

Chapter 1 - Classes and Objects - identity, state, and behavior

"When you write a program, you provide the instructions to process pieces of data. Data comes in many different types. Depending on the language you are using, you will have different datatypes provided to you. You will probably have ways to create new datatypes. In object-oriented programming, we create new datatypes by creating classes and using the classes to create objects." (Gee page 5)

Object-Oriented Terminology

Definition	Term	Alternate Term	Alternate Term
An instance of a class; a representation in a computer of something of some interest.	Object		
A blueprint for creating objects; a description of the objects which are instances of the class.	Class		
Some data intrinsic to an object that serves to define the "state" of that object.	Attribute	Instance Variable	
The means by which an object is communicated with for the purposes for which the object is intended. Methods correspond to the defined " behaviors " of the object.	Method	Message	Operation
The name given to those kinds of methods that serve to bring new objects into existence and establish their initial state.	Constructor		
The name given to those kinds of methods that provide means for attribute values to be obtained from an object.	Accessor	Getter	Observer
The name given to those kinds of methods that provide means for the attribute values of an object to change, thus changing the state of the object.	Mutator	Setter	
The name given to those kinds of methods that are provided to perform typical and expected operations, normally recognized by name.	Conventional	Standard	

UML - Unified Modeling Language

First Examples

- Student, Professor and College
- Temperature
- SingleUseBottle
- RefillableBottle
- BaseballUmpireClicker
- WrapAroundCounter