**Chapter 2**

**Knowledge Goals**

* To learn the basic structure of a Java program.
* To learn what an identifier is and understand the rules for creating an identifier.
* To understand the Java standards for naming an identifier.
* To learn what a reserved word (or keyword) is.
* To learn what a statement is.
* To learn what a block is.
* To understand the role of white space between identifiers, keywords, operators, and literals.
* To learn the two types of comments.
* To learn the concept of a data type.
* To learn the eight primitive data types, the differences among them, and understand when to use each data type.
* To learn what a variable is.
* To learn what a literal value is.
* To learn about the assignment operator and understand the purpose of using it.
* To learn what a constant is and how a constant is defined.
* To learn what an expression is.
* To learn the various arithmetic operators and how to use them in an expression.
* To understand the difference between integer division and floatingpoint division.
* To understand the difference between implicit type casting and explicit type casting.
* To learn how the shortcut operators work.

**Skill Goals**

*To be able to:*

* Write a Java program that performs a simple calculation.
* Declare a variable, including deciding what data type it should have.
* Use Java styles when defining identifiers.
* Assign a value to a variable.
* Write line and block comments.
* Define and assign a value to a constant.
* Write arithmetic expressions using the operators +, -, \*, /, and %.
* Insert tabs and newline characters into a String literal.
* Use explicit type casting.
* Decide when integer division should be used and when floatingpoint division should be used.
* Use explicit type casting to force floating-point division when needed.
* Write statements using the shortcut operators.