**Name:** Click or tap here to enter text.

**Chapter 1: Introduction to Computers and Java Programming**

What does SDK stand for?

Software Development Kit

What does SE stand for in Java SE?

Standard Edition

What does EE stand for in Java EE?

Enterprise Edition

What does ME stand for in Java ME?

Micro Edition

What is Moore’s Law?

Every year or two, the capacities of computers have approximately

doubled without any increase in price

What is a data hierarchy?

Data items processed by computers that become larger and more

complex in structure as we progress from bits to characters to fields, and so on

What are the five levels of a data hierarchy?

1. Bits

2. Characters

3. Fields

4. Records

5. Files

Every computer has the following six sections:

1. Input Unit

2. Output Unit

3. Memory Unit

4. Arithmetic and Logic Unit (ALU)

5. Central Processing Unit (CPU)

6. Secondary Storage Unit

What are the three general types of programming languages?

1. Machine Languages

2. Assembly Languages

3. High-Level Languages

What is an assembler?

Translator programs for assembly to machine

What is a compiler?

Translator programs for high-level to machine

What is an interpreter?

Programs to execute high-level language programs directly without the delay of compilation (although slower than programs that are compiled)

“Almost any noun can be can be reasonably represented as a software object in terms of attributes and behaviors.”

“Performing a task in a program requires a method .”

“A program unit called a class houses the set of method that perform that class’s tasks.”

What is instantiation?

Building an object of a class before a program can perform the tasks that

the class’s methods define

What is software reuse?

The ability to reuse software when building new classes and programs to save time and effort

What is a method call?

Tells a method of the object to perform its task

What is an instance variable?

Variables that specify attributes

What is encapsulation?

Wrapping attributes and behaviors into objects

What is information hiding?

Allowing objects to communicate with one another but not know how other objects are implemented

What is inheritance?

A new class absorbing the chracteristics of an existing class

What is an operating system?

Software systems that make using computers more convenient for users

What is a kernel?

Software that contains the core componetns of the operating system

What company created the Java language?

Sun Microsystems

What was the original key goal of Java?

Write programs that will run on a great variety of computer systems and computer-control devices

What happened in the mid-1990s to encourage the development of Java programs?

The internet popularity explosion

What are the Java APIs?

Collections of existing classes and methods in the Java class libraries

What does API stand for?

Application Programming Interfaces

What extension do Java files end with?

.java

What does IDE stand for?

Integrated development environments

What does the “javac” program do?

Command to compile a program

The Javac program produces a file with what extension?

.class

What are bytecodes?

Represent the tasks to execute in the execution phase

What does JVM stand for?

Java Virtual Machine

What does the JVM do?

Execute bytecodes

What does HTML stand for?

HyperText Markup Language

What are the five steps in creating a Java program

**and what is done in each step?**

Step 1: Creating a program

Consists of editing a file with an editor program and saving the file to a secondary storage device.

Step 2: Compiling a Java program into bytecodes

Use the command javac to compile a program into a Java file

Step 3: Loading a program into memory

Takes class files containing the program’s bytecodes and transfers them to primary memory.

Step 4: Bytecode Verification

Bytecode verifier examines their bytecodes to ensure that they’re valid and do not violate Java’s security restrictions.

Step 5: Execution

JVM executes the program’s bytecodes, performing the actions specified by the program.