

- **double:** For decimal, data type is generally the default choice. As mentioned above, this data type should never be used for precise values.
- **boolean:** The boolean data type has only two possible values: true and false. Use this data type for simple flags that track true/false conditions. This data type represent one bit of information.
- **char:** The char data type is a single 16-bit Unicode character. It has a minimum value of '\u0000' (or 0) and a maximum value of '\uffff' (or 65,535)

Referencias:

<https://docs.oracle.com/javase/tutorial/java/nutsandbolts/datatypes.html>

- Un requerimiento necesita empezar con un verbo

+ Animal id int

INTRODUCTION TO OBJECTS

This chapter will introduce you to the basic concepts of OOP, including an overview of development methods. This chapter is background and supplementary material. Many people do not feel comfortable wading into object-oriented programming without understanding the big picture first. However you will want to come back here eventually to feel in your knowledge so you can understand why objects are important and how to design with them.

The Progress of Abstraction

All programming language provide abstractions. It can be argued that the complexity of the problems you're able to solve is directly related to the kind and quality of abstraction. These languages are big improvements over assembly language, but their primary abstraction still requires you to think in terms of the structure of the computer rather than the structure of the problem you are trying to solve. The programmer must establish the association between the

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machine model and the model of the problem that is actually being solved.

The object-oriented approach goes a step further by providing tools for the programmer to represent elements in the problem space. This representation is general enough that the programmer is not constrained to any particular type of problem. We refer to the elements in the problem space and their representations in the solution space as "objects".

There's still a connection back to the computer: Each object looks quite a bit like a little computer, they all have characteristics and behaviors.

Alan Kay summarized five basic characteristics of Smalltalk, the first successful object-oriented language and one of the languages upon which Java is based. These characteristics represent a future approach to object-oriented programming:

1. Everything is an object: Think of an object as a fancy variable; it stores data, but you can "make requests" to that object, asking it to perform operations on itself.
2. A program is a bunch of objects telling each other what to do by sending messages: To make a request of an object, you "send a message" to that object.
3. Each object has its own memory made up of other objects: Put another way, you create a new kind of object by making a package containing existing objects.
4. Every object has a type: Using the parlance, each object is an instance of a class in which "class" is synonymous with "type".
5. All objects of a particular type can receive the same messages: This is actually a loaded statement, as you will see later, Because an object of type "circle" is also an object of type "shape".

An object has an interface

Aristotle was probably the first to begin a careful study of the concept of type; he spoke of "the class and the class of birds". The idea of