# METHOD

```
METHOD method-name
  OF [INTERFACE] interface-name
  IS subprogram-name
END-METHOD
```

This chapter covers the following topics:

- Function
- Syntax Description
- Example

For an explanation of the symbols used in the syntax diagram, see *Syntax Symbols*.

Related Statements: `CREATE OBJECT` | `DEFINE CLASS` | `INTERFACE` | `PROPERTY` | `SEND METHOD`

Belongs to Function Group: *Component Based Programming*

## Function

The `METHOD` statement assigns a subprogram as the implementation to a method, *outside* an interface definition. It is used if the interface definition in question is included from a copycode and is to be implemented in a class-specific way.

The `METHOD` statement may only be used within the `DEFINE CLASS` statement and after the interface definition. The interface and method names specified must be defined in the `INTERFACE` clause of the `DEFINE CLASS` statement.

## Syntax Description

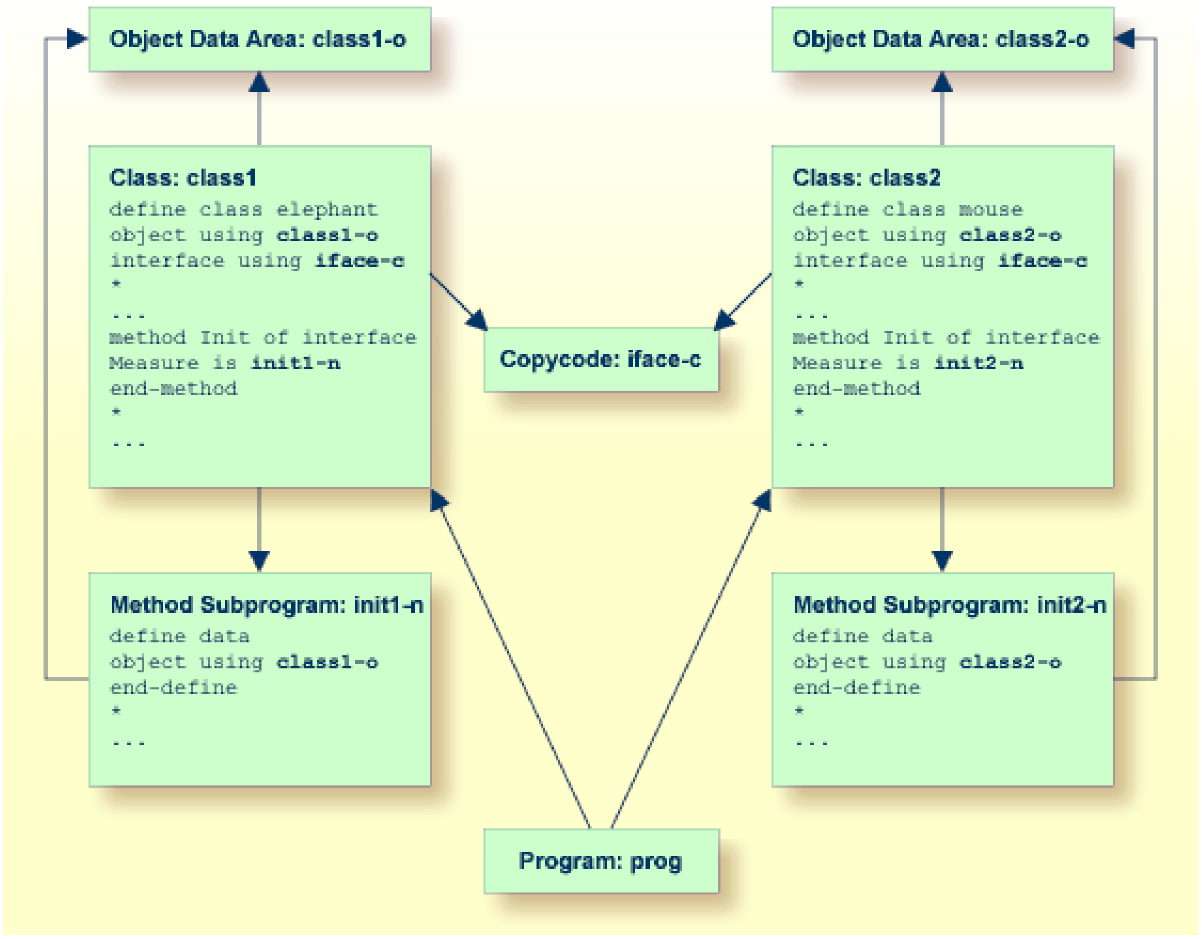
| Syntax Element | Description |
|---|---|
| *method-name* | **Method Name:**<br><br>This is the name assigned to the *`method`*. |
| `OF` *`interface-name`* | **Interface Name:**<br><br>This is the name assigned to the *`interface`*. |
| `IS` *`subprogram-name`* | **IS Clause:**<br><br>This clause can be used to specify the name of the subprogram that implements the method. The name of the subprogram consists of up to 8 characters. The default is *`method-name`* (if the `IS` clause is not specified). |
| `END-METHOD` | **End of Method Statement:**<br><br>The Natural reserved word `END-METHOD` must be used to end the `METHOD` statement. |

## Example

The following example shows how the same interface is implemented differently in two classes and how the `PROPERTY` statement and the `METHOD` statement are used to achieve this.

The interface `Measure` is defined in the copycode `iface-c`. The classes `Elephant` and `Mouse` implement both the interface `Measure`. Therefore, they both include the copycode `iface-c`. But the classes implement the property `Height` using different variables from their respective object data areas, and they implement the method `Init` with different subprograms. They use the `PROPERTY` statement to assign the selected data area variable to the property and the `METHOD` statement to assign the selected subprogram to the method.

Now the program `prog` can create objects of both classes and initialize them using the same method `Init`, leaving the specifics of the initialization to the respective class implementation.



The following shows the complete contents of the Natural modules used in the example above:

## Copycode: iface-c

```
interface Measure
*
property Height(p5.2)
end-property
*
property Weight(i4)
end-property
*
method Init
end-method
*
end-interface
```

## Class: class1

```
define class elephant
object using class1-o
interface using iface-c
*
property Height of interface Measure is height
end-property
*
property Weight of interface Measure is weight
```

```
end-property
*
method Init of interface Measure is init1-n
end-method
*
end-class
end
```

## LDA Object Data: class1-o

```
*   *** Top of Data Area ***
  1 HEIGHT                  P 5.2
  1 WEIGHT                  I 2
*   *** End of Data Area ***
```

## Method Subprogram: init1-n

```
define data
object using class1-o
end-define
*
height := 17.3
weight := 120
*
end
```

## Class: class2

```
define class mouse
object using class2-o
interface using iface-c
*
property Height of interface Measure is size
end-property
*
property Weight of interface Measure is weight
end-property
*
method Init of interface Measure is init2-n
end-method
*
end-class
end
```

## LDA Object Data: class2-o

```
*   *** Top of Data Area ***
  1 SIZE                    P 3.2
  1 WEIGHT                  I 1
*   *** End of Data Area ***
```

## Method Subprogram: init2-n

```
define data
object using class2-o
end-define
*
size := 1.24
weight := 2
*
end
```

## Program: prog

```
define data local
1 #o handle of object
1 #height(p5.2)
1 #weight(i4)
end-define
*
create object #o of class ’Elephant’
send "Init" to #o
#height := #o.Height
#weight := #o.Weight
write #height #weight
*
create object #o of class ’Mouse’
send "Init" to #o
#height := #o.Height
#weight := #o.Weight
write #height #weight
*
end
```