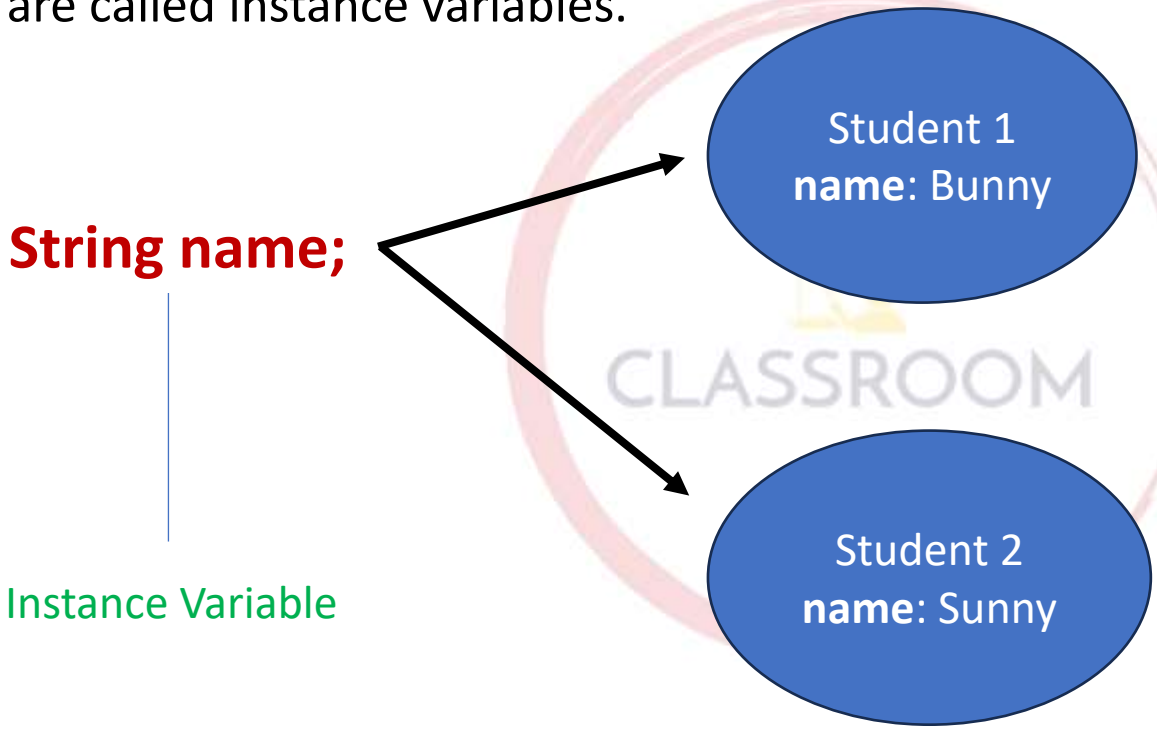
Instance variables

What is Instance Variables ?

If the value of a variable is varied from object to object such type of variables are called instance variables.



- For every object a separate copy of instance variables will be created.

Instance variables

```
class Student
{
        String  name;    // instance variable

        public static void main(String[] args)
        {


        }


}
```

Class Area

Method Area

Instance variables

- Instance variables should be declared within the class directly but outside of any method or block or constructor.
- Instance variables will be created at the time of object creation and destroyed at the time of object destruction hence the scope of instance variables is exactly same as scope of object.
- Instance variables will be stored on the heap as the part of object.
- Instance variables can be accessed directly from instance area but can not accessed directly from static area. But by using object reference we can access instance variables from static area
- Instance variables are also known as object level variables or attributes.
- No need to perform initialization JVM will always provide default value

Example

```
class Student
{
        String  name; // instance variable declare

        public static void main(String[] args)
        {

            //System.out.println(name); //compiler error

              Student student1 = new Student();
              student1.name = "bunny";

              Student student2 = new Student();
              student2.name = "Sunny";

              System.out.println(student1.name);
              System.out.println(student2.name);

        }
}
```