Class and Method Definition

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Class Definition

Object subclass: #NameOfSubclass instanceVariableNames: " classVariableNames: " category: 'PackageName'

Example

Object subclass: #Point instanceVariableNames: 'x y' classVariableNames: '' category: 'Graphics'

Methods

- Public.
- Virtual (late bound): always dynamically looked up.
- By default return the receiver (like if we add a return self at the end of any method)
- This ease composition

```
initializePlayers
super initializePlayers.
self players
at: 'tileAction'
put: ( MITileAction director: self )
```

is equivalent to

```
initializePlayers
super initializePlayers.
self players
at: 'tileAction'
put: ( MITileAction director: self )
^ self
```

Methods

yourself is equivalent to yourself ^ self

Typographical convention

When you edit a method, you do not type the class name

crossProduct: aPoint

"Answer a number that is the cross product of the receiver and the argument, aPoint."

^ (x * aPoint y) – (y * aPoint x)

But when we show code you do not know in which class the method is defined.

Point >> crossProduct: aPoint

"Answer a number that is the cross product of the receiver and the argument, aPoint."

```
^ (x * aPoint y) - (y * aPoint x)
```

An Example of Method

```
Point >> dist: aPoint

"Answer the distance between aPoint and the receiver."

| dx dy |

dx := aPoint x - x.

dy := aPoint y - y.

^ (dx * dx + (dy * dy)) sqrt
```

Class Method

To define a class method, press the class side button

× - D Point class>#x:y: •			
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Groups Hierarchy	Class side Comments	History Navigator	V
xi xinteger y: yInteger "Answer an instance of me with coordinates xInteger and yInteger." Aself basicNew setX: xInteger setY: yInteger			
1/4 [1]		Format a	as you read : off W +L

In books and lecture notes we add 'class'

Point class >> x: xInteger y: yInteger

"Answer an instance of me with coordinates xInteger and yInteger."

^self basicNew setX: xInteger setY: yInteger



- Classes are defined inside packages.
- Methods are public and virtual.
- Class methods are just methods of the class.
- By default a method returns the receiver.