AQA Computer Science A Level
4.1.2 - Programming paradigms

Flashcards

This work by PMT Education is licensed under CC BY-NC-ND 4.0

What scope is a variable that can be accessed from all parts of a program said to have?

CC BY NC ND

What scope is a variable that can be accessed from all parts of a program said to have?

Global

CC BY NC ND

List the four types of basic structure used in the structured approach to program design and construction

CC BY NC ND

List the four types of basic structure used in the structured approach to program design and construction

1. Assignment
2. Sequence
3. Selection
4. Iteration

CC BY NC ND

What do rectangles represent in hierarchy charts?

CC BY NC ND

What do rectangles represent in hierarchy charts?

Procedures

CC BY NC ND

How is data stored in procedural programs?

CC BY NC ND

How is data stored in procedural programs?

By constants and variables

CC BY NC ND

What name is given to containers for data and instructions in object-oriented programming?

CC BY NC ND

What name is given to containers for data and instructions in object-oriented programming?

Objects

CC BY NC ND

In object-oriented programming, what specifies the properties and methods that objects have?

CC BY NC ND

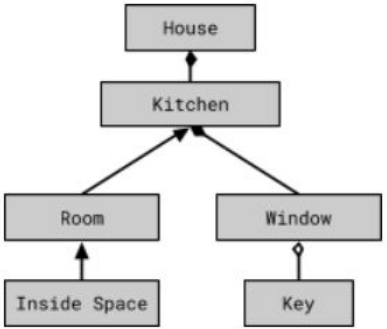
In object-oriented programming, what specifies the properties and methods that objects have?

Classes

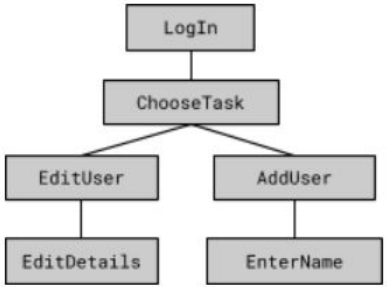
CC BY NC ND

Which of the following is an example of a hierarchy chart?

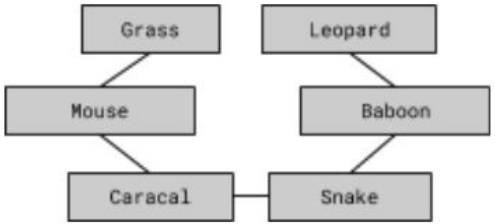
A



B



C



CC BY NC ND

Which is an example of a hierarchy chart?

B

CC BY NC ND

In OOP, what name is given to the process of combining methods and procedures in an object?

CC BY NC ND

In OOP, what name is given to the process of combining methods and procedures in an object?

Encapsulation

CC BY NC ND

Which class definition is correct?

A

```
Car {
  Private:
    Manufacturer
    Model
    EngineCapacity
    IsTaxed
  Public:
    Function GetManufacturer
    Function GetModel
    Function GetEngineCapacity
    Function GetIsTaxed
    Procedure SetDetails
}
```

B

```
Car = Class {
  Private:
    Manufacturer: String
    Model: String
    EngineCapacity: Float
    IsTaxed: Boolean
  Protected:
    GetManufacturer
    GetModel
    GetEngineCapacity
    GetIsTaxed
    SetDetails
}
```

C

```
Car = Class {
  Private:
    Manufacturer: String
    Model: String
    EngineCapacity: Float
    IsTaxed: Boolean
  Public:
    Function GetManufacturer
    Function GetModel
    Function GetEngineCapacity
    Function GetIsTaxed
    Procedure SetDetails
}
```


CC BY NC ND

Which class definition is correct?

C

CC BY NC ND

In OOP, what is said to occurs when objects are processed differently depending on their class?

CC BY NC ND

In OOP, what is said to occurs when objects are processed differently depending on their class?

Polymorphism

CC BY NC ND

Which class definition shows inheritance?

A

```
Truck = Class of Vehicle {
  Private:
    Capacity: Integer
  Public:
    Function GetCapacity
    Procedure SetDetails
}
```

B

```
Truck inherits Vehicle {
  Private:
    Capacity: Integer
  Public:
    Function GetCapacity
    Procedure SetDetails
}
```

C

```
Truck = Class (Vehicle) {
  Private:
    Capacity: Integer
  Public:
    Function GetCapacity
    Procedure SetDetails (Override)
}
```


CC BY NC ND

Which class definition shows inheritance?

C

CC BY NC ND

In OOP, what type of method has the same name as a method in an inherited class but different implementation?

CC BY NC ND

In OOP, what type of method has the same name as a method in an inherited class but different implementation?

An overridden method

CC BY NC ND

Name the stronger of the two kinds of association

CC BY NC ND

Name the stronger of the two kinds of association

Composition

CC BY NC ND

In OOP, what is the purpose of inheritance?

CC BY NC ND

In OOP, what is the purpose of inheritance?

Inheritance allows one class to share the properties and methods of another class

CC BY NC ND

What type of association exists between a class and a student: aggregation or composition?

CC BY NC ND

What type of association exists between a class and a student: aggregation or composition?

Aggregation

If the class is destroyed, the student still exists

CC BY NC ND

In class diagrams which feature properties and methods, what symbol represents a private property?

CC BY NC ND

In class diagrams which feature properties and methods, what symbol represents a private property?

A minus sign (-)

CC BY NC ND

Name two object-oriented design principles

CC BY NC ND

Name two object-oriented design principles

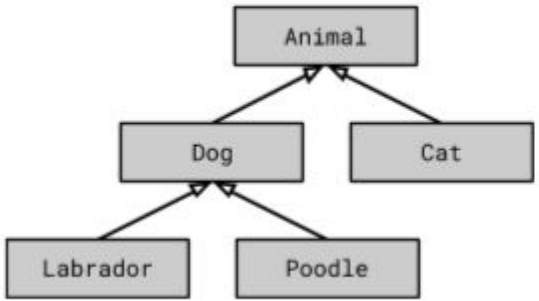
Two from:

1. Encapsulate what varies
2. Favour composition over inheritance
3. Program to interfaces, not implementation

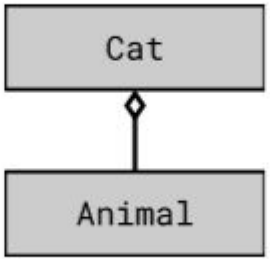
CC BY NC ND

Which is an inheritance diagram?

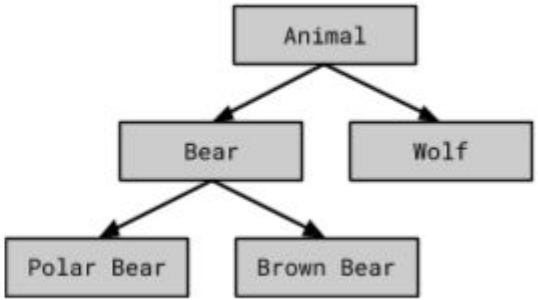
A



B



C



CC BY NC ND

Which is an inheritance diagram?

A

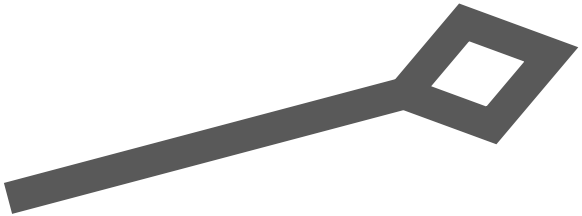
CC BY NC ND

In class diagrams which type of line represents aggregation?

CC BY NC ND

In class diagrams which type of line represents aggregation?

A line with a hollow diamond cap



CC BY NC ND