

Final

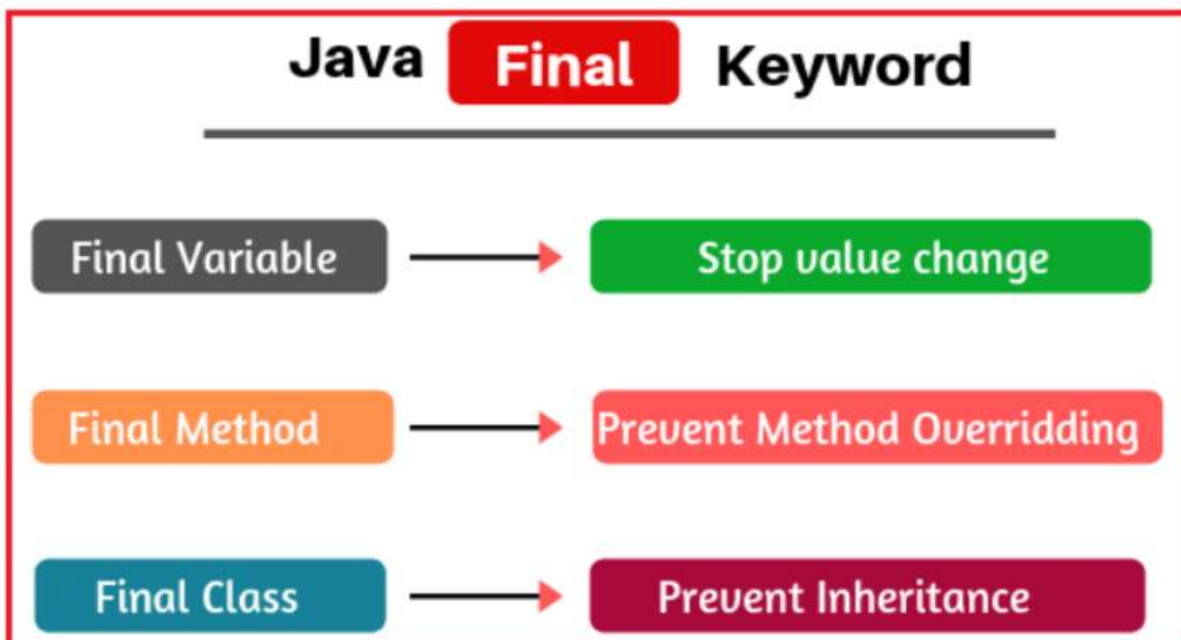
We will cover the following

- Final keyword
- Java Final variable
- Java Final method
- Java Final class

Final keyword

The **final keyword** in java is used to restrict the user. Java final keyword can be used with the following.

1. Variable
2. Method
3. class



Java Final variable

once the variable is declared as final then its value can not be changed.

E.g. here in the example below, you can see that I have declared the variable speedlimit and initialized it with a value of 90. Now, with the run method's help, when I am trying to change its value, the compiler throws the error.

```
1- class rollsroyace{
2-   final int speedlimit=90;//final variable
3-   void run(){
4-     speedlimit=400;
5-   }
6-   public static void main(String args[]){
7-     rollsroyace mycar=new rollsroyace();
8-     mycar.run();
9-   }
10  }//end of class
```

input

Compilation failed due to following error(s).

```
Main.java:4: error: cannot assign a value to final variable speedlimit
    speedlimit=400;
    ^
1 error
```

Java Final Method

if you declare your method as final, you can not override that method.

Eg.

```
1- class Bike{
2-   final void run(){System.out.println("running the bike ");}
3- }
4-
5- class Honda extends Bike{
6-   void run(){System.out.println("running safely with 80kmph");}
7-
8-   public static void main(String args[]){
9-     Honda honda= new Honda();
10    honda.run();
11  }
12 }
13
```

input

Compilation failed due to following error(s).

```
Main.java:6: error: run() in Main cannot override run() in Bike
    void run(){System.out.println("running safely with 80kmph");}
    ^
    overridden method is final
1 error
```

Here you can notice that the run method of the Bike class can not be redefined in its child class as the run method is declared as final. So the compiler is throwing the error.

Java Final Class

If you make any class as final, you cannot extend that class.

```
1 final class Bike{
2     void run(){System.out.println("running the bike ");}
3 }
4
5 class Honda extends Bike{
6     void run(){System.out.println("running safely with 80kmph");}
7
8     public static void main(String args[]){
9         Honda honda= new Honda();
10        honda.run();
11    }
12 }
13
```

input

Compilation failed due to following error(s).

```
Main.java:5: error: cannot inherit from final Bike
class Honda extends Bike{
    ^
1 error
```

Here you can notice that the Bike class is declared as final, so we are not able to override it; that's why the compiler is throwing the error.