What techniques can be used for identifying class operations?

i. Class - responsibility cards

ii. Activity diagrams

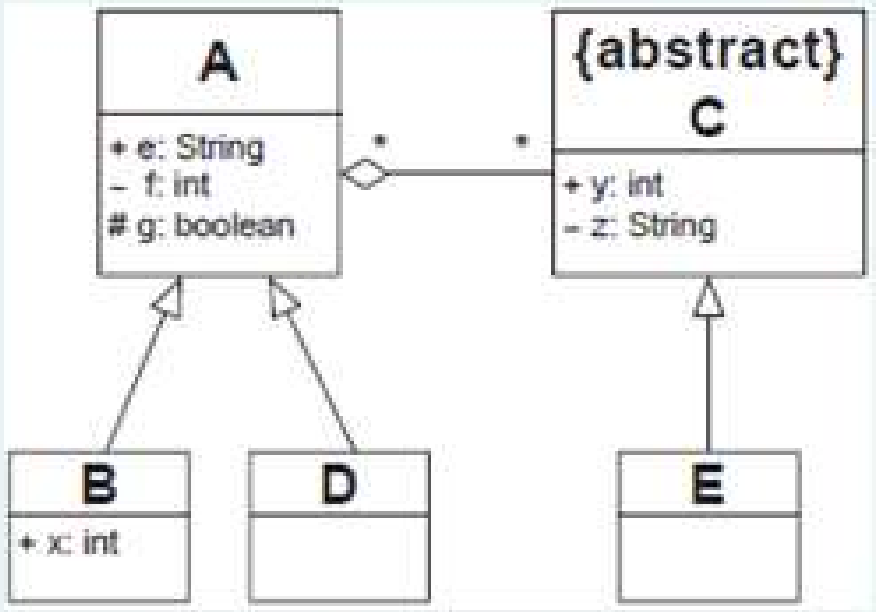
iii. Sequence diagrams

iv. Business process diagrams

Select one:

- a. i+ii+iii
- b. i+ii
- c. i+iii
- d. ii+iv

You are given the following clipping of a UML2 class diagram.



Which of the following statements are FALSE?

Select one:

- a. An object of A may or may not contain objects of C
- b. An instance of A can see y
- c. Objects of B and D can see g
- d. Objects of C and B can see f

Which statements are the correct about the life cycle of a computer system...:

1. it is a template for ordering the activities of the computer system;
2. it is included in the development cycle of the computer system;
3. it can be organized in 5 stages (identification of requirements, analysis, design, implementation, maintenance);
4. it ends with the decision to abandon the system and replace it with a new system.

Select the correct combination:

Select one:

- a. 1+2
- b. 2+3+4
- c. 3+4;
- d. 1+3+4

Which of the following statements about shared aggregations is true?

Select one:

- a. Chains of shared aggregation links may form a cycle
- b. Shared aggregations are used to express an is-a relationship
- c. A shared aggregation is shown by a solid-filled diamond on the end of an association line
- d. The multiplicity of a shared aggregation may be ≥1

What is MOST important in an agile approach (according to the Agile Manifesto)?

Select one:

- a. People and how they communicate;
- b. Control and management;
- c. Documentation and planning;
- d. Process and tools;

In a decision node of an activity diagram:

Select one:

- a. several flows enter and one come out;
- b. you can simulate the "DO-UNTIL" control structure from programming;
- c. output flows have mutually exclusive conditions;
- d. more flow enter and more than one come out;

You can model the following situations with a state machine diagram:

Select one or more:

i. The states that the object of a class can have.

ii. Possible transitions from one state to another.

iii. Events that trigger transitions.

iv. Activities that are executed while the object is in a certain state or while a transition is occurring.

Select one:

- a. i
- b. i+ii+iii+iv
- c. i+ii+iii
- d. i+ii

The <<boundary>> classes have the role of:

Select one:

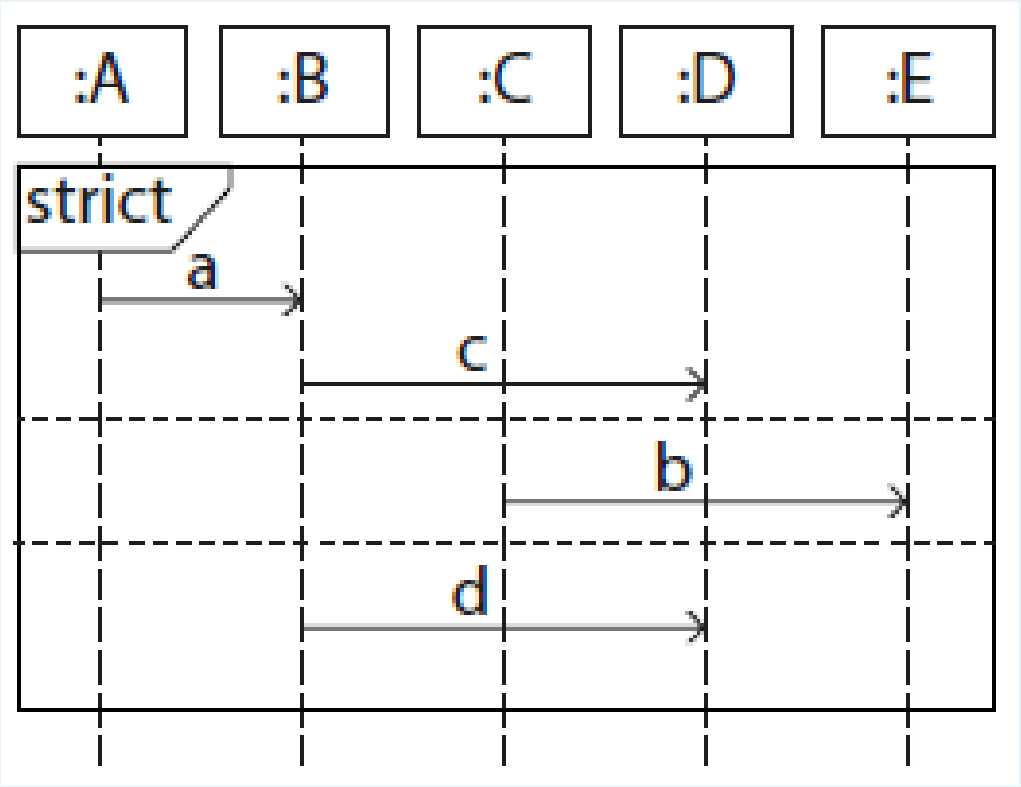
- a. Identifying classes of the problem domain;
- b. Creating objects that must also exist after the system is turned off;
- c. Ensuring communication with actors or other computer systems.
- d. Mediating between boundary classes and entity classes;

What type of BPMN event is appropriate for modeling "Approved expense budget"? Choose one of the following:

Select one:

- a. timer
- b. receive message
- c. conditional
- d. signal

You are given the following sequence diagram. Which traces are possible?



Select one:

- a. a → c → b → d
- b. b → d → a → c
- c. a → b → c → d
- d. a → b → d → c

A class diagram describes ...

Select one:

- a. shows the static view of a system.
- b. shows the practical view of a system.
- c. shows the dynamic view of a system.
- d. shows the interaction view of a system.

What is UML?

Select one:

- a. a case tool
- b. an object-oriented methodology
- c. a standard modeling language
- d. a formal language

Relationships between components in a component diagram show that:

Select one:

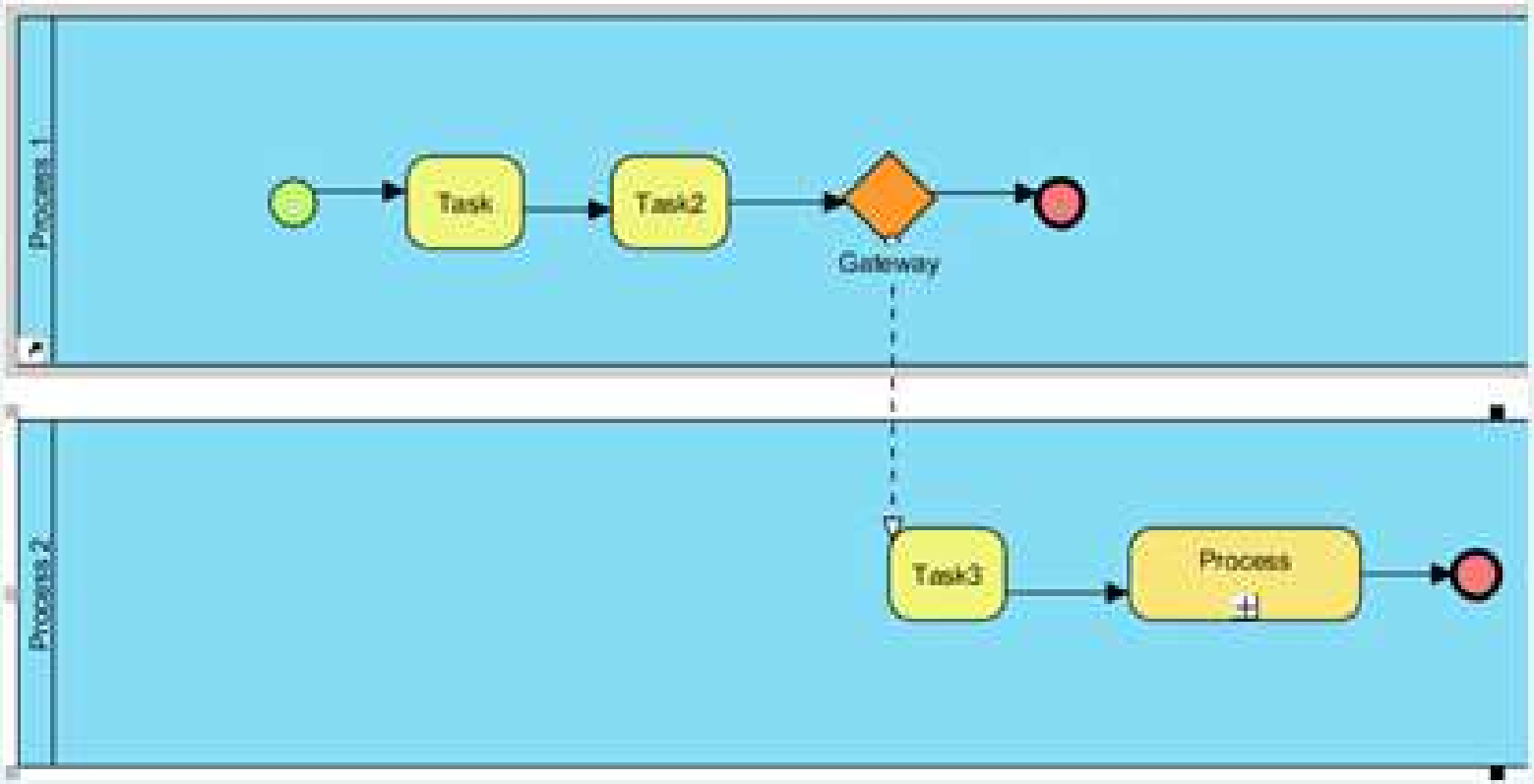
- a. The classes included in the client component are interfaces of the classes in the supplier component;
- b. The classes included in the client component can inherit, instantiate or use classes included in the vendor component;
- c. The classes included in the client component cannot exist without the supplier component;
- d. The classes included in the client component are composed of classes included in the supplier component;

Which of the following models does NOT contribute to the design of the database:

Select one:

- a. Object diagram;
- b. Class diagram;
- c. Sequence diagram;
- d. Entity-relationship diagram

Which element is missing from the following collaboration diagram;



Select one:

- a. A start event;
- b. A data flow;
- c. A message flow;
- d. An intermediate event;

What elements should be added/ defined in a design class diagram?

Select one:

- a. stereotypes, controller classes, navigability, member's complete signature
- b. entity classes
- c. multiplicities
- d. associations

The design of the system environment consists of:

Select one:

- a. Establishing the technical level of the equipment with the necessary computer technology;
- b. Establishing the architecture of the information system;
- c. Designing the configuration of the processing elements during execution.
- d. dentification of all the technologies necessary to support the implementation of the IT system;

The design of computer system security and controls can be carried out at the level of:

Select one:

- a. Database, user interface; cloud;
- b. Application; database; network;
- c. Application, database, user interface;
- d. Company, application and database;

In a UML state-machine diagram, a state:

Select one:

- a. describes a workflow;
- b. is included in the activity diagram;
- c. may include special actions;
- d. is included in the class diagram;

What defines the DevOps process loop?

Select one:

- a. Plan, build, release, deploy, monitor;
- b. Build, test, release, monitor;
- c. Plan, code, build, test, deploy, operate, monitor, plan;
- d. Code, test, deploy, operate, monitor, plan;

The current trend in developing computer systems is:

Select one:

- a. Reuse;
- b. Decentralization;
- c. Building closed systems;
- d. Increasing cost of computer systems implementation.

Within sequence diagrams ...

Select one:

- a. ...time is no separate dimension
- b. ...the chronological process of one object is modeled
- c. ...you can refer to other sequence diagrams
- d. ...the behavior of one object is modeled

Which of these are the types of nodes used in the deployment diagram?

Select one:

- a. execution environments and stereotypes
- b. artifacts and stereotypes
- c. devices and execution environments
- d. devices and artifacts

Robustness in design can be implemented by:

Select one:

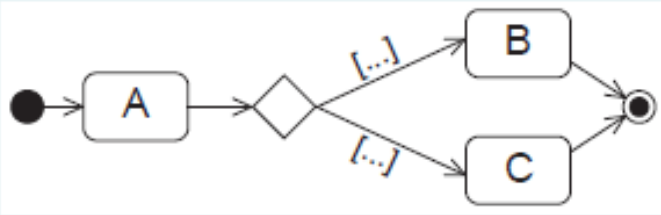
- a. using design patterns
- b. using design patterns and separating relational storage and objects
- c. separating persistent functions from business functions and separating relational storage and objects

A shared aggregation between two classes (whole and parts) will be implemented:

Select one:

- a. By value, adding an attribute tothe Whole class
- b. By value, adding an attribute to the Part class
- c. By reference, adding a reference attribute to the Whole class
- d. By reference, adding a reference attribute to the Part class

You are given the following activity diagram. Which of the following action sequences are possible during one execution of the activity diagram?



i. A → B → C

ii. A → C → B

iii. A → B

iv. A → C

Select one:

- a. iii+iv
- b. ii+iv
- c. i+ii
- d. i+iii+iv

Designing interfaces with other systems involves:

Select one:

- a. Designing dialogue with system users;
- b. Designing graphic interface layouts;
- c. Designing how to connect and interact with other systems, whether internal or external;
- d. Designing the model of collaboration between processes from different systems;

What statements about deployment diagram are TRUE ?

i. It is a part of physical deployment of a system

ii. It shows the configuration of runtime processing nodes

iii. It is an important part of system architecture

iv. includes processors, connections, nodes and notes

Select one:

- a. i+ii+iii
- b. i+ii+iii+iv
- c. i+ii
- d. i+iii