OBJECTS TYPES IN OBJECT-ORIENTED PROGRAMMING

by

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Object oriented programming,introduced in the 1960's by Simula
has become an important programming framework for large software
systems. Among the attractions of object programming languages is the
potential for software reuse. Programming environments such as the
Smalltalk-80 environment provide programming tools and examples in
a set of pre-defined system classes,similar to a software library.
Programming in such a system consists of directly using existing
classes by creating derived classes by subclasing existing ones.

Subclassing,or inheritance,allows the programmer to define a new
class of objects which inherit the procedures and state descriptions
of an existing class. The programmer may then modify and extend the
behavior of the base class,and add new state information,if desired.
Because state information is static,subclassing state is straightfor-
ward:simply append new state information. However,behaviour is dyna-
mic: the problem of subclassing behavior is a bit more complicated,
since it may not be appropriate to simply concatenate the behaviors
of the superclass and the subclass and execute them sequentially.
This issue is referred to as the method combination problem.