

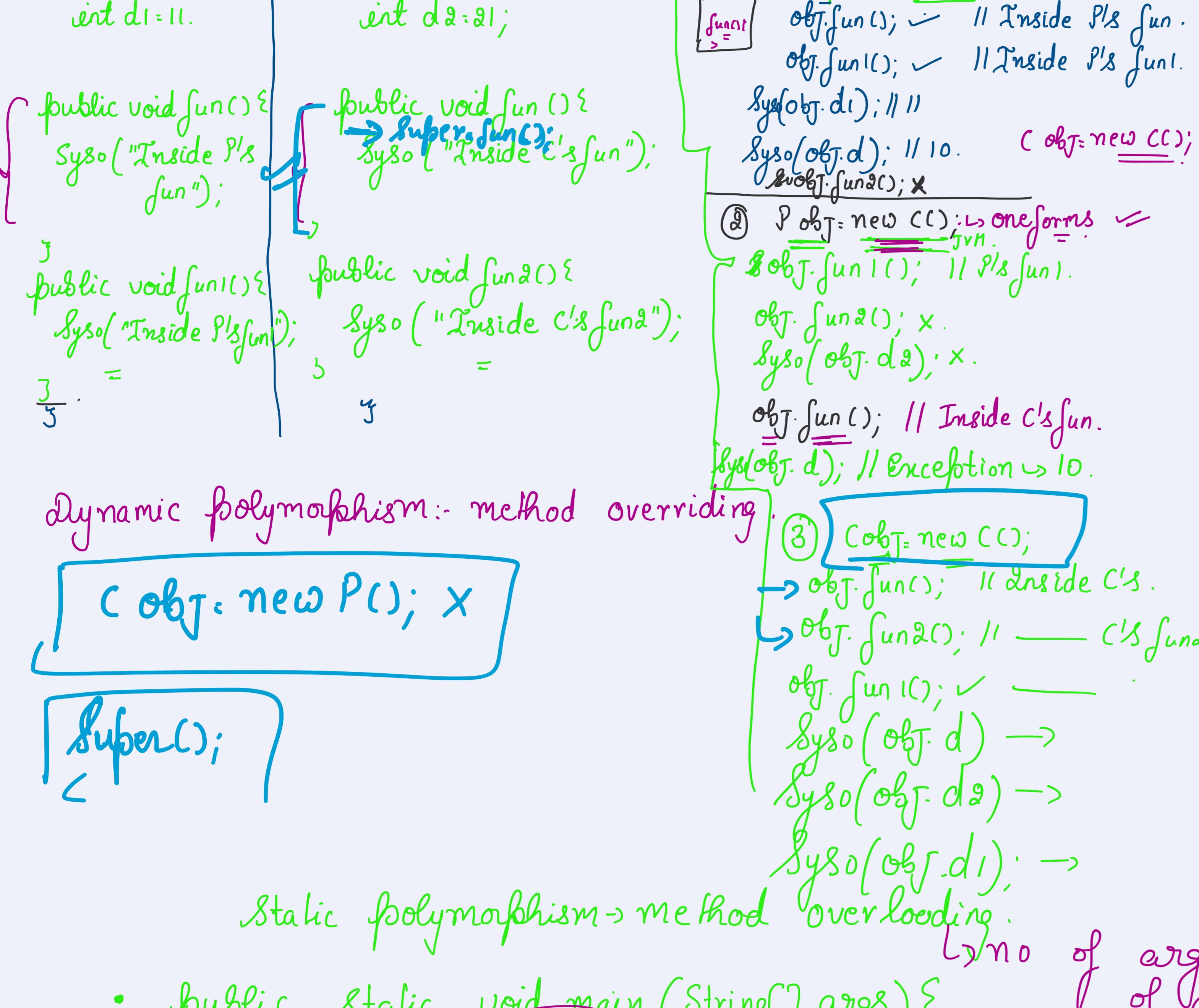
OOPS AND Queues.

③ Inheritance  $\hookrightarrow$  Reusability  $\rightarrow$  (1.0).  $\rightarrow$  new feature (1.1).

④ Polymorphism  $\hookrightarrow$  More than forms.

$\hookrightarrow$  Dynamic polymorphism.

$\hookrightarrow$  Static polymorphism.



dynamic polymorphism: method overriding

`C obj = new P(); X`

`super();`

Static polymorphism  $\rightarrow$  method overloading.

• no of arguments & type of arguments.

• `public static void main (String[] args) {`

$\rightarrow$  `add ("a", "b");`

$\rightarrow$  `add (1, 2);`

$\rightarrow$  `add (10);`

① `public static void add (int a, int b) {`

`System.out(a+b);`

② `public static void add (String a, String b) {`

`System.out(a+b);`

③ `public static void add (int a) {`

`System.out(a);`

④ `public static int add (int a, int b) {`

`return a+b;`

① & ④

Error

overloading  $\neq$  does not depend on return type.

• Abstract classes.

$\hookrightarrow$  abstract function  $\rightarrow$  public abstract eat();  
`public abstract class Animal {`  $\Rightarrow$  no object  
 $\hookrightarrow$  Animal obj.  
`new Animal(); X`

$\rightarrow$  public abstract void eat();

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Access Specifiers

P  $\rightarrow$  Same class ✓ ✓ ✓ ✓  
 package  $\rightarrow$  C extends P ✓ ✓ ✓ ✓  
 Normal class in same package X ✓ ✓ ✓ ✓  
 Derived class in other package X ✓ X ✓ ✓

Normal class in other package X X X ✓  
 Derived class in other package X X X ✓

③ Inheritance

④ Polymorphism

Private Protected Default Public

P  $\rightarrow$  Same class ✓ ✓ ✓ ✓  
 package  $\rightarrow$  C extends P ✓ ✓ ✓ ✓  
 Normal class in same package X ✓ ✓ ✓ ✓  
 Derived class in other package X X X ✓

Normal class in other package X X X ✓  
 Derived class in other package X X X ✓

Resume at 8:43 pm  $\rightarrow$

Queues  $\rightarrow$  FIFO  $\rightarrow$  First in First Out.

`Q.enqueue(10);`  $\rightarrow$  size=1  
`Q.enqueue(20);`  $\rightarrow$  size=2  
`Q.enqueue(30);`  $\rightarrow$  size=3  
`Q.enqueue(40);`  $\rightarrow$  size=4  
`Q.enqueue(50);`  $\rightarrow$  size=5  
`Q.enqueue(60);`  $\rightarrow$  size=6

`Q.dequeue();`  $\rightarrow$  size=5  
`Q.dequeue();`  $\rightarrow$  size=4  
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