VARIABLES IN JAVA

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Variables in java

Variables

- It is the entity that may vary during the execution of program called as variable
- Variable is a name which is associated with a value that can be changed.

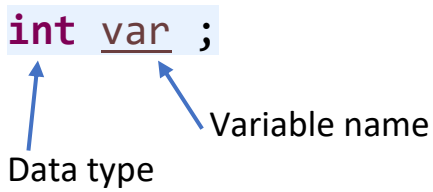
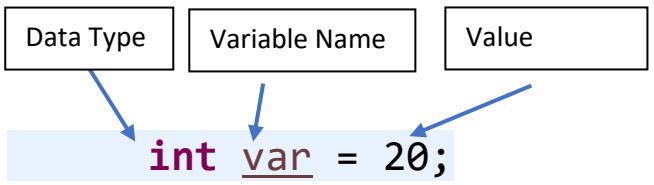
Guidelines for declaring variable

- Variable can be made of combination of alphabets, digits and special symbols.
- First character in variable must be alphabet or _ (underscore) but not digit
- Variable name must be some meaning full words.
- No blanks allowed in variable name.

```
7     int a ;
8     int _a;
9     int 5a;
10    int 5_a;
11    int _5a;
12    int gross_salary;
13    long mobileNumber;
14    float AreaOfTriangle;
15
```

Note: Variable is declared followed by semicolon (;).

How to declare and initialize the variables

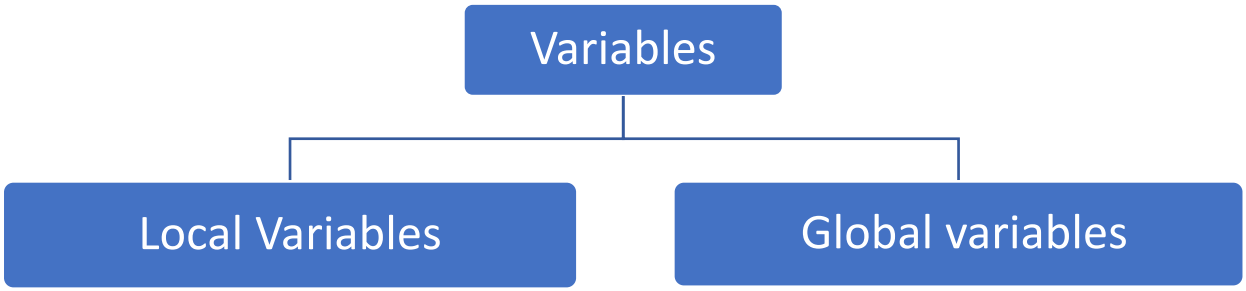
Variable Declaration	variable Initialization
	

Data Type: It shows which type of data can be stored into variable, so here “int” is the data type which will store number.

Variable Name: It is the name given to the variable, so here “var” is the variable name.

Value: It is the initial value that is stored into variable, so here “20” is the value.

There are two types of variables



Global Variable:

- It is defined outside of a method but inside the class.
- It is called as instance variable.

Why it is called as instance variable?

Because Instance variable can be accessed by using instance (Object).

How to declare and initialize global variable.

```
public class Demo {

    int a; // Declaration.
    int b = 20; // Initialization.

    public static void main(String[] args) {

    }

}
```

-In this example we have declared “a” variable as globally, outside of a method.

-It is initialized automatically by JVM and default value is zero.

-Global variables are stored in “Heap Memory area”, each instance(object) of a class has its own copy of instance variable.

-Global variables scope is anywhere in the class.

Note: Static keyword can be applied to global variable and it will become static variable.

How to print the values of a global variable.

```
public class Demo {

    int a; // Declaration.
    int b = 20; // Initialization.

    public static void main(String[] args) {
        Demo demo = new Demo();

        System.out.println("Value of a >>"+demo.a);
        System.out.println("Value of b >>"+demo.b);
    }

}
```

Local Variables:

-The variables which are declared inside method body are called as local variables.

-It is also declared in a constructor or block.

How to declare and initialize local variables

```
public class Demo {

    public static void main(String[] args) {
        int x; // Declaration.
        int y = 20; // Initialization.
    }

}
```

How to print the local variables

```
1
2  public class Demo {
3
4      public static void main(String[] args) {
5          int x; // Declaration.
6          int y = 20; // Initialization.
7
8          System.out.println("Value of x >>" + x);
9          System.out.println("Value of y >>" + y);
10     }
11
12 }
```

Note: Local variables must be initialized compulsory.

```
public class Demo {

    public static void main(String[] args) {
        int x; // Declaration.
        int y = 20; // Initialization.

        //System.out.println("Value of x >>" + x);
        System.out.println("Value of y >>" + y);
    }

}
```

```
Markers  Properties  Servers  Data Source Explorer  Snippets  Console
<terminated> Demo [Java Application] C:\Program Files\Java\jre1.8.0_331\bin\javaw.exe (16-Jul-2022, 1:05:53 PM)
Value of y >>20
```

- Scope of local variables is within the method, constructor and block only.
- It does not initialize automatically.
- Local variables are stored in stack area.
- If you are trying to use local variables without initialization then we will get compile time error.

Note: Static keyword is not applied to local variable.