



JAVA Programming



Prepared By: Hetal Bhaidasna
Assistant Professor & HOD
Computer Engineering
PIET-DS



UNIT-1

Introduction to Java

Difference between C++ & JAVA

C++	JAVA
C++ is Platform Dependent.	Java is a Platform Independent.
C++ support Pointer .	Java does not support Pointer .
C++ have preprocessor.	Java does not have preprocessor
C++ is compiled language.	Java is interpreted language.
C++ Supports Operator Overloading.	Java does not Supports Operator Overloading.
C++ is not portable.	Java is portable.
C++ does not supports garbage collection.	Java supports garbage collection.
C++ supports multiple inheritance.	Java does not support multiple inheritance.

Features of Java

- Java is **Simple**
- Java is **Object-oriented**
- Java is **Distributed**
- Java is **Interpreted**
- Java is **Robust**
- Java is **Portable**
- Java is **Multithreaded**
- Java is **Dynamic**
- Java is **Secure**

Cont...

Java is Simple:

- Derived from C(syntax) & C++(features)
- Easy to write & Compile

Cont ...

Java is Object-oriented:

- *Java supports all features of OOP:*

- Class
- Object
- Inheritance
- Polymorphism
- Encapsulation

Cont ...

- **Java is Distributed:**
 - Java supports TCP/IP & UDP Protocol.
 - RMI
 - Support for Internet communication primitives

Cont ...

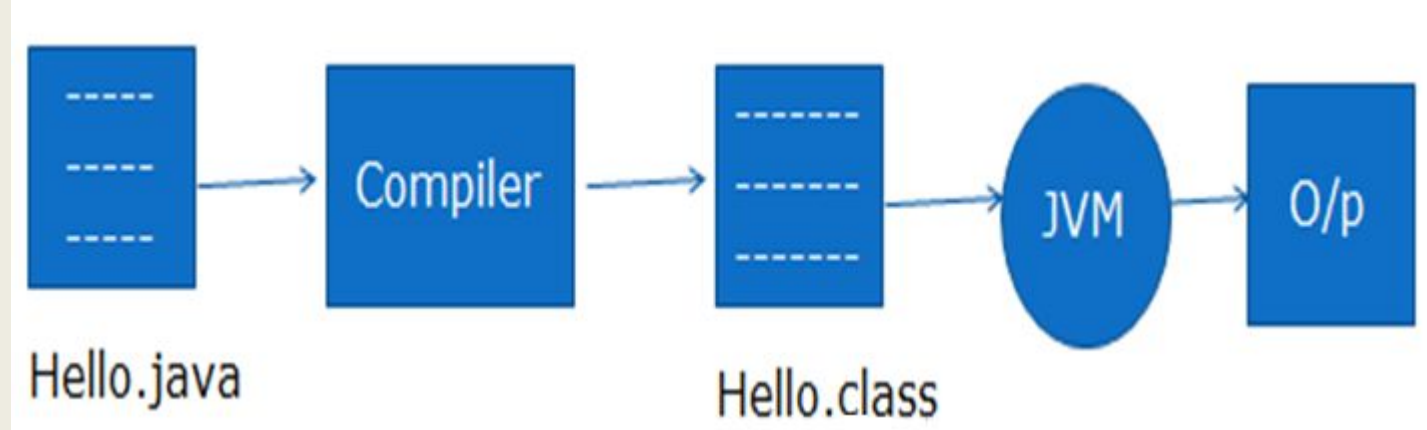
- **Java is Interpreted:**

- Compiling the java source code into an intermediate representation called BYTECODE.
- It can run on every platform having Java Virtual Machine installed

Cont ...

- Java is Portable:

□ Write Ones Run Anywhere



Cont ...

- **Java is Robust:**

- Strictly typed language
- Code checking at compile time as well as run time
- Memory management using the Garbage Collector
 - *Automatic de-allocation of memory with unused Objects*
- Exception Handling
 - *Prevent program from crashing due to runtime error*

Cont ...

- **Java is Multithreaded:**

- Multithreaded means handling multiple tasks simultaneous.
- Multithreading means a single program having different threads executing independently at the same time.

Cont ...

- **Java is Dynamic:**

- By connecting to the Internet, a user immediately has access to thousands of programs and other computers.
- During the execution of a program, Java can dynamically load classes that it requires either from the local hard drive, from another computer on the local area network or from a computer somewhere on the Internet.

Cont ...

- **Java is Secure:**

- No Pointers
- Automatic memory Management
- Compile Time Checking
- Exception Handling
- Byte Code Verifier
- Java Class Loader



Thank you