## Learning JAVA

### The Start Program

1. In a DOS window, create file HelloJava.java file with the following contents:  
   public class HelloJavaApp {  
    public static void main( String args[] ) {  
    System.out.println("Hello Java!");  
    }  
   }
2. C:\> javac HelloJava.java – Will create HelloJava.class file in the same folder
3. C:\> java -cp . HelloJava – Executes the program, output:  
   Hello Java!

### Javadoc Comments

/\*\*  
Class description  
 \*/  
public class MyClass {  
}

The above comment before the class declaration will be parsed by Javadoc command to generate java documentations automatically.

### Using Underscore Characters in Numeric Literals

Example:

int i = 123\_456; // The same as int i=123456;

### private and public classes and interfaces

A class/interface definition without the public keyword is private.

Public class/interface must be defined in a separate file with the same name. For example, a class defined as “public class MyClass { … }” must be placed in a file named MyClass.java.

### Arrays – Copy, sort, compare

To copy an array :  
 System.copyarray(src\_array, start, dest\_array, start, number);

To sort a class :  
 import java.util.Arrays;  
 class MyClass implements Comparable<MyClass> {  
 …  
 public int compareTo(MyClass obj) {  
 …  
 }  
 }

MyClass[] objs = new MyClass[10];  
Arrays.sort(objs);

To sort by a Comparator:  
 import java.util.Comparator;  
 import java.util.Arrays;  
 public class MyClass {  
 …  
 public static Comparator<MyClass> CompareClass =  
 new Comparator<MyClass>( ) {  
 public int compare(MyClass s1, MyClass s2) {  
 return n; // - if s1<s2, 0 if s1=s2, + if s1>s2  
 }  
 };  
 }  
 Arrays.sort(objs, MyClass.CompareClass);

### instanceof

instanceof is an operator that returns true if the object is an instance of the specified type in the the aame class hirachy. This does not check if it is an instance of a particular class. For example,

class Class1 { }  
class Class2 extends Class2 { }  
class Class3 { }

obj1 = new Class1();  
obj2 = new Class2();  
obj3 = new Class3();  
obj1 instanceof Class1; // true  
obj2 instanceof Class2; // true  
obj2 instanceof Class1; // true  
obj1 instanceof Class2; // false  
obj3 instanceof Class1; // Compiler error