

# Final Exam

<b>Due</b> Jul 31 at 11:59pm	<b>Points</b> 100	<b>Questions</b> 100
<b>Available</b> Jul 18 at 12am - Jul 31 at 11:59pm 14 days	<b>Time Limit</b> 120 Minutes	

## Instructions

Final Exam - 120 Minutes

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	94 minutes	95 out of 100

Score for this quiz: **95** out of 100  
Submitted Jul 26 at 2:41pm  
This attempt took 94 minutes.

Question 1

1 / 1 pts

The first step in defining a solution in the development of a new software system is to define what?

Correct!

☒ The computing environment

☐ The details of the business problem

☐ The application architecture

☐ The programming language

Question 2

1 / 1 pts

Low-level design that includes the design of the program modules and algorithm logic is referred to as \_\_\_\_ design.

module

detail

component

functional

Correct!

Question 3

1 / 1 pts

The key design question, (Have we specified in detail how the users will interact with the system to carry out all the use cases?) is associated with which design activity?

Design application software

Design use cases

Design system interfaces

Design user interfaces

Correct!

Question 4		1 / 1 pts
Which is NOT one of the problematic areas of Web based applications?		
Correct!	<input checked="" type="radio"/>	Complexity of Internet servers and Web development
	<input type="radio"/>	Configuration to handle high peak loads
	<input type="radio"/>	Security of applications
	<input type="radio"/>	Rapid change of Web standards and functionality

Question 5		1 / 1 pts
Which of the following is NOT a form of system interface?		
Correct!	<input type="radio"/>	File transfer
	<input checked="" type="radio"/>	Turn-around document
	<input type="radio"/>	Function call
	<input type="radio"/>	Transaction interchange

Question 6		1 / 1 pts

Which of the following is NOT considered an analysis model?

Activity diagram

State machine diagram

User interface screen layouts

Class diagram

Correct!

Question 7

1 / 1 pts

Limiting user access to the system is considered what type of design?

System interface design

Security and controls design

Application software design

User interface design

Correct!

Question 8

1 / 1 pts

Which is NOT one of the primary advantages of deploying a system via a Web implementation.

4 of 43

7/26/20, 14:43

Correct!

- ☒ Easy to program with HTML
- ☐ Wide availability of the Web
- ☐ Standard development and deployment practices
- ☐ Low-cost connectivity

Question 9

1 / 1 pts

Which if the following is NOT considered part of designing the application architecture and software?

- ☐ Multilayer design
- ☐ Detailed design
- ☐ Subsystem definition

Correct!

- ☒ Program security design

Question 10

1 / 1 pts

Managed services refers to what?

- ☐ Hosting service that provides backup and recovery services.
- ☐ Hosting company manages the cloud.

Correct!

- ☐ Hosting company provides all the server equipment.
- ☒ Hosting service with maintenance of the server and system software.

Correct!

Question 11

1 / 1 pts

Architectural design includes the design of specific program details.

- ☐ True
- ☒ False

Correct!

Question 12

1 / 1 pts

The most serious problem with Web based deployment of applications is security.

- ☒ True
- ☐ False

Question 13

1 / 1 pts

Designing the application architecture involves specifying in detail

Correct!

how some system activities will actually be carried out.

False

True

Question 14

1 / 1 pts

It is just as important to have heavy user involvement during analysis as it is during design.

True

False

Question 15

1 / 1 pts

The output of the design activities is a set of diagrams and documents that describe the solution system.

False

True

Question 16

1 / 1 pts

Since most newer Web applications use dynamic pages, content delivery networks are going out of use.

Correct!

☒ False

☐ True

Question 17

1 / 1 pts

Basically, design involves decomposition -- breaking a complex problem into smaller, more understandable components.

Correct!

☒ False

☐ True

Question 18

1 / 1 pts

The majority of new systems today must be integrated into existing networks without disrupting existing applications.

Correct!

☐ False

☒ True



Question 19

1 / 1 pts

One of the benefits of three-layer architecture is its flexibility.

Correct!

☒ True

☐ False

Question 20

1 / 1 pts

One of the disadvantages of three-layer architecture is that is usually requires multiple computers.

Correct!

☒ False

☐ True

Question 21

1 / 1 pts

Designers should be sure to include cancel buttons on all dialog boxes which allow the user to back up. This is an example of what?

Correct!

☒ Easy reversal of actions

☐ Dialog that yields closure

☐ Reduce short term memory load

☐

 Good error handling

Question 22

1 / 1 pts

Users should not be required to keep track of information that they have previously entered. This is an example of what?

- ☐ Dialogs that yields closure
- ☐ Easy reversal of actions
- ☒ Reduce short term memory load
- ☐ Good error handling

Correct!

Question 23

1 / 1 pts

A metaphor of human-computer interaction, in which interaction with the computer involves browsing and entering data on electronic documents, is referred to as a \_\_\_\_ metaphor.

- ☐ direct manipulation
- ☐ dialog
- ☐ desktop
- ☒ document

Correct!

Question 24

1 / 1 pts

Reports that are not predefined by a programmer, but are designed as needed, are called \_\_\_\_ reports.

- ☒ ad hoc
- ☐ business
- ☐ quick and dirty
- ☐ one-time

Correct!

Question 25

1 / 1 pts

Correct!

Since it is not always clear that Web page objects are clickable, or when a control has recognized the click, designers should be careful to apply the principle of \_\_\_\_.

☒ visibility

☐ shortcuts

☐ affordance

☐ consistency

Question 26

1 / 1 pts

Correct!

The major advantage of screen output versus printed output is that screen output \_\_\_\_.

☐ is more secure

☒ can be updated dynamically

☐ has more information

☐ is more user-friendly

Question 27

1 / 1 pts

An external output that includes a portion that is returned to the system as an input is a(n) \_\_\_\_.

Correct!

- ☒ turn-around document
- ☐ return document
- ☐ output-input document
- ☐ tear off and return document

Question 28

1 / 1 pts

A good design heuristic for menu design is to limit the menu choices to \_\_\_\_ choices.

Correct!

- ☐ never more than seven
- ☒ five to ten
- ☐ four to nine
- ☐ three to seven

Question 29

1 / 1 pts

[When subsequent processing is delayed by more than a second or

two, users may repeatedly press controls or reenter information, resulting in processing errors and user frustration] is an example of what?

- ☐ Lack of consistency
- ☐ Lack of closure
- ☒ Lack of feedback
- ☐ Lack of error handling

Correct!

Question 30

1 / 1 pts

Which of the following is NOT an example of a technique to reduce input errors?

- ☐ Avoid human involvement
- ☐ Capture data close to the source
- ☒ Design input codes with special meanings
- ☐ User electronic data capture devices

Correct!

Question 31

1 / 1 pts

EDI stands for electronic database integration.

Correct!

- ☒ FALSE
- ☐ TRUE

Question 32

1 / 1 pts

Users need to feel that they can explore options and take actions that can be canceled without difficulty.

Correct!

- ☒ TRUE
- ☐ FALSE

Question 33

1 / 1 pts

XML is a definition language that allows users add new constructs to the language.

Correct!

- ☒ TRUE
- ☐ FALSE

Question 34

1 / 1 pts

Storyboarding should result in a detailed dialog design.

Correct!

☐ TRUE

☒ FALSE

Question 35

1 / 1 pts

A good example of an error message might be, [The account information is missing critical data. Please re-enter.]

☐ TRUE

Correct!

☒ FALSE

Question 36

1 / 1 pts

User interface design is frequently added to the system after the business rules and business logic has been designed.

☒ FALSE

Correct!

☐ TRUE

Question 37

1 / 1 pts

Each dialog may only have one window form.



Correct!

- ☒ FALSE
- ☐ TRUE

Question 38

1 / 1 pts

Highly automated input devices such as scanners can capture many system inputs.

- ☐ TRUE

Correct!

- ☒ FALSE

Question 39

1 / 1 pts

Ease of learning and ease of use are often in conflict.

- ☐ FALSE

Correct!

- ☒ TRUE

Question 40

1 / 1 pts

Adequate feedback from a system to user data entry helps reduce errors.

Correct!

- ☒ TRUE
- ☐ FALSE

Question 41

1 / 1 pts

High coupling \_\_\_\_ in a system.

- ☐ is easier to maintain
- ☐ decreases visibility between classes
- ☐ reduces ripple effects in a system when changes occur
- ☒ adds complexity

Correct!

Question 42

1 / 1 pts

Ports and sockets are used to show the interface in what kind of UML diagram?

Correct!

- ☐ Package diagram
- ☒ Component diagram
- ☐ Network diagram
- ☐ Deployment diagram

Question 43

1 / 1 pts

The original method used to process input data in a Web based system was by using computer programs in \_\_\_\_\_.

Correct!

- ☐ the .NET programming suite
- ☐ the Javascript programming language
- ☐ the Java programming language
- ☒ the C++ language for the CGI

Question 44

0 / 1 pts

If you are doing detailed design for the use case Create New Order,

which class should receive the first input?

Incorrect Answer

- ☐ Order
- ☐ Customer
- ☐ OrderTransaction

Correctly Answered

- ☒ OrderHandler

Question 45

1 / 1 pts

After completing a use-case design using CRC cards, the next step is to \_\_\_\_\_.

- ☐ select another use case
- ☐ add required utility classes
- ☒ update the design class diagram
- ☐ program the use case

Correct!

Question 46

1 / 1 pts

Which of the following is NOT part of a multilayer object-oriented design (OOD)?

Correct!

- ☒ Functional module
- ☐ Problem domain object
- ☐ User input form
- ☐ Database access

Question 47

1 / 1 pts

In a design class diagram, navigation visibility is identified by \_\_\_\_.

Correct!

- ☒ a solid arrow between the classes, pointing to the visible class
- ☐ a solid arrow between the classes, initiating from the visible class
- ☐ a dashed arrow between the classes, pointing to the visible class
- ☐ a solid line between the classes

Question 48

1 / 1 pts

Correct!

It is usually a bad idea to try to include user-interface classes to a CRC design.

- ☒ FALSE
- ☐ TRUE

Question 49

1 / 1 pts

Correct!

The primary difference between a design class symbol and a problem domain class symbol is the addition of method signatures.

- ☐ FALSE
- ☒ TRUE

Question 50

0 / 1 pts

Incorrect Answer

You Answered

The objective of object-oriented detailed design is to identify and specify all the objects that must work together to carry out each use case.

- ☐ TRUE
- ☒ FALSE

Question 51

1 / 1 pts

Software systems can generally be divided into three types of systems: single-user systems, enterprise-level systems, and Web-based systems.

TRUE

☒

FALSE

Correct!

Question 52

0 / 1 pts

Two-layer architectures are interesting in theory, but are seldom if ever used.

TRUE

☒

FALSE

You Answered

Question 53

1 / 1 pts

Developers do not typically add more classes to design class diagrams than were originally defined in the domain model.

TRUE

Correct!

☒ FALSE

Question 54

1 / 1 pts

Just in time systems design is a popular technique used in adaptive approaches to projects.

Correct!

☒ TRUE

☐ FALSE

Question 55

1 / 1 pts

Developing a(n) \_\_\_\_ diagram is a multistep process of determining which objects work together and how they work together.

Correct!

☒ interaction

☐ state machine

☐ design class

☐ package

Question 56

1 / 1 pts



System designers frequently create a class called a \_\_\_\_ that can serve as a collection point for incoming messages.

message collector

use case controller

message controller

switchboard

Correct!

Question 57

1 / 1 pts

The following notation <anOrd:Order> can be interpreted as follows:

Order is a class. anOrd is an object in that class

Order is an object. anOrd is the reference to that object

Order is an object. anOrd is the identifier for that order

Order is a class. anOrd is the identifier of an object in the class

Correct!

Question 58

1 / 1 pts

[ \_\_\_\_ ] methods must be included in a design class diagram.

Setter

Correct!

- ☐ Getter
- ☐ Constructor
- ☒ Use case specific

Question 59

1 / 1 pts

Correct!

What is the first step in constructing a first-cut sequence diagram from the elements of the system sequence diagram (SSD)?

- ☒ Replace the :System object with all the objects that must collaborate
- ☐ Determine which messages must be sent
- ☐ Create a use case controller
- ☐ Select an input message from the use case

Question 60

1 / 1 pts

The primary models used for OO detailed design are \_\_\_\_ diagrams.

- ☐ package and statechart
- ☐ package and deployment

Correct!

- ☒ design class and interaction
- ☐ design class and statechart

Question 61

1 / 1 pts

Communication diagrams indicates the order of the messages with \_\_\_\_\_.

- ☐ links
- ☐ arrows
- ☐ activation lifelines

Correct!

- ☒ sequence numbers

Question 62

1 / 1 pts

The activation lifeline is depicted by a vertical dashed line under an object.

Correct!

- ☒ FALSE
- ☐ TRUE

Question 63

1 / 1 pts

The first-cut sequence diagram contains view layer and business layer.

Correct!

☒ FALSE

☐ TRUE

Question 64

1 / 1 pts

Design class diagrams and interaction diagrams should be developed independent of each other.

Correct!

☐ TRUE

☒ FALSE

Question 65

1 / 1 pts

The code [if (someObject == null)] is part of the factory pattern.

Correct!

☐ FALSE

☒ TRUE

Question 66

1 / 1 pts

Dependency relationships cannot exist between classes within packages.

FALSE

TRUE

Correct!

Question 67

1 / 1 pts

The perfect technology assumption means not to worry about issues such as user security.

TRUE

FALSE

Correct!

Question 68

1 / 1 pts

The perfect memory assumption means that there is always adequate memory to execute the program.

☐ TRUE

☒ FALSE

Correct!

Question 69

1 / 1 pts

A \_\_\_\_ is an institution's name and public key, which is encrypted and certified by a third party.

☐ private key

☐ certifying authority

☒ digital certificate

☐ digital key

Correct!

Question 70

1 / 1 pts

A relational database table is in \_\_\_\_ normal form if every non-key field is functionally dependent on the primary key.

☐ first

Correct!

- ☐ third
- ☐ fourth
- ☒ second

Correct!

Question 71

1 / 1 pts

A \_\_\_\_ database server architecture is only feasible when a database schema can be cleanly divided among client access user groups.

- ☐ cloud-based
- ☒ partitioned
- ☐ single
- ☐ replicated

Question 72

1 / 1 pts

Database synchronization should be implemented when using a(n) \_\_\_\_ database server architecture.

- ☐ single
- ☐ partitioned

Correct!

- ☒ replicated
- ☐ cloud-based

Question 73

1 / 1 pts

[\_\_\_\_\_] is a consistent relational database state in which every foreign key value also exists as a primary key value.

Correct!

- ☒ Referential integrity
- ☐ First normal form (1NF)
- ☐ Database synchronization
- ☐ Function dependency

Question 74

1 / 1 pts

Each class on an class diagram is represented by a(n) \_\_\_\_\_ in a relational database.

Correct!

- ☒ table
- ☐ attribute
- ☐ row



☐ column

Question 75

1 / 1 pts

Which is NOT an objective of integrity controls?

- ☐ Protect the assets of the organization
- ☐ Allow only valid business transactions
- ☒ Ensure a stable functioning operating environment
- ☐ Ensure that transactions are recorded completely

Correct!

Question 76

1 / 1 pts

Classes that participate in a classification hierarchy can be represented within a relational database as a set of tables with the primary key of the general class table replicated in the other tables.

- ☒ TRUE
- ☐ FALSE

Correct!

Question 77

1 / 1 pts

Correct!

Completeness control is an integrity control that identifies when a value in a field is too large or too small.

FALSE

TRUE

Question 78

1 / 1 pts

Correct!

The primary purpose of integrity controls is to track external activity.

FALSE

TRUE

Question 79

1 / 1 pts

Correct!

Relationships in a relational database are usually represented by embedding a foreign key in each participating table.

FALSE

TRUE

Question 80

1 / 1 pts

Every table in a relational database must have a foreign key.

☐ TRUE

☒ FALSE

Correct!

Question 81

1 / 1 pts

A relational database management system stores data in tables.

☐ FALSE

☒ TRUE

Correct!

Question 82

1 / 1 pts

A foreign key is a field or set of fields stored in one table that also exists as a primary key in another table.

☒ TRUE

☐ FALSE

Correct!

Question 83

1 / 1 pts

A relational database table is in third normal form (3NF) if it is in second normal form (2NF) and if every non-key field is functionally dependent on the primary key.

☐ TRUE

☒ FALSE

Correct!

Question 84

1 / 1 pts

Problem domain modeling and database normalization are incompatible techniques for relational database design.

☒ FALSE

☐ TRUE

Correct!

Question 85

1 / 1 pts

Classes that participate in a classification relationship can only be represented within a relational database as a single table containing all the attributes in each class.

☒ FALSE

☐ TRUE

Correct!

Question 861 / 1 pts

Most organizations use a(n) \_\_\_\_ form to propose and document a maintenance change.

maintenance report

change request

team request

user request

Correct!

Question 871 / 1 pts

In a \_\_\_\_ deployment, the system is installed and brought into operation in a series of steps.

stepwise

direct

parallel

phased

Correct!

Question 881 / 1 pts

Correct!

Drivers are used extensively in \_\_\_\_ development, because called methods and child modules are developed and unit-tested before their parents are developed.

bottom-up

object-oriented

input, process, output

top-down

Question 89

1 / 1 pts

Correct!

The primary advantage of \_\_\_\_ deployment is its simplicity.

direct

parallel

networked

phased

Question 90

1 / 1 pts

A(n) \_\_\_\_ test is a test performed to determine whether the system fulfills user requirements.

Correct!

- ☐ system
- ☐ performance
- ☒ acceptance
- ☐ integration

Question 91

0 / 1 pts

A(n) \_\_\_\_ version is a system that is stable enough to be tested by end users.

- ☐ maintenance
- ☐ production
- ☐ beta
- ☒ alpha

Correct Answer

You Answered

Question 92

0 / 1 pts

A minor production release, called a(n) \_\_\_\_ version, provides bug fixes and small changes to existing features.

- ☐ beta

You Answered

Correct Answer

☐ alpha

☒ production

☐ maintenance

Correct!

Question 93

1 / 1 pts

A(n) \_\_\_\_ version is a system version created for long-term release to users.

☐ alpha

☒ production

☐ beta

☐ maintenance

Question 94

1 / 1 pts

A stress test is also called a \_\_\_\_ test.

☐ volume

☐ equipment



Correct!

- ☒ performance
- ☐ throughput

Question 95

1 / 1 pts

Which of the following is a major advantage of input, process, output development order?

- ☐ The development process is rapid
- ☐ Not as much testing is required
- ☐ User interface is easier to develop
- ☒ Testing is more straightforward

Correct!

Question 96

1 / 1 pts

How to start up the system and how to shut it down are examples of system documentation.

- ☒ FALSE
- ☐ TRUE

Correct!

**Question 97****1 / 1 pts**

In some deployment situations, it may be possible to begin operation of the new system without converting data from the old system.

**Correct!**☒ TRUE☐ FALSE**Question 98****1 / 1 pts**

In complex data conversions programs must be constructed and tested in the same manner as operational software.

**Correct!**☐ FALSE☒ TRUE**Question 99****1 / 1 pts**

Due to design principles for object-oriented systems, such as cohesion and coupling, integration testing is usually a straightforward process with little complexity.

**Correct!**☒ FALSE☐ TRUE

Question 100

1 / 1 pts

The purpose of system documentation is to help the end users understand the details of how the system works.

FALSE

TRUE

Correct!

Quiz Score: **95** out of 100