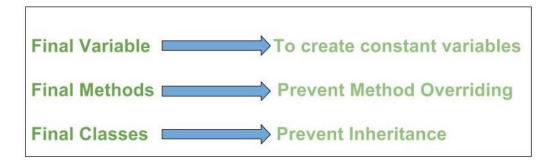
Department: BCA

Faculty Name: Er. Ashish Kumar

Subject: JAVA (5th sem.) Topic: final keyword in java

final keyword in java

The final keyword is used in different contexts. First of all, *final* is a non-access modifiers applicable **only to a variable, a method or a class**. Following are different contexts where final is used.



The **final keyword** in java is used to restrict the user. The java final keyword can be used in many contexts. Final can be:

- 1. final variable
- 2. final method
- 3. final class
 - 1. **final variable:** The final keyword can be applied with the variables, a final variable that have no value it is called blank final variable or uninitialized final variable. It can be initialized in the constructor only. The blank final variable can be static also which will be initialized in the static block only.

FINAL KEYWORD IN JAVA

Example:

```
C:\Users\ashishjha\Desktop\java\TestBike.java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
📑 TestPerformance java 🗵 📙 string 1.html 🗵 블 string 2.html 🗵 📙 TestCapital java 🗵 블 javascriptfirst.html 🗵 📙 mathobj.html 🗵 📙 TestBike java 🗵
     class TestBike
   2
     □ {
   3
            final int maxSpeedLimit=140;//final value
            /*TestBike()
   4
   5
   6
                 maxSpeedLimit=200;
   7
            }*/
   8
           /* static final int speedlimit;//final variable
   9
             static
  10
                speedlimit=200;
  11
  12
  13
             void show()
  14
              System.out.println(maxSpeedLimit);
  15
  16
 17
             public static void main(String args[])
  18
             TestBike obj=new TestBike();
 19
             obj.show(); Command Prompt
  20
  21
                           C:\Users\ashishjha\Desktop\java>javac TestBike.java
  22
  23
                           C:\Users\ashishjha\Desktop\java>java TestBike
                           140
                           C:\Users\ashishjha\Desktop\java>
```

2. **method:** When a method is declared with *final* keyword, it is called a final method. A final method cannot be overridden. The Object class does this a number of its methods are final. We must declare methods with final keyword for which we required to follow the same implementation throughout all the derived classes.

FINAL KEYWORD IN JAVA

Example:

```
C:\Users\ashishjha\Desktop\java\TestFinalMD.java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
🕞 🔒 😭 😘 🥱 🤼 | 🕹 🐚 🖺 | ⊃ C | ## 🦖 | 🤏 🤏 | 🛂 🚍 1 📜 🗷 💹 🐔 🐼 🕒 🖜 🗩 🗷 🕩
📙 Test Performance java 🔀 🚆 string 2.html 🔀 🔛 TestCapital java 🔀 🧱 javascriptfirst.html 🔀 🌉 mathobj.html 🔀 🔛 TestBike java 🔀 🛗 TestFinalMD.java 🔀
        class TestFinalM
   2
       ₽ {
   3
              final void m1()
   4
              {
   5
                   System.out.println("This is a final method.");
   6
   7
   8
   9
        class TestFinalMD extends TestFinalM
  10
  11
             void m1()
  12
                   // COMPILE-ERROR! Can't override.
  13
                   System.out.println("Illegal!");
  14
  15
            public static void main(String args[])
  16
  17
  18
             TestFinalMD obj=new TestFinalMD();
             obj.ml(); Command Prompt
  19
  20
  21
                           C:\Users\ashishjha\Desktop\java>javac TestFinalMD.java
                           TestFinalMD.java:11: error: m1() in TestFinalMD cannot override
                           m1() in TestFinalM
                              void m1()
                            overridden method is final
                           :\Users\ashishjha\Desktop\java>
```

- 3. **final class:** When a class is declared with *final* keyword, it is called a final class. A final class cannot be extended(inherited). There are two uses of a final class:
- One is definitely to prevent inheritance, as final classes cannot be extended. For example, all Wrapper Classes like Integer, Float etc. are final classes.
- The other use of final with classes is to create an immutable class like the predefined String class. We can't make a class immutable without making it final.

FINAL KEYWORD IN JAVA