VARIABLES

A vaíiable is a containeí which holds the value while the Java píogíam is executed. A vaíiable is assigned with a data type.

Vaíiable is a name of memoíy location.

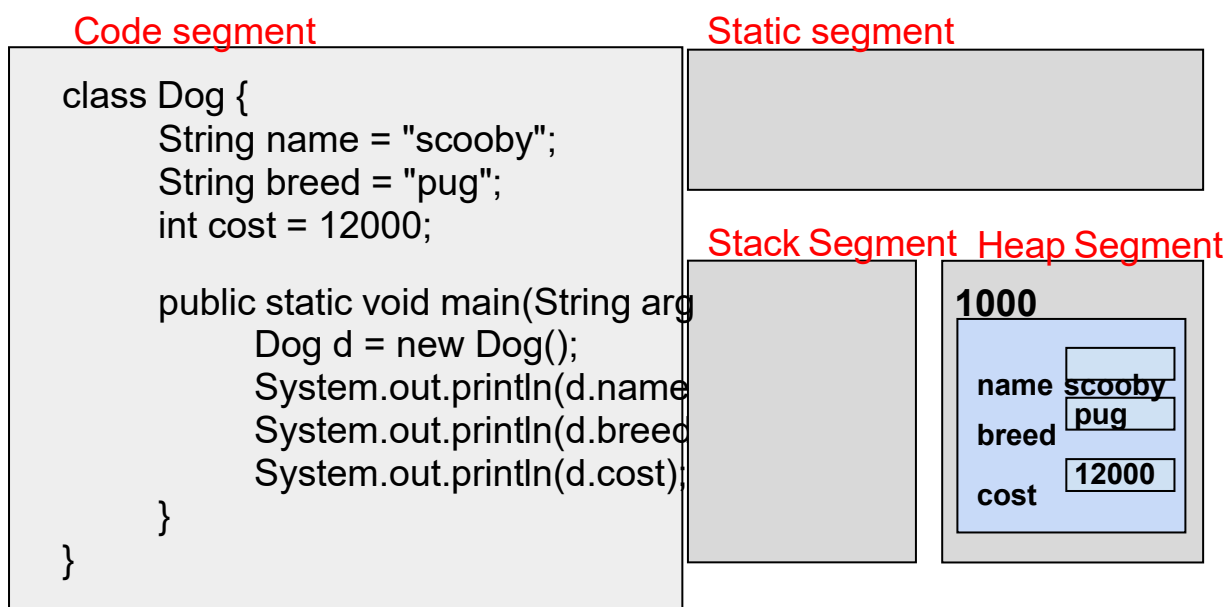Theíe aíe thíee types of vaíiables in

java:

- local
- Instance
- Static

Now let's undeístand about Local and Instance Vaíiables

Instance Vaíiables:

The vaíiables which will get cíeated inside the class outside the methods aíe called instance vaíiables

Code segment

Static segment

```
class Dog {
    String name = "scooby";
    String breed = "pug";
    int cost = 12000;

    public static void main(String arg
        Dog d = new Dog();
        System.out.println(d.name
        System.out.println(d.breed
        System.out.println(d.cost);
    }
}
```

Stack Segment   Heap Segment

1000

name scooby
      pug
breed

      12000
cost

Here control of execution will start from the main method. In the main method when a new keyword is called an object is created in the heap segment and memory for instance variables name, breed and cost is allocated the default values for the

variables is allocated then the values that is assigned will get allocated i.e

name=''scooby'', breed = ''pug'', cost = 12000.

Local Variables:

The variables which will get created inside the class inside the methods are called local variables

Code segment   Static segment
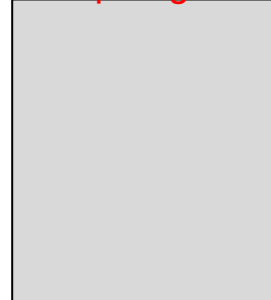
```
class Test {
    public static void main(String args
        int a =99;
        float b = 99.99f;
        double d =100.99;
        boolean c = true;
        System.out.println(a);
        System.out.println(b);
        System.out.println(c);
        System.out.println(d);
    }
}
```

Stack Segment   Heap Segment

a   99

b   99.99

c   true

d   100.99

The control of execution will start from the main method and the memory for variables a,b,c,d is allocated in the stack segment and values will be assigned. Default values for local variables will not be assigned by jvm.