



Smalltalk

SI413 – Programming Languages
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Overview

Smalltalk is a programming language based on message passing, dynamic strong typing, reflection, and object orientation.

Features

- Small and uniform language
- Large library of reusable classes
- Advanced development tools

Messages and Methods



Smalltalk vs. C++ vs. Java

	Smalltalk	C++	Java
Object Model	Pure	Hybrid	Hybrid
Garbage Collection	Automatic	Manual	Automatic
Inheritance	Single	Multiple	Single
Types	Dynamic	Static	Static
Reflection	Fully reflective	Introspection	Introspection
Concurrency	Semaphores, Monitors	Some libraries	Monitors
Modules	Categories, Namespaces	Namespaces	Packages

Message: which action to perform

```
aWorkstation accept: aPacket
aMonster eat: aCookie
```

Method: how to carry out the action

```
accept: aPacket
(aPacket isAddressedTo: self)
ifTrue:[
  Transcript show:
  'A packet is accepted by the Workstation ',
self name asString ]
ifFalse: [super accept: aPacket]
```