             c.
             No; Testing and design should be strictly distinct activities to preserve integrity of
             design.

             ✓ d.
             Yes; Preventing errors early can prevent them from flowing downstream and saves
             time and money.

**Question 12**

1 out of 1 points

Accept() method belongs to

Selected Answer:     ✓ a. Visitable

Answers:             ✓ a. Visitable

                      b. Visitor

                      c. ObjectStructure

                      d. Visited

**Question 13**

1 out of 1 points

A class diagram contains an attribute marked with a '#'. Will this attribute be accessible to another

class in the same package?

Selected Answer:    ✓ a. Yes; Protected identifiers can be accessed inside the package.

Answers:            ✓ a. Yes; Protected identifiers can be accessed inside the package.

                      b. No; Identifiers cannot be made accessible outside the class.

                      c. Yes; Identifiers marked with '#' are public, so they are accessible anywhere.

                      d. No; Only identifiers marked with '+' will be accessible.

## Question 14

1 out of 1 points

Which part/s of the MVC manages the behavior and data of the application domain, responds to requests for information about its state?

Selected Answer:    ✓ b. Model

Answers:
                      a. Controller

                      ✓ b. Model

                      c. View and Controller

                      d. View

## Question 15

1 out of 1 points

In sequence diagrams, different types of messages between objects are represented by

Selected Answer:    ✓ a. types of arrows

Answers:            ✓ a. types of arrows

                      b. speech balloons

                      c. broken lines of varying thickness

                      d. boxes with thick borders

## Question 16

1 out of 1 points

Suppose in a credit card application, you have three modules -
Module 1) Calculate_Monthly_Interest
Module 2) Calculate_Monthly_Principal
Module 3) Display_Total_Amount_Payable

The third module calls the first two modules, and the second module calls the first module.
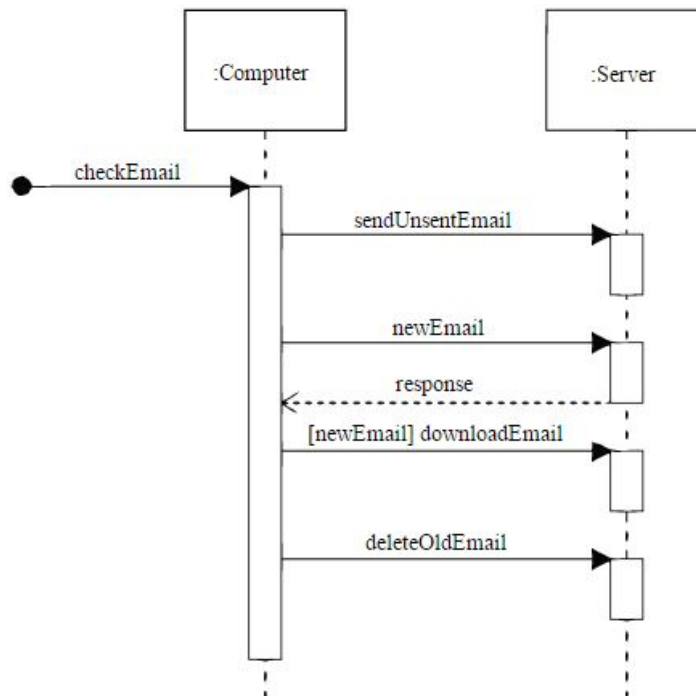
What would be the sequence of testing, if you had to use a bottom up approach?

Selected Answer:   ✓ b. Test Module 1, Test Module 2, Test Module 3

Answers:           a. Test Module 2, Test Module 3, Test Module 1

                   ✓ b. Test Module 1, Test Module 2, Test Module 3

                   c. Test Module 3, Test Module 2, Test Module 1

                   d. Test Module 1, Test Module 3, Test Module 2

## Question 17

1 out of 1 points



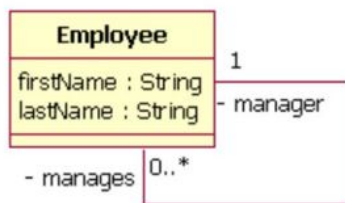In the above sequence diagram, what does the 'deleteOldEmail' arrow indicate ?

Selected Answer:   ✓ d. Synchronous message

Answers:           a. Simple message

                   b. Asynchronous message

                   c. Return

                   ✓ d. Synchronous message

## Question 18

1 out of 1 points

What type of association does the figure describe ?

Selected Answer:　✅ b. Reflexive association

Answers:　　　　a. Binary association

　　　　　　　　✅ b. Reflexive association

　　　　　　　　c. Aggregation

　　　　　　　　d. Composition

## Question 19

1 out of 1 points

An application has a lot of interconnections between its modules. Would you consider it to be well designed?

Selected Answer:　　✅ c.
No; Because it is harder to understand, to test, to reuse, to replace, to maintain and alter etc.

Answers:　　　a.
Yes; Because more interactions between modules means data can flow easily between layers.

b.
Yes; Because higher the number of interactions, higher is the modularity of the software.

✅ c.
No; Because it is harder to understand, to test, to reuse, to replace, to maintain and alter etc.

d.
No; Because any sort of interactions between modules compromises data privacy.

## Question 20

1 out of 1 points

Which of the following actions below use lessons learned from the V Model?

Selected Answers:　✅ a. Requirements and Architecture documents are inspected.

✅ b. Top down integration practices are put in place (i.e. Build Early, Build Often).

✅ d.
Screen sketches (or screen prototypes) are shown to the customer during requirements phase to get their feedback.

Answers:　　✅ a. Requirements and Architecture documents are inspected.

b. Top down integration practices are put in place (i.e. Build Early, Build Often).

c. The software is beta tested before release.

d.
Screen sketches (or screen prototypes) are shown to the customer during requirements phase to get their feedback.

## Question 21

1 out of 1 points

Which one of the following is a structural design pattern?

Selected Answer:       a. Facade

Answers:                a. Facade

                        b. Decorator

                        c. Observer

                        d. Visitor

## Question 22

1 out of 1 points

Which is not one of the participants of Visitor pattern?

Selected Answer:       a. Subject

Answers:                a. Subject

                        b. ConcreteVisitor

                        c. Visitor

                        d. ObjectStructure

## Question 23

1 out of 1 points

Which of the following statements about V Model are correct?

Selected          a.
Answers:
                  V Model shows where in a development phase (such as requirements) defects found in a
                  specific testing phase (such as acceptance testing) would most likely have been created,

                  b.
                  V Model shows that testing should be incorporated from the beginning of development
                  process rather than after coding is done.

                  c.

                  V Model shows that in traditional development methodologies, the most expensive bugs (to
                  fix) are caught last.

Answers:          a.

V Model shows where in a development phase (such as requirements) defects found in a specific testing phase (such as acceptance testing) would most likely have been created,

✅ b.
V Model shows that testing should be incorporated from the beginning of development process rather than after coding is done.

✅ c.

V Model shows that in traditional development methodologies, the most expensive bugs (to fix) are caught last.

d. V Model shows that unit tests catch the most expensive (to fix) bugs.

## Question 24

1 out of 1 points

Interaction between objects is best understood with the help of

Selected Answer: ✅ c. Sequence diagrams

Answers:
a. Block diagrams

b. Use Case diagram

✅ c. Sequence diagrams

d. Class diagrams

## Question 25

1 out of 1 points

Compilers are good examples of

Selected Answer: ✅ b. Visitor Pattern

Answers:
a. MVC Pattern

✅ b. Visitor Pattern

c. Observer Pattern

d. Decorator Pattern

## Question 26

1 out of 1 points

You have designed a software and have recently found a bug in one of the modules. After fixing it, you notice that several other modules are not working as they should. What is the probable cause for this behavior?

Selected Answer: ✅ b. Your modules are tightly coupled.

Answers:
a. You have probably reused a module in the wrong place.

✅ b. Your modules are tightly coupled.

c. The source files are not segregated into correct directories.

d. The measure of cohesion in your code is high.

## Question 27

1 out of 1 points

Which one of the following is not a participant in the Observer Pattern?

Selected Answer:  ✓ c. Observed

Answers:

a. Observer

b. Subject

✓ c. Observed

d. Concrete Subject

## Question 28

1 out of 1 points

Which one of the below patterns reduces complexity by providing a simplified interface to a set of interfaces?

Selected Answer:  ✓ b. Facade

Answers:

a. Observer

✓ b. Facade

c. MVC

d. Visitor

## Question 29

1 out of 1 points

Which of the following is the best integration technique and why ?

Selected Answer:  ✓ a. Sandwich; It allows benefits of both top-down and bottom-up testing strategies.

Answers:  ✓ a. Sandwich; It allows benefits of both top-down and bottom-up testing strategies.

b. Big-Bang; It is easier to pin-point the source of errors as units are tested first.

c. Bottom-Up; No stubs are necessary.

d. Top-Down; It is effective for finding high level design flaws.

## Question 30

1 out of 1 points

In the observer pattern, subject maintains a collection of objects called

Selected Answer:    ✅ b. Observers

Answers:            a. Subjects

                    ✅ b. Observers

                    c. ConcreteSubject

                    d. Observed

## Question 31

1 out of 1 points

A student wants to get updates of the class timings. So, while registering for the class, he clicks on "Notify" button to get alerts. Here, notify button is an example of

Selected Answer:    ✅ c. Observer Pattern

Answers:            a. Visitor Pattern

                    b. Decorator Pattern

                    ✅ c. Observer Pattern

                    d. MVC Pattern

## Question 32

1 out of 1 points

In Java, we can segregate code into distinct modules by creating

Selected Answer:    ✅ a. packages or subpackages

Answers:            ✅ a. packages or subpackages

                    b. projects

                    c. methods

                    d. classes

## Question 33

1 out of 1 points

The classes Student and Person have which type of relation?

Selected Answer:    ✅ a. Generalization

Answers:            ✅ a. Generalization

                    b. Composition

                    c. Aggregation

                    d. Realization

## Question 34

1 out of 1 points

Which one among the below patterns provide high extensibility?

Selected Answer: ✅ b. Visitor Pattern

Answers:
a. Observer Pattern

✅ b. Visitor Pattern

c. MVC Pattern

d. Facade Pattern

## Question 35

1 out of 1 points

Which part/parts of MVC takes care of handling user events?

Selected Answer: ✅ b. Controller

Answers:
a. Model

✅ b. Controller

c. View and Controller

d. Model and Controller

## Question 36

1 out of 1 points

In sequence diagrams, what kind of frame should be used to show a method?

Selected Answer: ✅ a. ref

Answers: ✅ a. ref

b. loop

c. alt

d. opt

Saturday, March 25, 2017 2:29:57 PM CDT

← OK