1. **Java** is a general purpose Programming Language
2. **It** was created by James Gosling, and it was released in 1996
3. **Java** Current vendor is "Oracle Corporation" / before "Sun Microsystems"
4. **Java** will run in different operating sysyems like Windows, Linux, Mac etc..
5. **Java** Syntax is quite easy to understand
6. **Java** programs are compiled for its execution
7. **Java** can be considered as both interpreted and compiled because java source code
8. is first compiled into a byte code file.
9. **This** byte code file runs on the Java Virtual Machine(JVM) which is usually a Interpreter

Type	Open Source & Free Software
Initial Name	Oak
Present Name	Java
Slogan	WORA
Objective	Web Applications
Project	Green

Note:

Interpreted:

1.   Interpreted is S/w runs the code line by line for the execution

Compiler:

1.   Compiler is a S/w it converts the source code to byte code for the execution
2.   If we are having any errors it will through error at runtime
3.   If there are no errors then entire program executes at a time.

Java Editions

01 J2SE(Standard Edition)   Desktop Application
02 J2EE(Enterprise Edition)   Web Applications
03 J2ME(Micro Edition)   Mobile Phones [Not using now bcoz we are using Android]

Note: Whats app is available in J2ME(Nokia mobiles) and Android

Understand use of Java programming languages

[Web Applications, Desktop Applications, Database Engines, Games, Bigdata Technologies]
[Scientific Application, Mobile Application, Embedded Systems, Servers]

Database Engines : Apache Cassandra
: HSQLDB
: Oracle SQL Developer

Software : Hadoop (Used for Storing the data)
: Jenkins(Automation Server)

Games : Minecraft Trail (Developed by Mojang Studios)

Ide's : Eclipse, Java, Intellij IDEA, Android Studio

Web Applications : Ecommerce Applications

Server : Tomcat, JBoss, Web Logic

Embedded Systems : SIM Card (Subscriber identity/identifictaion module)

Java Versions

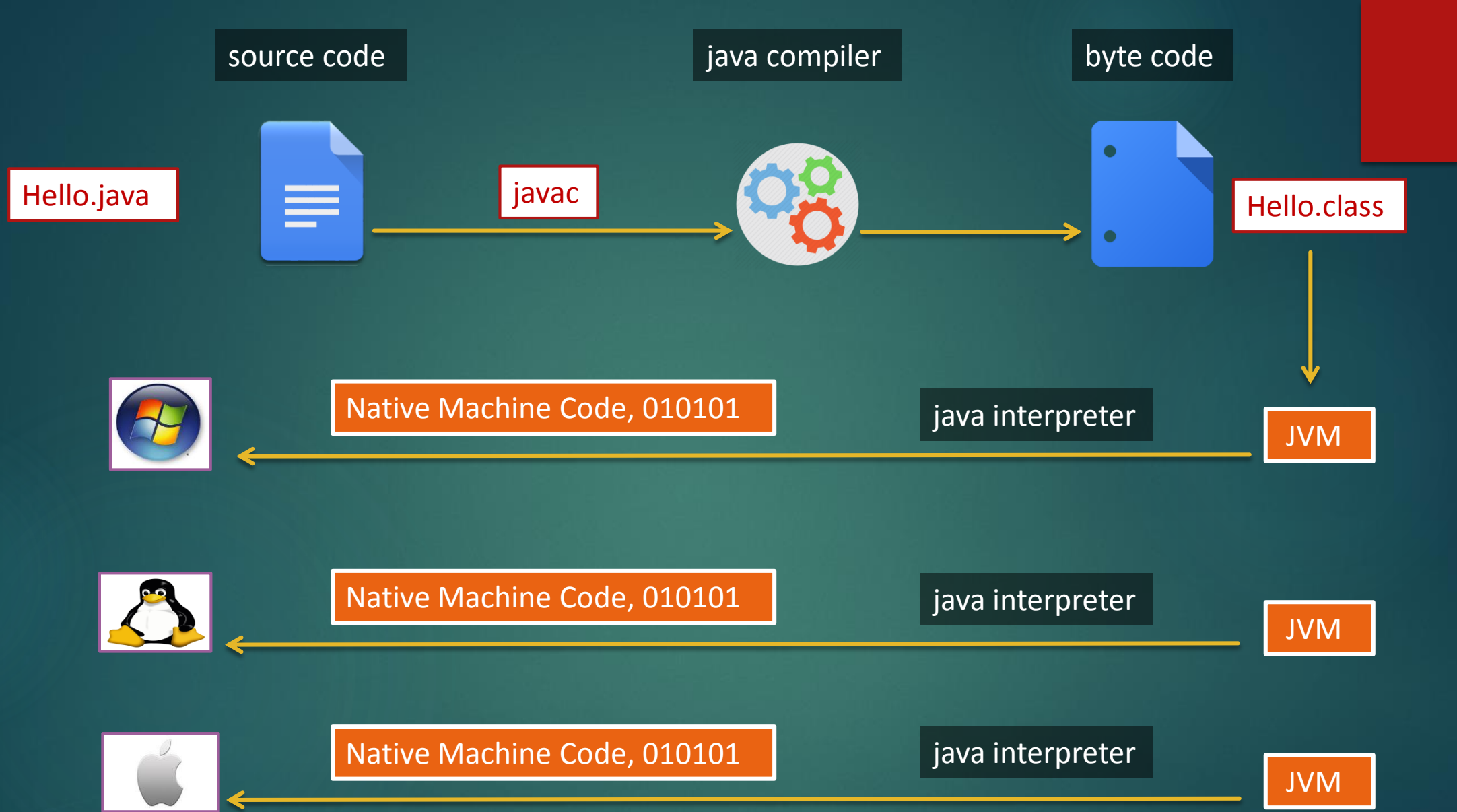|	
JDK 1.0	January 23, 1996
JDK 1.1	February 19, 1997
J2SE 1.2	December 8, 1998
J2SE 1.3	May 8, 2000
J2SE 1.4	February 6, 2002
J2SE 5.0	September 30, 2004
Java SE 6	December 11, 2006
Java SE 7	July 28, 2011
Java SE 8	March 18, 2014
Java SE 9	September 21, 2017
Java SE 10	March 20, 2018
Java SE 11	September 25, 2018
Java SE 12	March 19, 2019
Java SE 13	September 17, 2019
Java SE 14, 15, 16, 17	

Keywords: There are 50 keywords currently defined in the Java Language.
And we have 3 Reserved Literals.

Primitive Types (8)	Control Statements (11)	Error Handling (6)	Access Modifiers (3)	Non Access Modifiers (6)	OOPS (7)
int	if	try	private	static	class
byte	else	catch	protected	final	Implements
short	while	throw	public	volatile	extends
long	for	throws		transient	interface
float	do	finally		abstract	new
double	break	assert (1.4)		synchronized	super
char	continue				this
boolean	return				
	switch				
	default				
	case				

Other Keywords (6)	Return Type (1)	Un used (2)	Reserved Literals
strictfp (1.2)	void	goto	true
import		const	false
package			null
native			
instanceof			
enum			

Note:

✓ These Keywords cannot be used as Identifiers.
✓ They cannot be used as Names for a Varibale, Class, Method.
✓ const and goto Keywords are reserved but not used.

Static Programming

C and C++ , Java
Memory Allocation for Primitive Data types at Compilation time.
Before running the program if the data type of each variable is checked and verified
then it's static type programming language

Dynamic Programming

Python, PHP, Ruby
Memory Allocation for Primitive Data types at Runtime time.
During runtime, if there is an invalid assignment of a variable
that violates its data type then an error is given for that.

Note:
Java is a Statically-Typed Programming Language.
It means, all variables must be declared before its use.
That is why we need to declare variable's type and name.

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