

2) Info/Implementation Hiding (User goes thru interface to use software)

Use of Encapsulation: to restrict from external view:

- info: variables, attributes, data
- implementations: code, operations, methods
- decisions internal to the encapsulation unit

Why do this?

Independence, abstraction

Can break design if user relies on some impl but later, designer changes impl.

Evolution Since user/designer are independent, provided they agree on some interface.

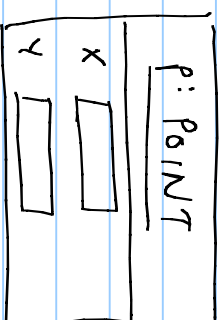
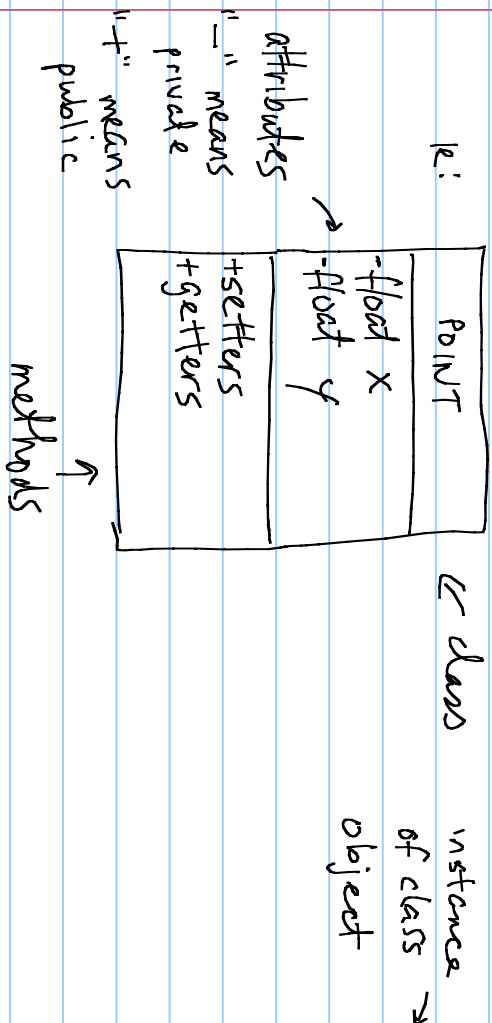
Code Re-use is high.

3) State retention:

Math function: SIDE EFFECT free: No memory, no state  
 Same argument always gives same result.

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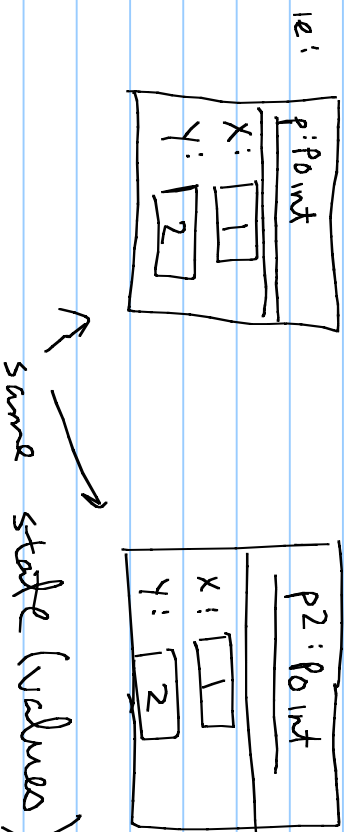
int f(int i) {
  int j;
  j = 2 * i;
  return j;
}
  
```



there is memory  
 so getx() will  
 not return same result  
 if setx() is called  
 in between  
 ← state

We are now object structured!

4) Object identity: Each object can be identified & treated as a distinct identity.



To distinguish, give Name, label, unique obj. id  
handle, reference

Rules: Same handle remains w/ obj. for all its life  
unique, distinct from all other handles  $\forall t$