

## Interaction with Chapter 1

The following is a conversation between a computer and a user who is learning the basics of computer science using BlueJ for the first time.

**Computer:** I want you to install BlueJ on your computer. But first, you must download and install a Java 2 Standard Edition Software Development Kit (J2SE SDK).

**Human:** OK, I'm downloading it.

-----Four hours later-----

**Human:** All right, it's finally finished installing. Now what do I do?

**Computer:** First, I want to explain a little bit of the theory to you. When you write a computer program, you are creating an object. An object is part of a class. For example, your cat Fluffy would be an object which is part of the class cats.

**Human:** Oh, so when I'm referring to a cat in general I am referring to a class, and when I'm referring to Fluffy I'm referring to an object?

**Computer:** That is correct. Now open the shapes project. Right click on the Circle class and choose new Circle().

**Human:** What's the difference between circle\_1 and Circle?

**Computer:** Circle is a class because it starts with a capital letter, and circle\_1 is an object because it starts with a lowercase letter. Now I want you to invoke methods on your circle.

**Human:** What does that mean?

**Computer:** It's the way you communicate with objects to make them do something. Right click on circle\_1 and that will show you some operations, such as moveRight, moveDown, makeInvisible and makeVisible. Experiment with those.

**Human:** Wow, I can show and hide the circle, and I can move it!

**Computer:** That's right. Now invoke the moveHorizontal method. A little box will pop up because that method has a parameter that provides information on how far you want to move the circle horizontally. There are different types of parameters. In this case, the parameter is *int*.

**Human:** Huh?

**Computer:** *Int* signifies whole numbers (or integers). Another type of parameter is String, which signifies a section of text that must be enclosed within double quotes.

**Human:** Wow, if I play around with this a little bit more, I can make triangles and squares too! Look, if I move them around and change their sizes I can create a picture of a house and a sun!

**Computer:** OK, now close that project and open up the picture project.

**Human:** Oh, but I was having so much fun!

**Computer:** Well, the Picture class is programmed to make a picture just like the one you just made by hand. Hey, you want to see what this program looks like?

**Human:** Sure.

**Computer:** Now open up the pop-up menu of class Picture, and click on Open Editor. This is called the source code, and it determines the behavior and the structure of each object in this class.

**Human:** Neat. You mean someday I'll learn to write a code like this?

**Computer:** Yes, but we'll save that for later.

**Human:** I'm tired now. I'm going to turn you off.

**Computer:** *Zzzzzzzzzzzzz...*