

CNDS 12A 5-18-10

[1]

-
- lab 5 closed
 - lab 6 soon
 - lab 4 still open
 - midterm on Thur 5-20-10.
-

Recall Object contains a method
with signature

public boolean equals (Object x)

add to Person:

```
System.out.println(a.equals(b));
```

```
System.out.println(a.equals(a));
```

output:

false

true

create a copy of a:

```
Person c = new Person( );
```

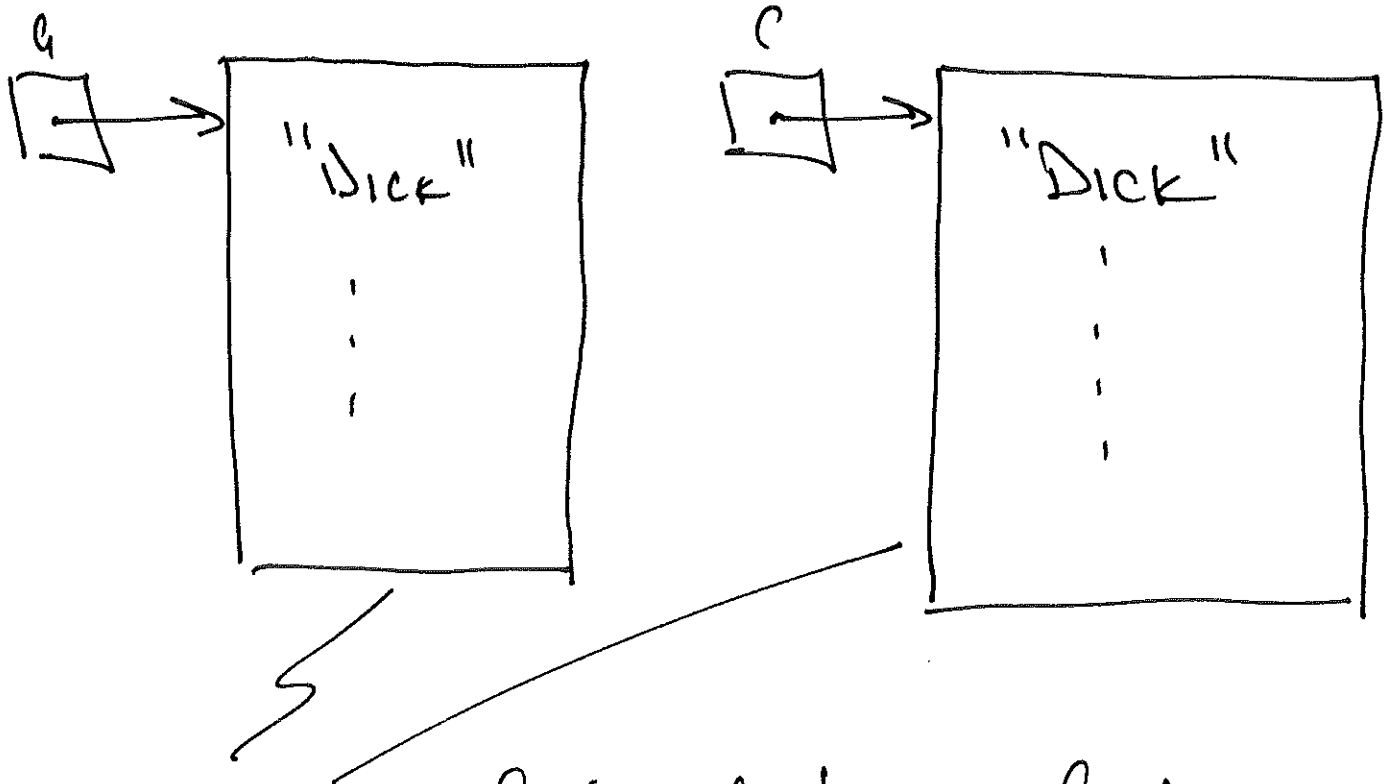
```
System.out.println(a.equals(c));
```

output:

false

Same as
in a

Picture of memory



same data but in different addresses .

by default $a.equals(c)$ is equivalent to $a == c$.

To get equals() to compare data instead of addresses, must override it.

Note:

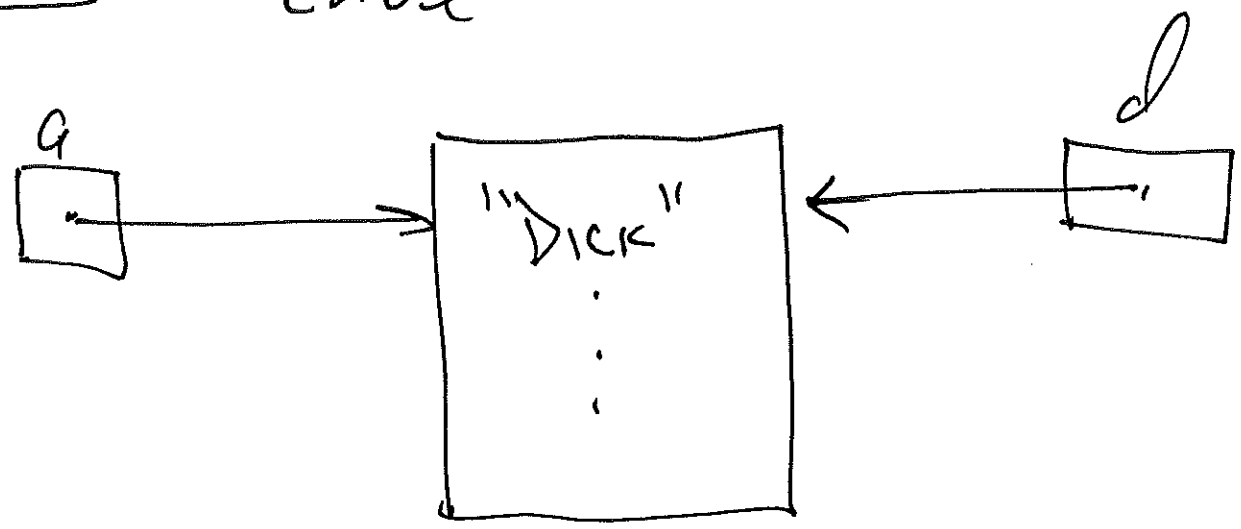
If we did

Person d = a;

then do

System.out.println(a.equals(d));

output: true



Public boolean equals(Object x) { 15

Person p = (Person) x;

boolean eq;

eq = this.name.equals(p.name) &&

this.phoneNumber.equals(p.phoneNumber) &&

this.age == p.age &&

this.weight == p.weight ;

return eq;

}

Data Hiding :

6

Ex.

```
class myClass {
```

```
    private int happy;
```

```
    private int sad;
```

```
myClass (int h, int s) {
```

```
    happy = h;
```

```
    sad = s;
```

```
}
```

```
void setHappy (int h) { happy = h; }
```

```
void setSad (int s) { sad = s; }
```

```
int getHappy () { return happy; }
```

```
int getSad () { return sad; }
```

```
}
```

Then in some other method,
in some other class

```
myClass a = new myClass(5, 6);
```

```
System.out.println(a.getSad());
```

```
a.setHappy(8);
```

```
System.out.println(a.getHappy());
```

Ex. Person b

Some Possible midterm topics

- function overloading
- recursive functions
- reading input from a file
- functions that take array arguments
 - swap()
 - printArray()
 - Find max or min (value or index) in an array
- Sort an array of length 3, 4, or 5-
- manipulate 2-dim arrays
 - read in or print out
 - simple arithmetic
- classes
 - member variables
 - member functions (class vs. instance)
 - Person() - Person() examples