Variables: A variables is an identifier which is used to store some value.

OR

A variables is a container which holds the value while the Java program is executed.

✧A variable is assigned with a data type.

✧ Variable is name of memory location.

Types of Variables in Java:

1. **Local variable:** A variable which is declared in inside the body of the method is called Local variable.
2. **Instance variable:** A variable which is declared in inside the class but outside the body of the method, is called an instance variable. It is not declared as static.
3. **Static variable:** A variable which is declared as static is called a static variable. It cannot be local variable. We can create a single copy of the static variable and we can share it among all the instances of the class. Memory allocation for static variables happens only once when. The class is loaded in the memory.

Local Variable PROGRAM:

```java
// Program on Local Variable
public class LocalVariable {
    public static void main(String[] args) {
        int x = 21;
        int y = 19;
        int z = x+y;
        System.out.println("Adding X and Y = " + z);
    }
}

```

Instance Variable PROPERTIES:

1. Instance Variable always gets default value.
2. Instance Variable cannot be reinitialised directly within class but they can reinitialised inside method or constructor.

Static Variable PROPERTIES:

- Static Variable is Independent, Independent means anyone can us Static variable inside the class and static variable don't need any help of any object.

```java
public class InstanceVariable {
      int marks = 400;
      marks = 350;
  /* The above code is wrong because, We cannot
     reinitialised InstanceVariable inside the class.
  */
     class instVar {
         int marks = 400;
         void someMethod(){
               marks = 350;
    }
  // The above code is write because we can reinitialised,
     InstanceVariable inside the method or Construtor.
}
```

Instance Variable PROPERTIES EXAMPLE

Instance Variable Program:

```java
public class InstanceVariable {
int enrollmentNo = 51; // Instance Variable
   public static void main(String[] args) {
    //Writing a Instance for InstanceVariable
   InstanceVariable instVar = new InstanceVariable();
   // Where instVar is object or instance of Instance Va
   System.out.println(instVar.enrollmentNo);
   }
}
```

Static Variable Program:

```
1 public class StaticVariable{
2  static String add = “Addition”;
3  static String subs = “Substraction”;
4    public static void main(Sting[] args) {
5      int a = 40;
6      int b = 20;
7      int c = a+b;
8      int d = a-b;
9      System.out.println(add+c);
10     System.out.printn(subs+d);
11    }
12 }
```