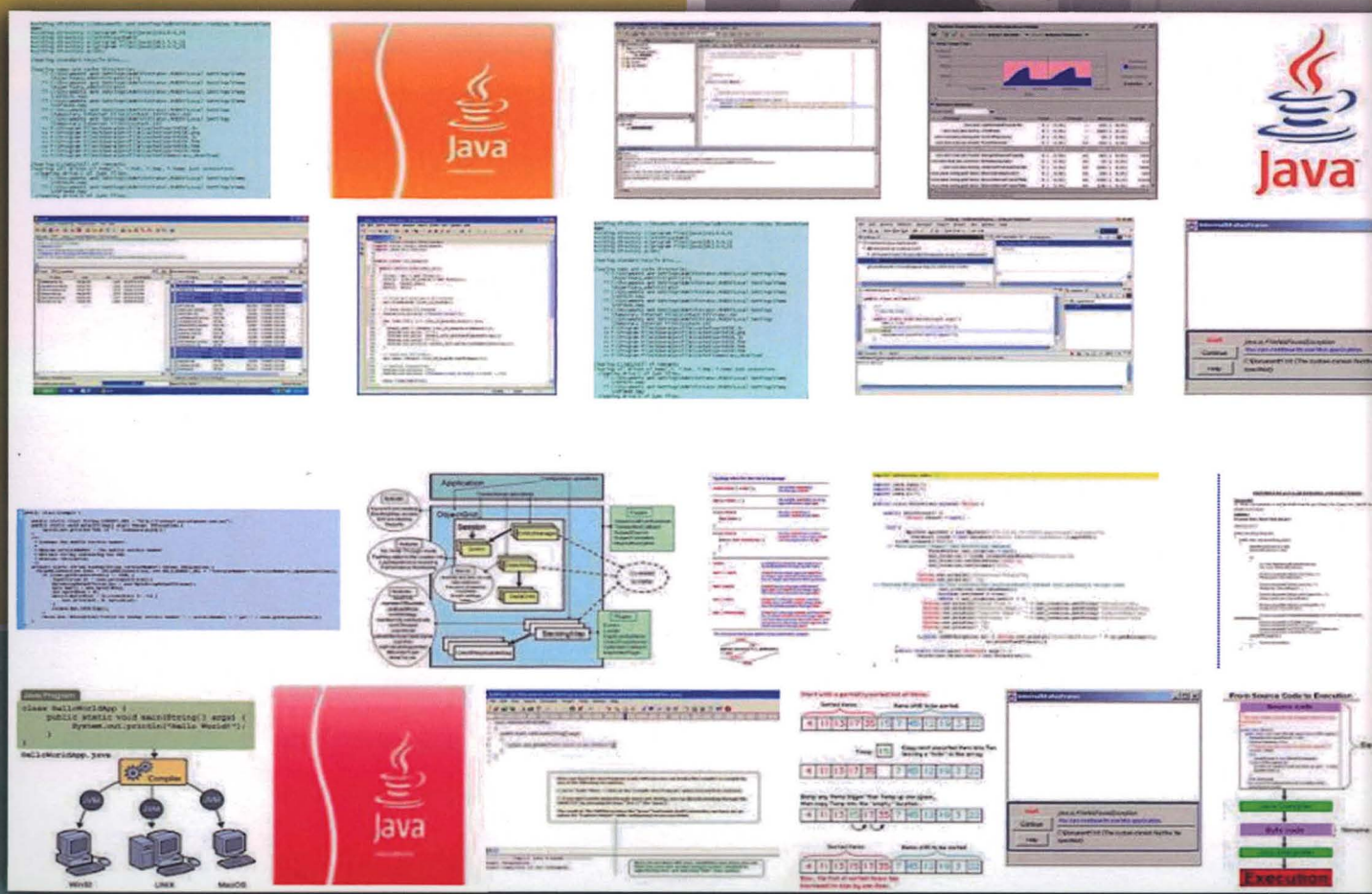
Java Programming Lab Manual

Asadullah Shah Zeeshan Bhatti



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Chapter 29

Inner Classes

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Abstract

Inner or nested classes means when a class is defined within the body of another class. These are very powerful means of controlling how data is represented and used in a program. In this chapter the students will learn the basics of using nested classes and how they can be instantiated. Java uses another type of classes that are called Anonymous classes, means class without a name and they are also discussed in this chapter.

29.1 Inner class or Nested class

An inner or nested classes means class within a class. The key attributes of inner call are:

- An Inner class can be *public, private, protected, static* or Non-Static.
- To create an object of inner class, two steps are needed:
    - The Inner class object cannot be created until the outer class object is created or an outer class is loaded into the memory.
    - The Inner class object will be created in correspondence with the outer class object.

      Outer out = new Outer();

      Outer.Inner in = out.newInner();

- Zero or more objects can be created on the basis of single Outer object for example:

```
class Outer{
```