Chapter 1
Introduction

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Summary

In this chapter we are going to introduce the Java programming language, which offers a multi-platform programming tool covering systems such as Windows, Linux, Mac, Android, Sun, and embedded systems, among others.

Java Desktop Example 1: Ex01ConsolePrintln.java

```java
public class Ex01ConsolePrintln{

    public static void main(String args[]){
        System.out.println("Hello: Example 01 Console Println");
    }
}
```

Java Desktop Example 2: Ex02Loop.java

```java
public class Ex02Loop{

    public static void main(String args[]){
        System.out.println("Example 02 Loop");
        for (int i=0; i<10; i++){
            System.out.println("Iteration="+i);
        }
    }
}
```

Java Desktop Example 3: Ex03While.java

```java
public class Ex03While{

    public static void main(String args[]){
        System.out.println("Example 03 While");
        Boolean exit = false;
        int i = 0;
        while (!exit){
            System.out.println("Iteration="+i);
            if (i==10){
                exit = true;
            }
            i++;
        }
    }
}
```

Java Desktop Example 4: Ex04IfElse.java

```java
public class Ex04IfElse{

    public static void main(String args[]){
        System.out.println("Example 04 IfElse");
        Boolean exit = false;
        int i = 0;
        while (!exit){
            System.out.println("Iteration="+i);

            if (i % 2 == 0){
                System.out.println(i+" is even.");
            }else{
                System.out.println(i+" is odd.");
            }

            if (i==10){
                exit = true;
            }
            i++;
        }
    }
}
```

Java Desktop Example 5: Ex05Threads.java

```java
public class Ex05Threads{

    public static void main(String args[]){
        System.out.println("Example 04 IfElse");
        ASimpleThread sThread1 = new ASimpleThread(1);
        ASimpleThread sThread2 = new ASimpleThread(2);
        sThread1.start();
        //sThread1.join();
        sThread2.start();
        //sThread2.join();
    }
}
```

Java Desktop Example 5: Ex05Threads.java

```java
class ASimpleThread extends Thread {

    private int id = -1;

    public ASimpleThread(int id){
        this.id = id;
    }

    public void run(){
        Boolean exit = false;
        int i = 0;
        while (!exit){
            if (i % 2 == 0){
                System.out.println("ASimpleThread "+id+":Iteration="+i+ " is even");
            }else{
                System.out.println("ASimpleThread "+id+":Iteration="+i+ " is odd");
            }

            if (i==10){
                exit = true;
            }
            i++;
        }
    }
}
```

Java Desktop Example 6: Ex06JFrame.java

```java
import javax.swing.*;
import java.awt.event.*;

public class Ex06JFrame{
    public static JFrame mainWindow;
    public static JButton mainButton;
    public static void main(String args[]){
        mainWindow = new JFrame("Ex06JFrame");
        mainButton = new JButton();
        mainButton.setText("Launch Threads");
        mainButton.addActionListener(new ActionListener(){
          public void actionPerformed(ActionEvent e)
          {
            System.out.println("Main Button Pressed. Launching Threads");
            ASimpleThread sThread1 = new ASimpleThread(1);
            ASimpleThread sThread2 = new ASimpleThread(2);
            sThread1.start();
            //sThread1.join();
            sThread2.start();
            //sThread2.join();
          }
        });
        mainWindow.add(mainButton);
        mainWindow.pack();
        mainWindow.setVisible(true);
    }
}
```

Java Desktop Example 6: Ex05JFrame.java

```java
class ASimpleThread extends Thread {

    private int id = -1;

    public ASimpleThread(int id){
        this.id = id;
    }

    public void run(){
        Boolean exit = false;
        int i = 0;
        while (!exit){
            if (i % 2 == 0){
                System.out.println("ASimpleThread "+id+":Iteration="+i+ " is even");
            }else{
                System.out.println("ASimpleThread "+id+":Iteration="+i+ " is odd");
            }

            if (i==10){
                exit = true;
            }
            i++;
        }
    }
}
```

Conclusion

It is important to remember that java compiles trough the javac command and runs using the java interpreter. The file that is running (i.e. extension .class) is portable and can be run in any desktop platform.
It is possible to run java code from a webserver (e.g. Applet) or an application server (e.g. JBoss).