

Αντικειμενοστρεφής Προγραμματισμός (Object-Oriented Programming)

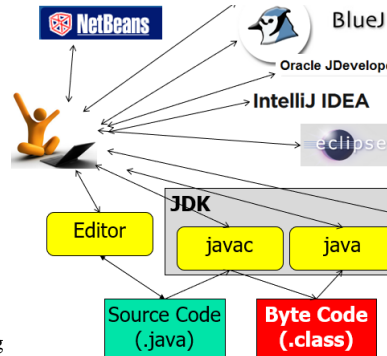
(CEID_NNY106)

Java Technology Introduction

Java
High-level programming
language



Kleanthis Thramboulidis
Prof. of Software and System Engineering
University of Patras
<https://sites.google.com/site/thramboulidiskleanthis/>



Java is a high-level, class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible.
[Wikipedia](#)

Designed by: James Gosling

First appeared: May 23, 1995; 27 years ago

Paradigm: Multi-paradigm: generic, object-oriented (class-based), functional, imperative, reflective, concurrent

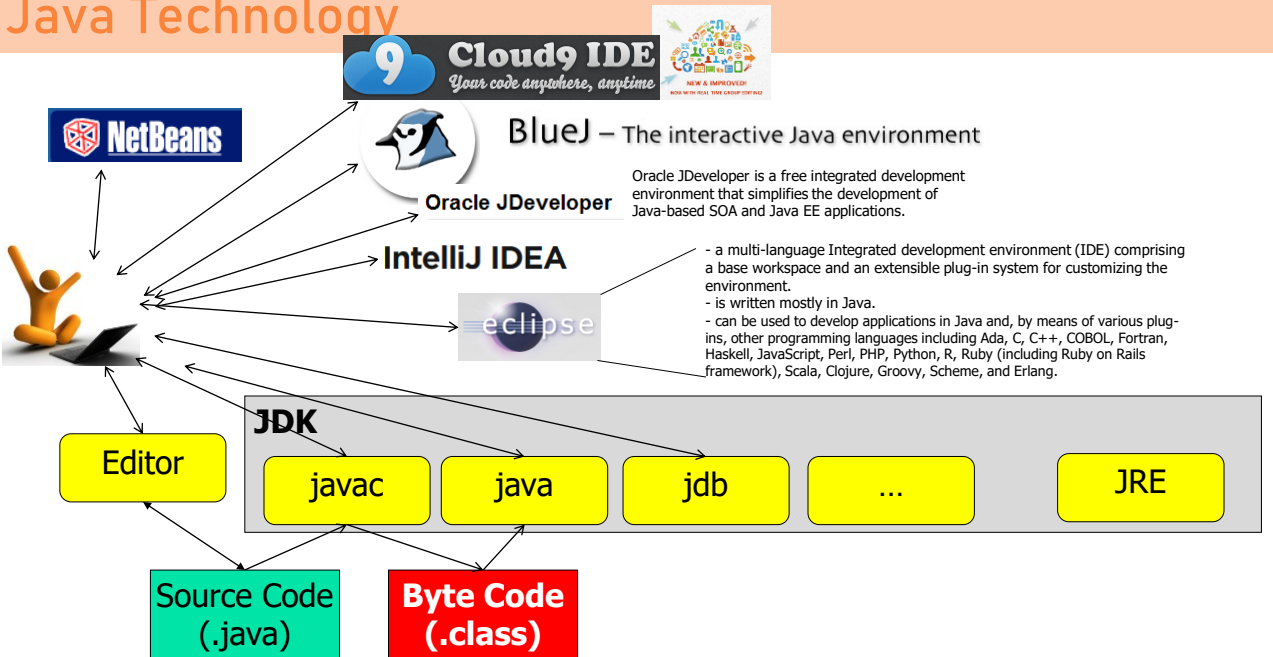
Οργάνωση Διάλεξης

- **Java Technology**
- Απλά Προγράμματα σε Java
 - Hello World!
 - Echo
- Java Development Kit (JDK)
 - Java Virtual Machine (JVM)
 - javac
 - java
 - javadoc
 - jar
 - jdb

Java Technology

- Με τον όρο τεχνολογία Java αναφερόμαστε:
 - στη γλώσσα προγραμματισμού, και
 - στην πλατφόρμα λογισμικού που είναι η υποδομή για ανάπτυξη προγραμμάτων με χρήση της γλώσσας.
- Java Development Kit (**JDK**)
 - **Javac**: Ο μεταγλωττιστής (compiler) της Java
 - **Java**: Ο διερμηνευτής (interpreter) της Java
 - Java Runtime Environment (**JRE**): Java Virtual Machine (JVM) + class libraries

Java Technology



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Hello World σε Java

```

/*****
* File name : HelloWorld.java
* Compile with javac:      javac HelloWorld.java
* Execute with java:      java HelloWorld
*
* Developer's Comments
* The HelloWorld class implements an application that simply
* displays "Hello World!" to the standard output.
*****/

```

```

public class HelloWorld {

    public static void main(String[] args) {
        System.out.println("Hello, World!");
    }

}

```

Δραστηριότητα 3.2 Το πρόγραμμα HelloWorld

Αναπτύξτε ένα πρόγραμμα σε Java που θα τυπώνει στην οθόνη τη φράση «Hello World!».

Echo example program

The screenshot displays an IDE interface for a Java program named 'Echo'. The main editor window shows the following code:

```

1 /**
2  * Write a description of class Echo here.
3  *
4  * @author (Kleanthis Thramboulidis)
5  * @version (17Feb2023-V1.0)
6  */
7 import java.util.Scanner;
8
9 public class Echo
10 {
11     public static void main(String[] args){
12         var sc = new Scanner(System.in);
13         String message;
14
15         System.out.println("Echo running - write \"bye\" to exit");
16         while(true){
17             message = sc.nextLine();
18             System.out.println(message);
19             if(message.equals("bye") )
20                 break;
21         }
22         sc.close();
23     }
24 }

```

The terminal window below the code shows the program's output:

```

Echo running - write "bye" to exit
hello
hello
there
there
bye
bye

```

The IDE interface includes a menu bar (Project, Edit, Tools, View, Help) and a toolbar with buttons for 'New Class...', 'Compile', 'Undo', 'Cut', 'Copy', 'Paste', 'Find...', and 'Close'. The status bar at the bottom indicates the copyright © 2023 Κλεάνθης Θραμπουλίδης, the course 'Java Technology - Εισαγωγή', and the slide number 'Διαφάνεια 7'.