**Java final keyword**

In Java, the final keyword is used to denote constants. It can be used with variables, methods, and classes.

Once any entity (variable, method or class) is declared final, it can be assigned only once. That is,

* the final variable cannot be reinitialized with another value
* the final method cannot be overridden
* the final class cannot be extended

**1. Java final Variable**

In Java, we cannot change the value of a final variable. For example,

class Main {

public static void main(String[] args) {

// create a final variable

final int AGE = 32;

// try to change the final variable

AGE = 45;

System.out.println("Age: " + AGE);

}

}

[Run Code](https://www.programiz.com/java-programming/online-compiler)

In the above program, we have created a final variable named age. And we have tried to change the value of the final variable.

When we run the program, we will get a compilation error with the following message.

cannot assign a value to final variable AGE

AGE = 45;

^

**Note**: It is recommended to use uppercase to declare final variables in Java.

**2. Java final Method**

Before you learn about final methods and final classes, make sure you know about the [Java Inheritance](https://www.programiz.com/java-programming/inheritance).

In Java, the final method cannot be overridden by the child class. For example,

class FinalDemo {

// create a final method

public final void display() {

System.out.println("This is a final method.");

}

}

class Main extends FinalDemo {

// try to override final method

public final void display() {

System.out.println("The final method is overridden.");

}

public static void main(String[] args) {

Main obj = new Main();

obj.display();

}

}

[Run Code](https://www.programiz.com/java-programming/online-compiler)

In the above example, we have created a final method named display() inside the FinalDemo class. Here, the Main class inherits the FinalDemo class.

We have tried to override the final method in the Main class. When we run the program, we will get a compilation error with the following message.

display() in Main cannot override display() in FinalDemo

public final void display() {

^

overridden method is final

**3. Java final Class**

In Java, the final class cannot be inherited by another class. For example,

// create a final class

final class FinalClass {

public void display() {

System.out.println("This is a final method.");

}

}

// try to extend the final class

class Main extends FinalClass {

public void display() {

System.out.println("The final method is overridden.");

}

public static void main(String[] args) {

Main obj = new Main();

obj.display();

}

}

[Run Code](https://www.programiz.com/java-programming/online-compiler)

In the above example, we have created a final class named FinalClass. Here, we have tried to inherit the final class by the Main class.

When we run the program, we will get a compilation error with the following message.

cannot inherit from final FinalClass

class Main extends FinalClass {

^