

JB0220: JAVA OOP: STATEMENTS AND EXPRESSIONS*

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Abstract

Java programs are composed of statements, and statements are constructed from expressions. This module takes a very brief look at Java statements and expressions.

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2 Preface

Java programs are composed of statements, and statements are constructed from expressions. This module takes a very brief look at Java statements and expressions.

3 Introduction

The first step

The first step in learning to use a new programming language is usually to learn the foundation concepts such as variables, types, expressions, flow-of-control, etc. This module concentrates on expressions and statements.

4 Expressions

The hierarchy

Java programs are composed of statements, and statements are constructed from expressions.

An expression is a specific combination of operators and operands, that evaluates to a single value. The operands can be variables, constants, or method calls.

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A method call evaluates to the value returned by the method.

Named constants

Java supports named constants that are implemented through the use of the **final** keyword.

The syntax for creating a named constant in Java is as follows:

NOTE: **Named constants**

```
final float PI = 3.14159;
```

While this is not a constant type, it does produce a value that can be referenced in the program and which cannot be modified.

The **final** keyword prevents the value of **PI** from being modified in this case (p. 2) . You will learn later that there are some other uses for the **final** keyword in Java as well.

Operator precedence

In some cases, the order in which the operations are performed determines the result. You can control the order of evaluation by the use of matching parentheses.

If you don't provide such parentheses, the order will be determined by the precedence of the operators (*you should find and review a table of Java operator precedence*) with the operations having higher precedence being evaluated first.

5 Statements

According to The Java Tutorials ¹ , *"A statement forms a complete unit of execution."*

A statement is constructed by combining one or more expressions into a compound expression and terminating that expression with a semicolon.

6 Further reading

As of November 2012, a good tutorial on this topic is available on the Oracle website titled Expressions, Statements, and Blocks ² .

7 Miscellaneous

This section contains a variety of miscellaneous information.

NOTE: **Housekeeping material**

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¹<http://docs.oracle.com/javase/tutorial/java/nutsandbolts/expressions.html>

²<http://docs.oracle.com/javase/tutorial/java/nutsandbolts/expressions.html>

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