

# METODE AVANSATE DE PROGRAMARE

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LABORATOR 2

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# AGENDA

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- Final
- Static
- Clase abstracte
- Interfete
- Varargs
- Testare unitara

# Final

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- Cuvantul rezervat final este folosit pentru a restrictiona accesul la date

## Java Final Keyword

⇒ Stop Value Change

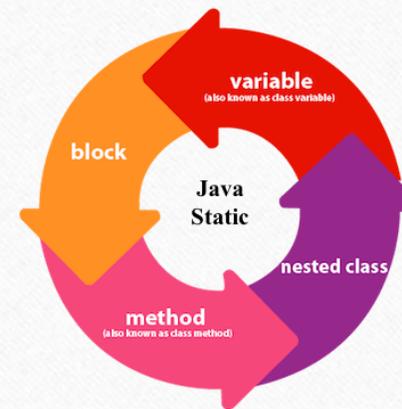
⇒ Stop Method Overriding

⇒ Stop Inheritance

[javatpoint.com](http://javatpoint.com)

# Static

- <https://www.javatpoint.com/static-keyword-in-java>
- Cuvantul rezervat static este folosit pentru gestiunea memoriei.
- O variabila/metoda statica poate fi folosita fara a avea o instanta a clasei.



# Clasa abstracta

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- clasa definite folosind cuvantul rezervat **abstract**
- **Abstractizare**= ascunderea detaliilor de implementare si prezentarea functionalitatilor catre utilizator
- In Java abstractizarea se realizeaza prin clase abstracte si interfete

# Clasa abstracta

- Referinta: <https://www.javatpoint.com/abstract-class-in-java>

## Rules for Java Abstract class



# Interfata

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- Interfata-> clasa care are doar metode abstracte (valid pana la Java 8)
  - Incepand cu Java 8-> metode default si statice
  - Incepand cu Java 9-> metode private
  - Putem extinde o singura clasa, dar putem implementa oricate interfete

# Interfata

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- Implicit, metodele sunt publice
- Variabilele sunt statice si final
- Clasa abstracta vs interfata?
  - <https://www.javatpoint.com/difference-between-abstract-class-and-interface>

# Varargs

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- Java variable arguments
- Permite numar variabil de parametri (0...n)
- Varargs trebuie sa fie pe ultima pozitie in lista de parametri a unei metode

```
public class Application{  
    public void display(int x, String... values){  
        x = 0;  
        System.out.println("display method invoked ");  
    }  
}
```

# Testare unitara-JUnit

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- <https://www.vogella.com/tutorials/JUnit/article.html>