- In java we have 3 types of variables based on the area of declaration.
- Local variables.
- Instance Variables.
- Static Variables.

Local Variable

- **Variables which are *declared inside a method* , constructor or block called local variable.**
- **Local variable will be created when the method or code block is executed by JVM and destroyed after the method execution.**
- ***No Access modifiers* are allowed with a local variable.**
- **These variables are created in stack memory.**
- **There is no default value for local variables , we must initialize before the first usage of the variable.**

Instance Variables

- **Variables which are declared inside a class but *not inside any method* , constructor or blocks.**
- **This variables are created when object is created to that class and destroyed when the object is cleared from memory.**
- **We should declare Instance variables when we need to refer the *same variable in multiple methods* or blocks.**
- **We can use all the Access modifiers with instance variables, generally we use private in IT industry.**
- **Instance variables have default values provided by JVM, for numbers the default value is zero , for Boolean variables it is false, for objects it is null.**
- **These variables value can be set in multiple ways.**

1)At the time of declaration we can set.

2)Through Constructor.

3)Through getter and setter methods.

4)Through Object reference.

Static Variables

- **Static variables are also called as Class Variables.**
- **These variables are also declared inside a class but not inside any method or block.**
- **Static key word is used along with the variable declaration.**
- **The major *difference* with static and non static variables is the Memory allocation.**
- **Access modifiers usage is similar to instance variables.**
- **Default values are also same as instance variables,**
- **For numbers zero ,Boolean – false, objects – null.**
- **Static variables are accessed with the class name.**
- **Syntax: ClassName.variableName**
- **In our day to day programming , we use static when the variable should be constant in entire application.**
- ***example : public static final int favouriteNumber=2;***

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- **Variable which hold primitive values are called primitive variables remaining are called reference variables.**
- **We know 8 primitive data types in java , but what are these reference variables?**

  ex: int id=200; (id is primitive variable);

  Employee e;(Here e is reference variable)
- **We can not use instance variable in static area.**

Static Methods vs Non Static

- **Like variables we have two types of methods also**

  1)Static Method

  2)Non Static method.