

VARIABLES

A variable is a container which holds the value while the Java program is executed. A variable is assigned with a data type.

Variable is a name of memory location.

There are three types of variables in java:

- local
- Instance
- Static

Now let's understand about Local and Instance Variables

Instance Variables:

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

Code 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);  
    }  
}
```

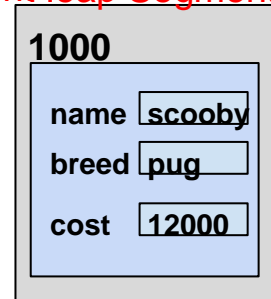
Static segment



Stack Segment



Heap Segment



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.

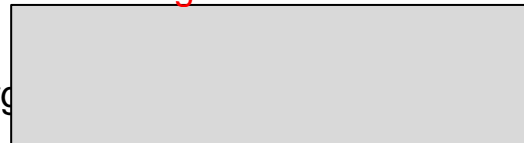
Local Variables:

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

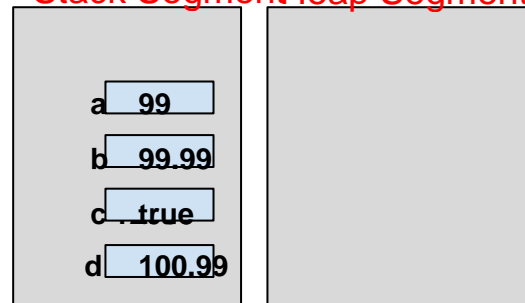
Code segment

```
class Test {
    public static void main(String arg
        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);
    }
}
```

Static segment



Stack Segment Heap Segment



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.