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About Softpro

A Company Founded By Technocrats from IIT Kanpur& IET Lucknow

Estd : 2004

2004

Softpro India Computer Technologies (P) Ltd

Software Development, Research & Automation

2008

Softpro Learning Center

Training & Learning Division of the Company

2012

Softpro Foods (P) Limited

Deals into Agro Products

2014

Softpro Technologies, Malawi (Africa)

Overseas Unit of the company dealing in development & training

Training On
Java

LECTURE – 1 : TOPICS

- Java, An Introduction
- Execution Scenario of Java
- JDK, JRE and JVM
- Technologies Dependent on Java
- Applications, which can be Developed by Using Java
- Java Program Structure
- First Java Program
- Taking Inputs In Java Using Scanner/ Bufferedreader
- Decision Controls In Java.

Java, An Introduction

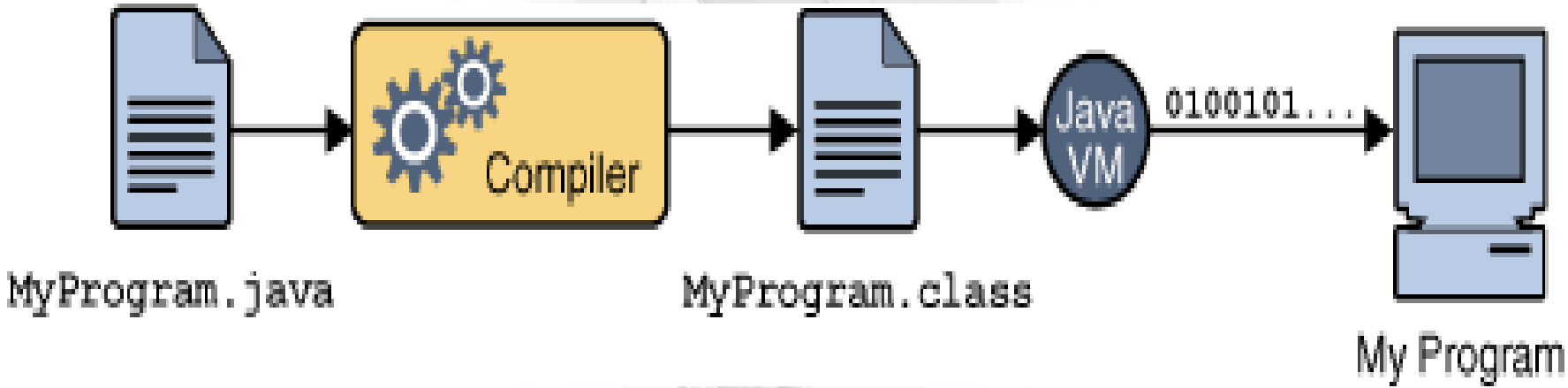
Author	James Gosling
Vendor	Sun Micro System (which has since merged into Oracle Corporation)
Project Name	Green Project
Type	Open Source & Free Software
Initial Name	OAK Language
Present Name	Java
Extensions	.java & .class & .jar
Operating System	Multi Operating System

Java, An Introduction (cont..)

Implementation Language	C, CPP.....
Symbol	Coffee Cup With Saucer
Objective	To Develop Web Applications
SUN	Stanford Universally Network
Slogan/Motto	WORA(Write Once Run Anywhere)
Initial version	Jdk 1.0 (Java Development Kit)
Present version	Java 14

Execution Scenario Of Java

In the java programming language, all the source code is first written in plain text files ending with extension .java Those source files are then compiled into .class files by the javac compiler. A class file does not contain code that is native to your preprocessor, it instead contain – bytecodes. The machine language of java (Java VM) . The java launcher tool then run your application with an instance of Java virtual machine.



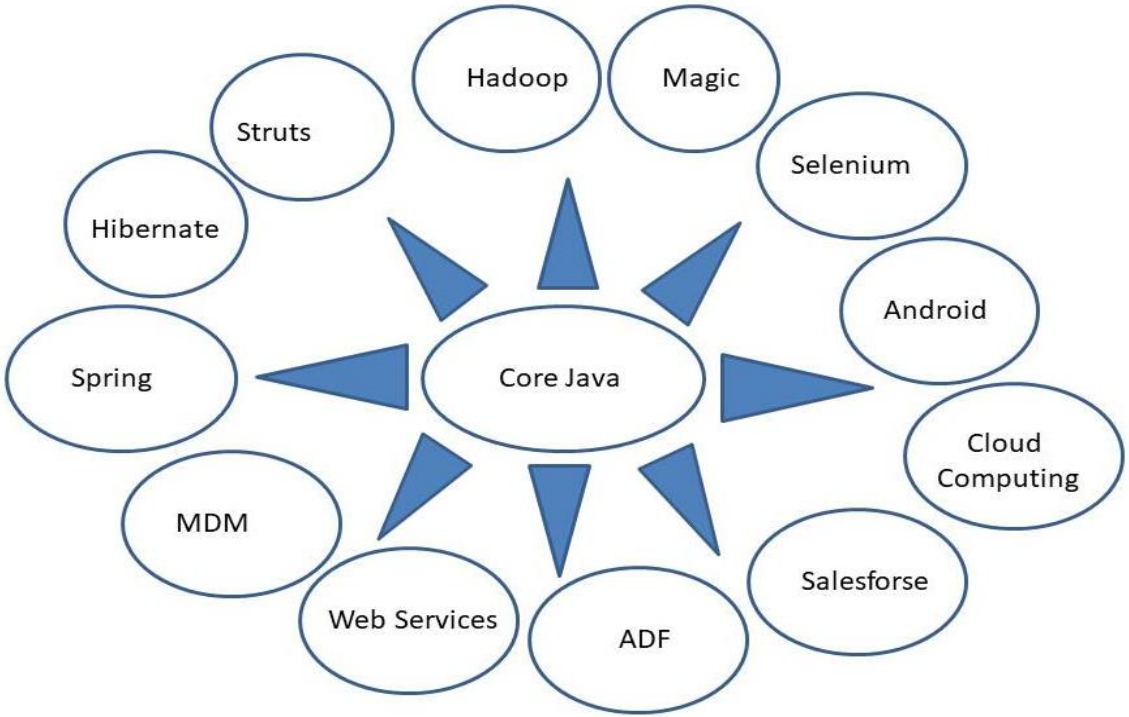
JDK, JRE & JVM

Java Development Kit:- The Java Development Kit (JDK) is a software development environment used for developing Java applications and applets. It includes the Java Runtime Environment (JRE), an interpreter/ loader (Java), a compiler (javac), an archiver (jar), a documentation generator (Javadoc) and other tools needed in Java development.

Java Runtime Environment:- JRE stands for **"Java Runtime Environment"** and may also be written as **"Java RTE."** The Java Runtime Environment provides the minimum requirements for executing a Java application; it consists of the Java Virtual Machine (JVM), core classes, and supporting files.

Java Virtual Machine:- JVM is a **specification** where working of Java Virtual Machine is specified. But implementation provider is independent to choose the algorithm. Its implementation has been provided by Sun and other companies.

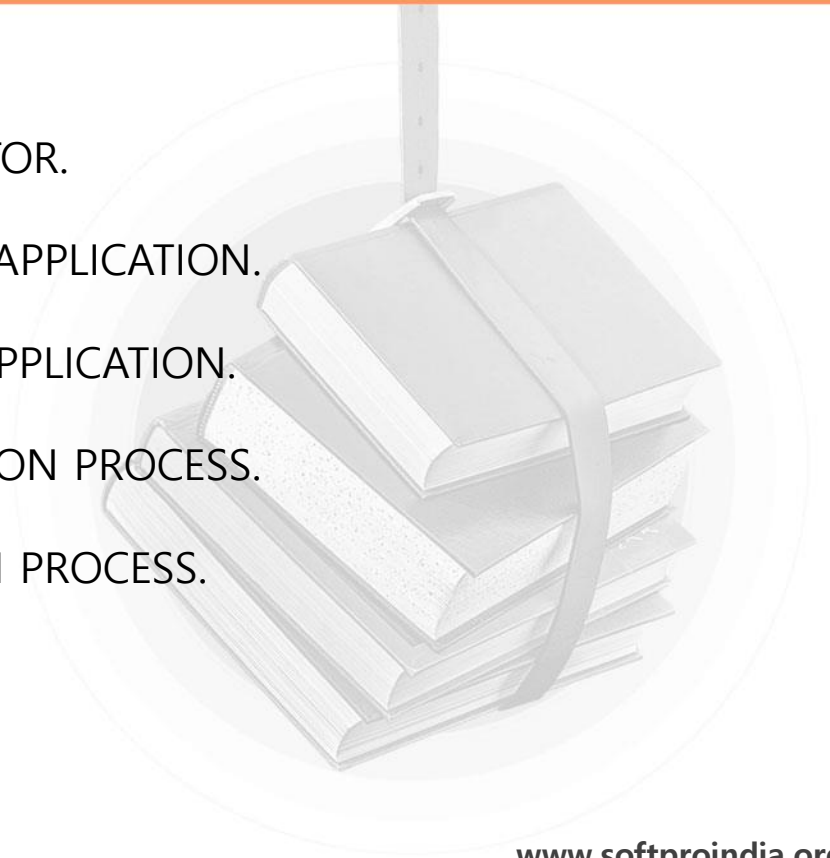
Technologies Dependent On Java



Applications, which can be Developed by Using Java

1) Java is used to develop Desktop Applications such as MediaPlayer, Antivirus etc.
2) Java is used to develop Web Applications such as irctc.co.in etc.
3) Java is used to develop Enterprise Application such as Banking Applications like Finacle.
4) Java is used to develop Mobile Applications.
5) Java is used to develop Embedded System.
6) Java is used to develop Smartcards.
7) Java is used to develop Robotics.
8) Java is used to develop Games .....etc.

Steps To Design A First Application



STEP-1:- SELECT EDITOR.

STEP-2:- WRITE THE APPLICATION.

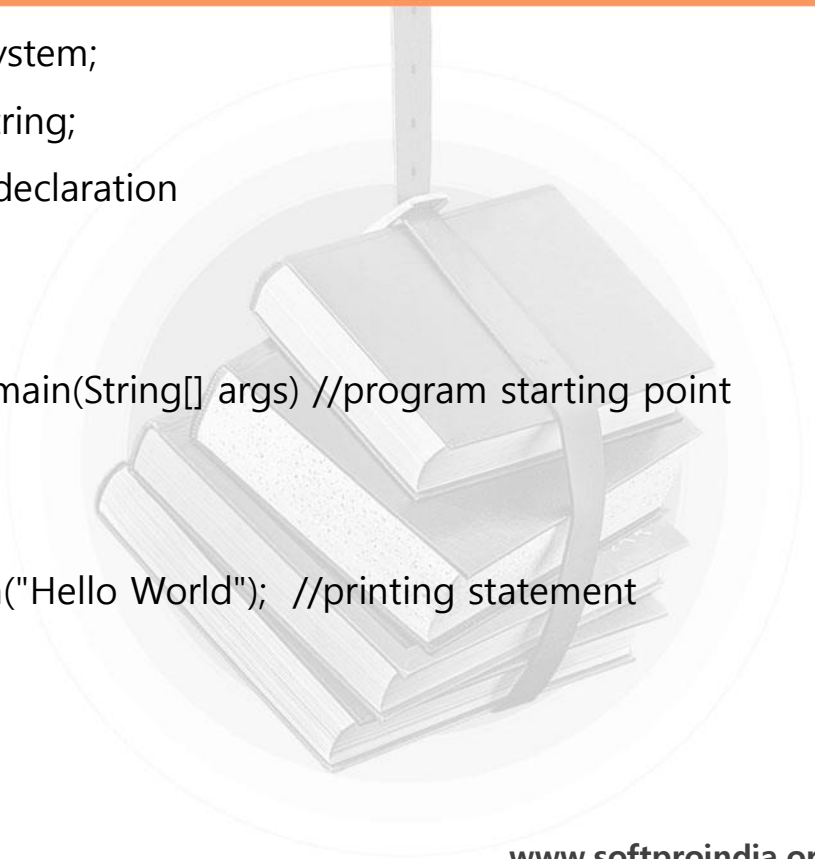
STEP-3:- SAVE THE APPLICATION.

STEP-4:- COMPILATION PROCESS.

STEP-5:- EXECUTION PROCESS.

Example Application

```
import java.lang.System;
import java.lang.String;
 class Test //class declaration
{
 //class starts
public static void main(String[] args) //program starting point
{
 //main starts
 System.out.println("Hello World");  //printing statement
} //main ends
} //class ends
```



Taking Input From User Using Scanner

Scanner class present in **java.util** package and it is introduced in 1.5 version.

First we create the object of Scanner class as given below:-

Scanner s=new Scanner(System.in);

To get int value ----> s.nextInt()

To get float value ---> s.nextFloat()

To get byte value ---> s.nextByte()

To get String value ---> s.next()

To get single line ---> s.nextLine()

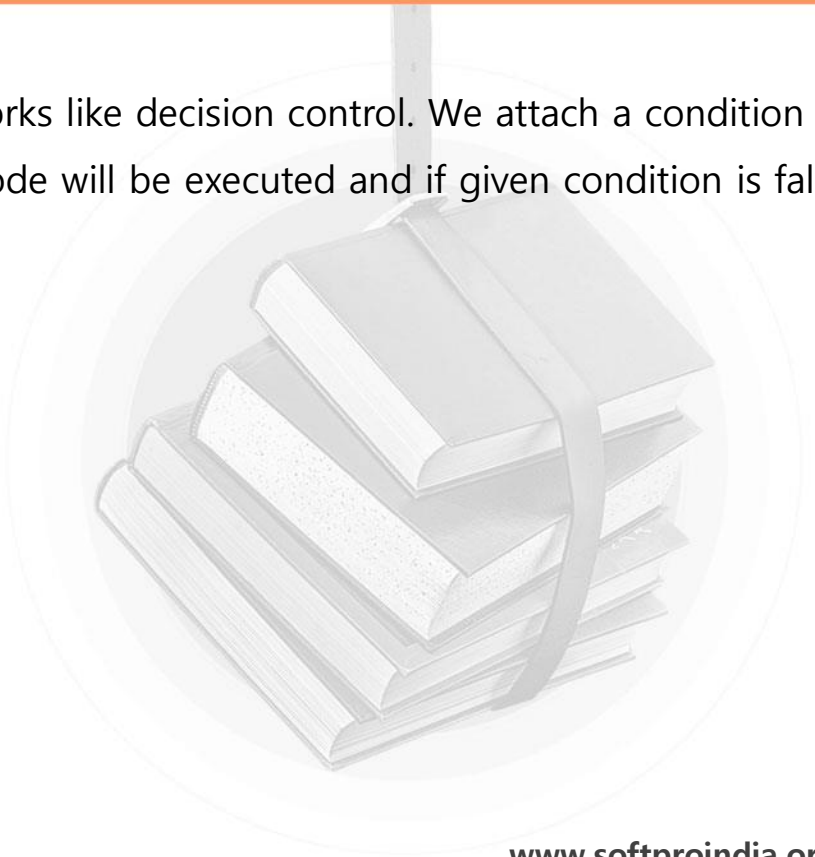
To close the input stream ---> s.close()

Decision Controls In Java (If Statement)

If is a keyword which works like decision control. We attach a condition with if statement. If given condition is true then code will be executed and if given condition is false then it does nothing.

Syntax:-

```
if(condition)
{
//code
}
```



If - Else Statement

If-else is the variation of if statement. We attach a condition with if statement. If given condition is true then if block code will be executed and if given condition is false then else block code will be executed.

Syntax:-

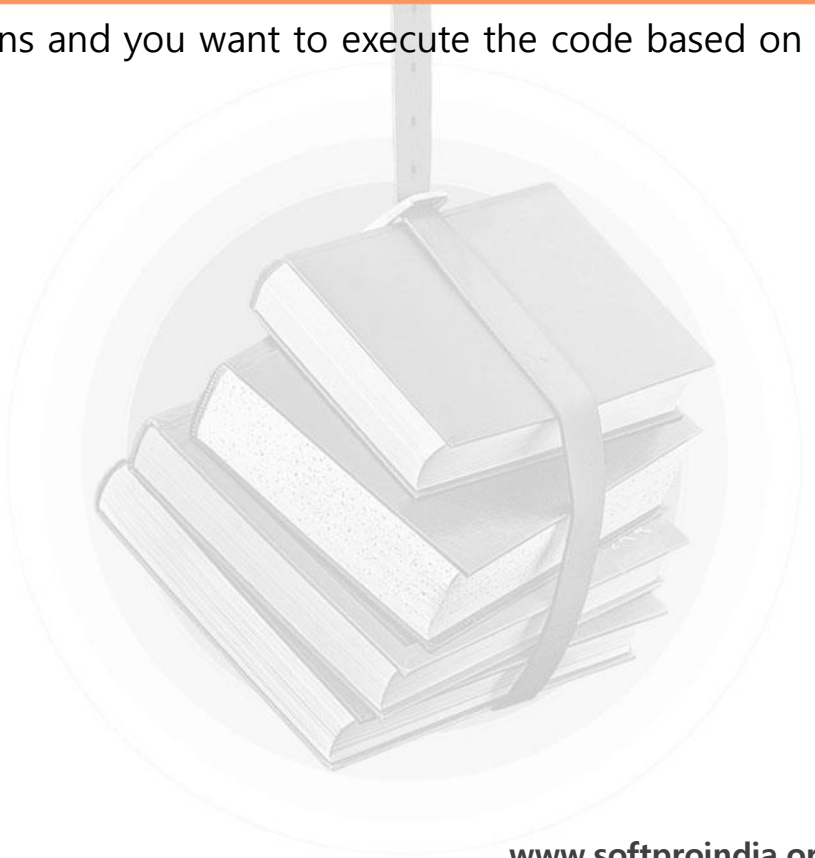
```
if(condition)
{
//If block code
}
else
{
//Else block code
}
```

Ladder If - Else Statement

If you have multiple conditions and you want to execute the code based on those conditions then you can use ladder if – else .

Syntax:-

```
if(condition)
{
//code1
}
else if
{
//code2
}
else
{
//code3
}
```

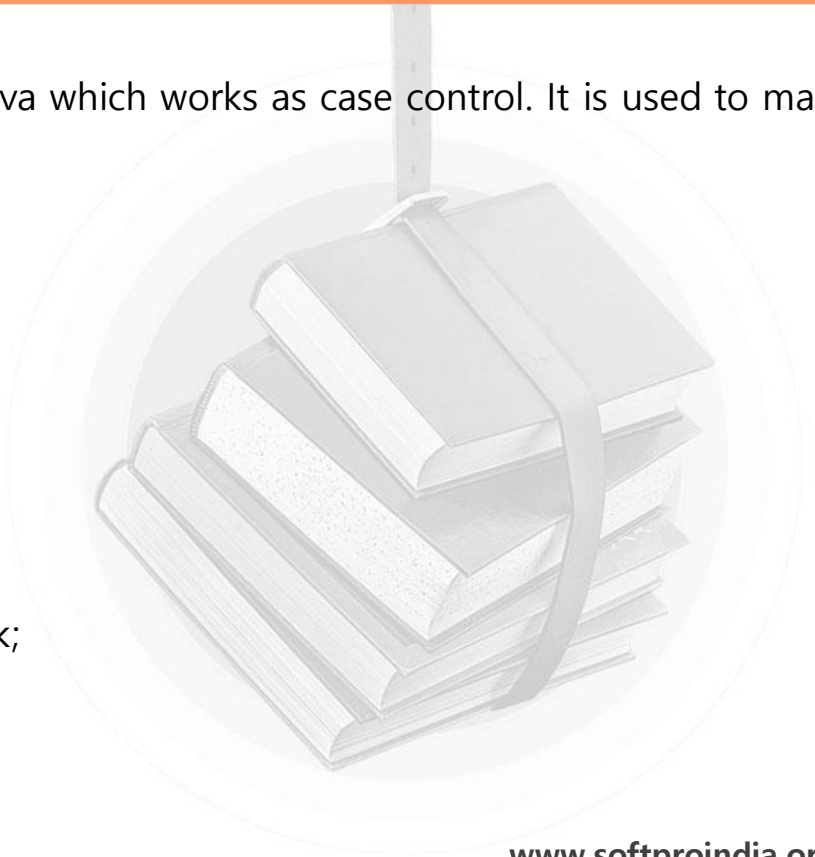


Switch Statement

Switch is a keyword in java which works as case control. It is used to make menu based program.

Syntax:-

```
switch(argument)
{
case     label1 :
 sop(" ");break;
 case    label2   :
sop(" ");break;
|
|
 default :  sop("   "); break;
 }
```



THANK YOU