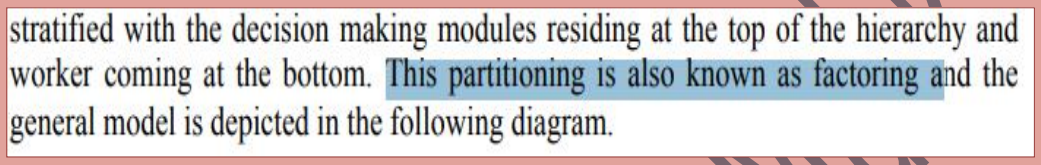
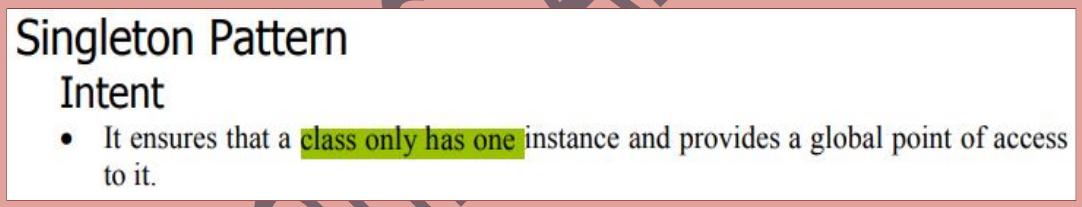
CS504 Quiz by Arsal Shani and Aina Malik

MCS Family Group

1. Vertical partitioning is also known as ....
   a. Balancing
   b. Mutating
   c. Parallelizing
   d. Factoring


stratified with the decision making modules residing at the top of the hierarchy and worker coming at the bottom. This partitioning is also known as factoring and the general model is depicted in the following diagram.

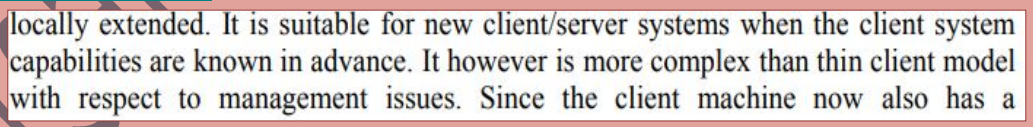
2. It ensures that a class only has one instance and provides a global point of access to it.
   a. Singleton Pattern
   b. Observer Pattern
   c. Real Pattern
   d. None of the given above


Singleton Pattern

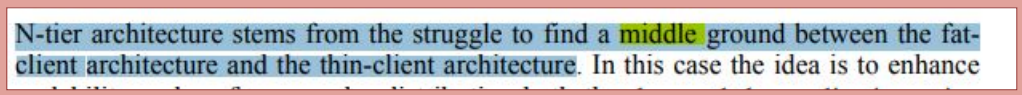
Intent

- It ensures that a class only has one instance and provides a global point of access to it.

3. Fat Client Model is one of the configurations of _____ Model.
   a. Data-centered
   b. Layered
   c. Reference
   d. Client Server


locally extended. It is suitable for new client/server systems when the client system capabilities are known in advance. It however is more complex than thin client model with respect to management issues. Since the client machine now also has a

4. N-tier architecture stems from the struggle to find a _____ between the fat-client architecture and the thin-client architecture.
   a. Concurrency
   b. Distribution point
   c. Middle ground
   d. Similarity


N-tier architecture stems from the struggle to find a middle ground between the fat-client architecture and the thin-client architecture. In this case the idea is to enhance

5. Which of these represents the Krutchen's 4+1 architectural view model?
   a. Logical view, Process view, Physical view, Development view, Use case view
   b. Logical view, Dynamic view, Physical view, Development view, User case view
   c. Logical view, Process view, Physical view, Development view, Sequence view
   d. Dynamic view, Process view, Physical view, Development view, Use case view

His architectural model is known as Krutchen's 4+1 architectural view model. As evident, this model proposes the development of 5 main views namely the logical view, the process view, the physical view, the development view, and the use case view. The logical view is the object model of the design, the *process* view captures the concurrency

6. Thin Client Model is one of the configuration of ____ Model
   a. Data-centered
   b. Client Server
   c. Layered
   d. Reference

Thin Client Model

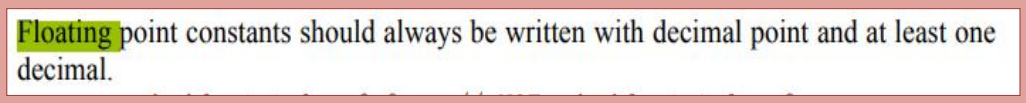
This model was initially used to migrate legacy systems to client server architectures. In this case the legacy system may act as a server in its own right and the GUI may be implemented on a client. It chief disadvantage is that it places a heavy processing load on both the server and the network.

7. In the N-Tire Architecture the idea is to enhance scalability and _____ by distributing both the data and the application using multiple server machines.
   a. Usability
   b. Performance
   c. Interoperability
   d. Integrity

N-tier architecture stems from the struggle to find a middle ground between the fat-client architecture and the thin-client architecture. In this case the idea is to enhance scalability and performance by distributing both the data and the application using multiple server machines. This could involve different types of servers such as

8. Floating point constants should always be written with decimal point and at least
   a. One decimal
   b. Two decimal
   c. Three decimal

d. None of the given


Floating point constants should always be written with decimal point and at least one decimal.

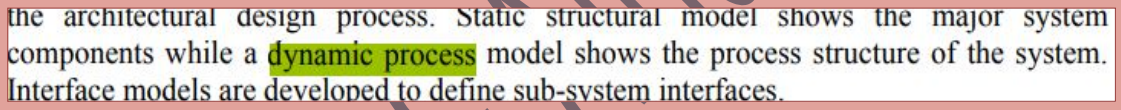
9. Which of the following statements are same in output:

1) a = a>>2
2) a = a/4
3) a = a*2

a. (1) and (3) only (I think)
b. (2) and (3) only
c. (1) and (2) only
d. All produce the same result

10. Dynamic process model shows the process ___ of the system.

a. Components
b. Objects
c. Structure
d. Linkage

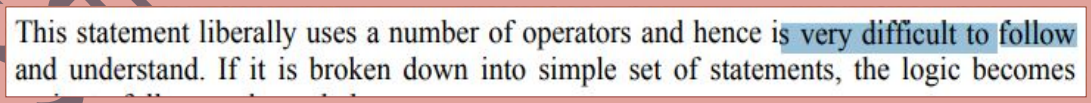

the architectural design process. Static structural model shows the major system components while a dynamic process model shows the process structure of the system. Interface models are developed to define sub-system interfaces.

11. There are ___ layers in OSI reference model.

a. 5
b. 6
c. 7
d. 8

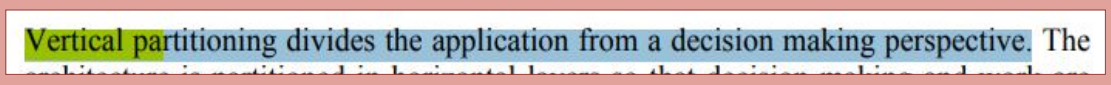
12. Complex expressions:

a. Make the code easy to modify
b. Make the code difficult to modify
c. Make the code easy to understand
d. Does not affect understand ability


This statement liberally uses a number of operators and hence is very difficult to follow and understand. If it is broken down into simple set of statements, the logic becomes

13. Vertical participation divides the architecture application from a _____ making perspective.

a. Decision
b. Design
c. Conclusion
d. Move


Vertical partitioning divides the application from a decision making perspective. The

14. Issues like system performance, availability, scalability, and security are analyzed in _____.

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a. Logical view
b. Physical view
c. Code view
d. Concurrency view

The Physical View depicts the physical organization of this system and how this system will be physically deployed. This includes different processors, sensors, and storage devices used by the system. This view connects various network elements and communication devices. The primary users of this system include hardware and system engineers. The view is developed with an intention to document and analyze system delivery and installation mechanism. The view is also used in understanding and analyzing issues pertaining to system performance, availability, scalability, and security.

15. Class variables should never be declared public. Public variable violate which of the following:
a. Information hiding
b. Encapsulation
c. Information hiding and encapsulation
d. None of the given

Class variables should never be declared public. The concept of information hiding and encapsulation is violated by public variables. Use private variables and access functions instead. One exception to this rule is when the class is essentially a data

16. Variable should be initialized where they are _____ and they should be declared in the _____ scope possible.
a. Defined and smallest
b. Declared and medium
c. Defined and medium
d. Declared and smallest

Variables should be initialized where they are declared and they should be declared in the smallest scope possible.

17. Patterns are devices that allows program to share knowledge about their ____.
a. Code
b. Design
c. Analysis
d. Implementation

Patterns are devices that allow programs to share knowledge about their design.

18. Identifier names also play a significant role in enhancing the ____ of the program.
a. Write ability
b. Read ability
c. Reliability
d. All of the given choices

Arsal Shah Siddiqui Mahesar

Identifier names also play a significant role in enhancing the readability of a program. The names should be chosen in order to make them meaningful to the reader. In order to

19. Goto statements violates the idea of
    a. Object oriented code
    b. Structured code
    c. Control structure
    d. Repetition structure

Goto statements violates the idea of structured code.

20. "Is" prefix should be used for _____ variables and methods.
    a. General
    b. Boolean
    c. Constant
    d. None of the given

is prefix should be used for boolean variables and methods.

21. development view in Krutchen's 4+1architectural view model captures
    a. object model of design
    b. concurrency and synchronization aspects of the design
    c. Mapping(s) of the software onto the hardware and reflects its distributed aspect
    d. Static organization of the software in its development

of the software onto the hardware and reflects its distributed aspect, the *development* view describes the static organization of the software in its development environment, and the use case view uses selected use cases or scenarios to validate that the architecture

22. A self-documenting code is a code that explain its self without the need of comments extraneous documentation like
    a. flow chart
    b. UML diagrams
    c. process flow state diagram
    d. all of the given choices

A *self documenting code* is a code that explains itself without the need of comments and extraneous documentation, like flowcharts, UML diagrams, process-flow state diagrams,

23. using proper parenthesis normally makes the code
    a. easy to read
    b. easy to understand
    c. less ambiguous
    d. all of the given options

Arsal Singh & Aina Malik

Parentheses should always be used as they reduce complexity and clarify things by specifying grouping. It is especially important to use parentheses when different unrelated operators are used in the same expression as the precedence rules are often assumed by the programmers, resulting in logical errors that are very difficult to spot. As an example consider the following statement:

24. ____was the first pure Object Oriented language in which observe pattern was used in implementing its model view controller pattern

a. Smalltalk
b. PASCAL
c. JAVA
d. C++

Smalltalk being the first pure Object Oriented language in which observer pattern was used in implementing its Model View Controller (MVC) pattern. It was a publish-subscribe mechanism in which views (GUIs)

25. the form for (;;) should be used for

a. nested loop
b. empty loop
c. more than 1000 iteration
d. less than 100 iteration

The form *for (;;)* should be used for empty loops.

26. client server is a ____ system model

a. integrated
b. distributed
c. heterogeneous
d. Homogeneous

The client-server model is a distributed system model

27. ____architectural model is widely is used in mainframe applications.

a. client-server model
b. Repository model
c. filter model
d. layered model

Client server model tries to distribute data and processing. This is a shift from main-frame based applications where both the data management and the processing of data used to be typically carried out by the same main-frame computer. In those applications,

28. In client server model the application is modeled as a set of ___that are provided by servers.

Arsal Shah & Alina Malik

a. requests
b. protocol
c. services
d. Requirements

The client-server model is a distributed system model which shows how data and processing is distributed across a range of components. In this model, the application is modeled as a set of services that are provided by servers and a set of clients that use these services. The system is organized as a set of stand-alone servers which provide specific

29. Which one is correct?

a. double total=0.5;
b. double total =5:
c. double total =50:
d. all of the given (I think)

30. Charles Simonyi first discussed Hungarian notation.

He was of _____

a. Microsoft
b. IBM
c. Dell
d. Cisco

Hungarian Notation was first discussed by Charles Simonyi of Microsoft. It is a variable

31. In case of header file construction is to avoid ____error.

The construction should appear in the top of the file (before the file header).

a. compilation
b. run time
c. logical
d. all of the given

1. Header files must include a construction that prevents multiple inclusion. The convention is an all uppercase construction of the module name, the file name and the h suffix.

```
#ifndef MOD_FILENAME_H
#define MOD_FILENAME_H
 :
#endif
```

The construction is to avoid compilation errors. The construction should appear in the top

32. In case of a file servers, Client requests selected records from a _____ and the server transmits records to client over the network.

a. Local memory

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b. Network
c. Database
d. File

File servers
In this case, client requests selected records from a file and the server transmits records to client over the network.

33. Which of the following is used for multi-level commenting?

a. //Comment
b. /*Comment*/
c. (Comment)
d. *(Comment)*

Since multilevel commenting is not supported in C++ and Java, using // comments ensure that it is always possible to comment out entire sections of a file using /* */ for debugging purposes etc.

34. Maintain ability and portability issues ~~are~~ discussed in _____.

a. Functional view
b. Physical view
c. Code view
d. Logical view

Code View	classes, objects, procedures, functions, subsystems, layers, modules	programmers, designers, reusers	modifiability/maintainability, portability, subsetability

35. Names representing methods and functions should be----and written in mixed case starting----case.

a. Noun----lower
b. Verb----lower
c. Noun----upper
d. Verb----upper

Names representing methods and functions should be verbs and written in mixed case starting with lower case.

36. C++ header files should have the extension---- Source files can have the extension ----

a. .c and .h

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b. .cc and .h
c. .h and .cpp
d. All of the given

C++ header files should have the extension .*h*. Source files can have the extension .*c++* (recommended), .*C*, .*cc* or .*cpp*.

37. Distributing the responsibilities of different subsystems so that we get a software system which is easy to maintain, is called ……the architecture.
a. Subtracting
b. Partitioning
c. Cloning
d. Balancing

Partitioning of architecture is an important concept. What we basically want to do is distribute the responsibilities to different subsystems so that we get a software system which is easy to maintain. Partitioning results in a system that suffers from fewer side effects. This ultimately means that we get a system that is easier to test and extend and hence is easier to maintain.

38. _____architecture model is widely used in mainframe application.
a. Client-server Model
b. Repository
c. Filter Model
d. Layered Model

43. Global variables in C++ should always be referred to by using the
a. ::operator
b. :operator
c. Without an operator
d. None of the given

Global variables in C++ should always be referred to by using the :: operator.
::mainWindow.open() , ::applicationContext.getName()

44. Static structural model shows the major systems
a. Leaks
b. Components
c. Activities
d. Objectives

Aqsa Shahi & Ali Malik



Arsal Shani & Aina Malik