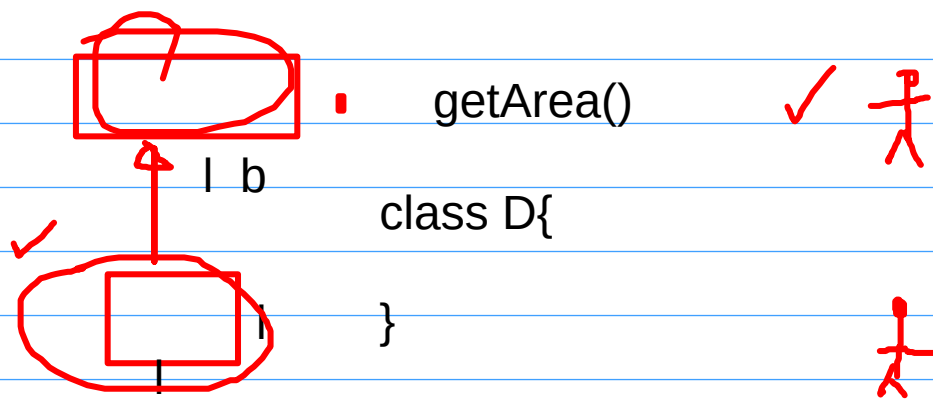


## square rectangle problem liskov



What is so special about string class

```
String s1="india";  
String s2=new String("india");  
if(s1==s2)  
    System.out.println("yes");  
else  
    System.out.println("no");
```

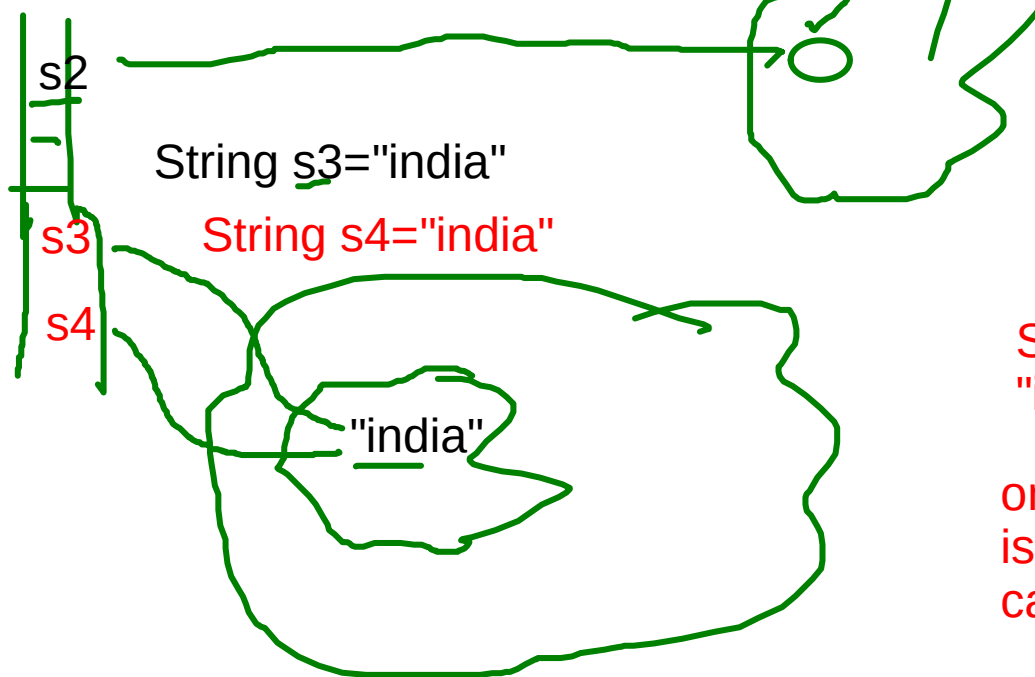
performance  
and save the  
memory

:(



# What is so special about string class

```
String s2=new String("india");
```

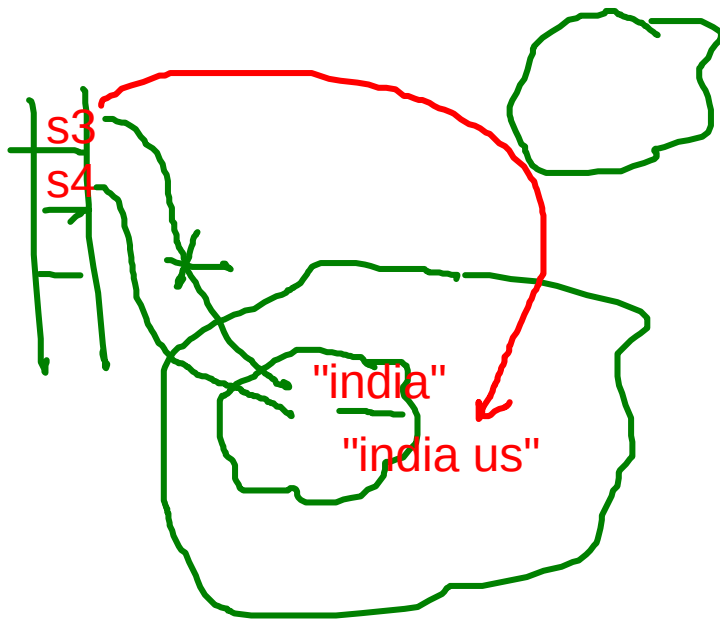


String should  
"immutable"

once object  
is created its state  
can not be change

```
String s3="india"
```

```
String s4="india"
```



```
String s3="india"  
s3=s3+"us";
```

use  
String companyName="IAF";

mis use

```
String a="a"+"b"+"c"+"d"
```

String a="a"+"b"+"c"+"d"

a

m

a ✓

ab ✓

abc ✓

abcd ✓

String m="ab"

meta area (it can grow)

PermGen java 7

it is not growable

class meta data  
string pool

```
String a="a"+"b"+"c"+"d"
```

# StringBuilder vs StringBuffer vs String

mutable

# java 1.5

not syn

syn

race condition  
Thread safe  
Bad

object of string class are immutable

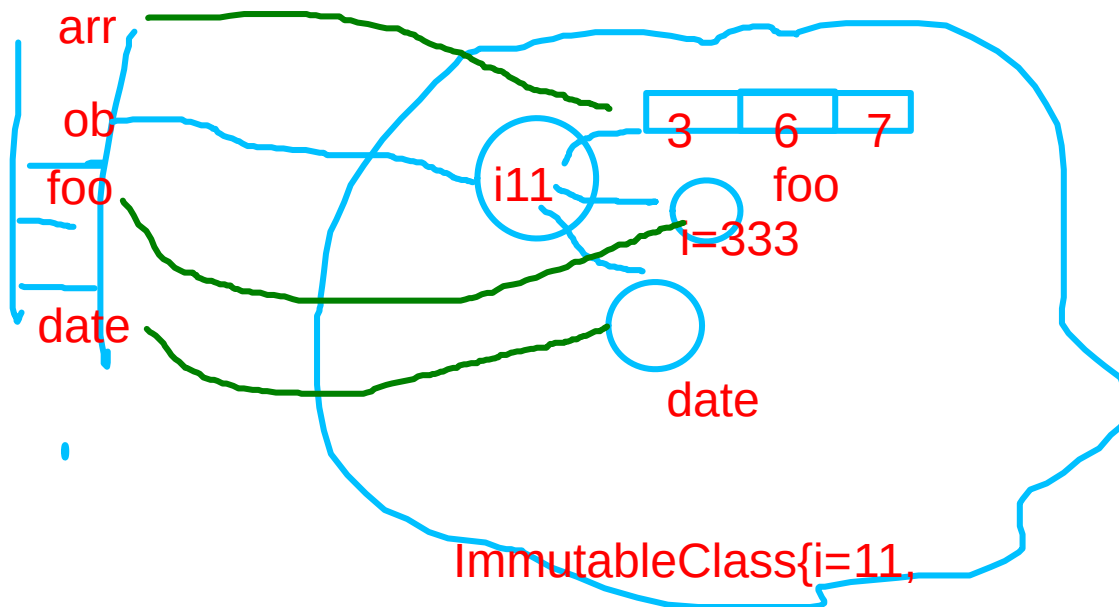
String a="a"+"b"+"c"+"d"

✓ String a=new StringBuider("a").  
append("b").append("c").append("d").toString();

abcd

"abcd"

# ImmutableClass



```
arr=[3, 6, 7],  
foo=Foo{i=333},  
date=Wed Jul 12 11:14:10 IST 2023}
```

Why eq must be overridden with hashCode()

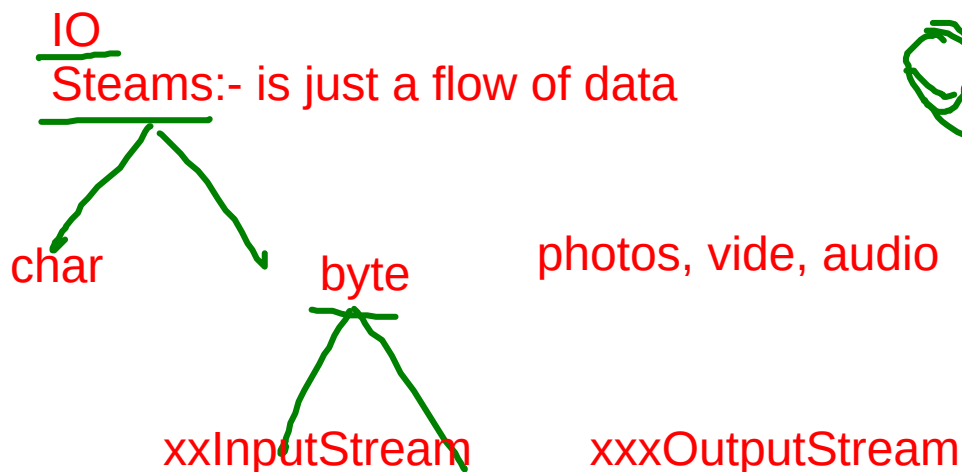
actually we have ds: in java

HashMap

HashSet

they internally use concept of bucketing aka hashing

if u are putting user define object in the hashmap  
and u forget to override hashCode() correctly then  
u will get some bugs in ur code



BufferedReader br =  
new BufferedReader(new FileReader(new File("data.txt")));

IO: decorator dp



## Serilization: used in RMI

IO process

getting the state of the object and put with some meta data so that it can send over the network

serilization

de- serilation