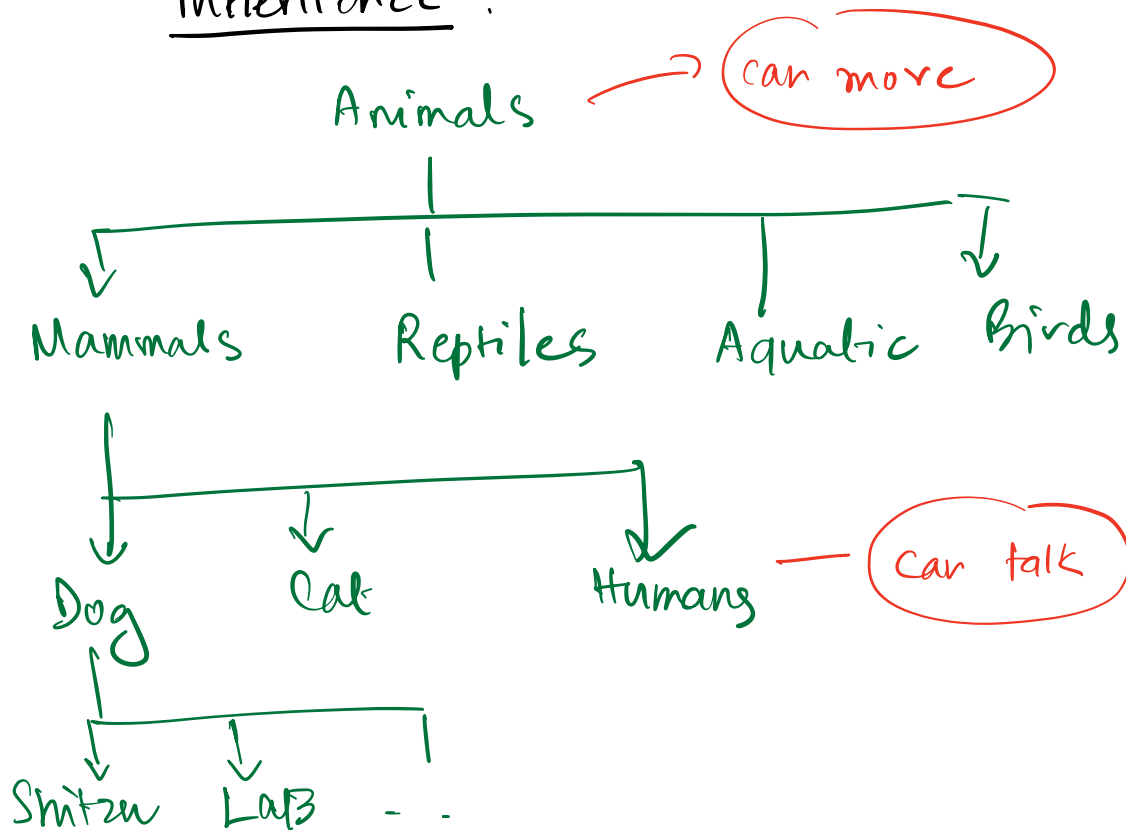


GOOD MORNING!

Start at 7:08

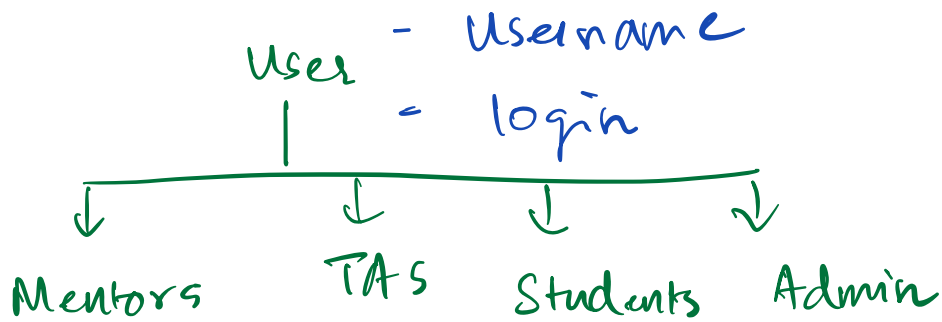
Inheritance :



child class inherits the attributes of the parent class **not vice versa**.

To share attributes and behaviours with

logically / physically related classes.

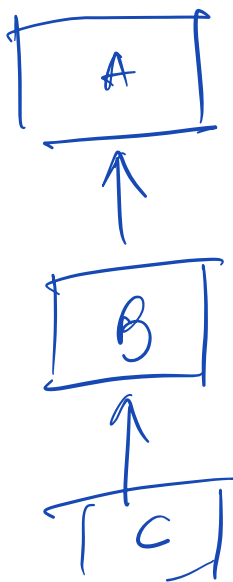


Batches , classes

- end() - end()

* Private members can be inherited but can't be used.

Constructor chaining



this C)
super C)

Polymorphism

form

User \rightarrow Admin

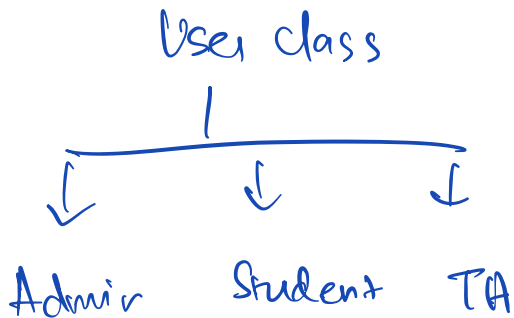
→ Student

→ TA

ADMIN IS A USER

STUDENT IS A USER

TA is A USER



```
User u = new User();
```

Student s = new Student();

```
print User Name ( List < ? > users )
```

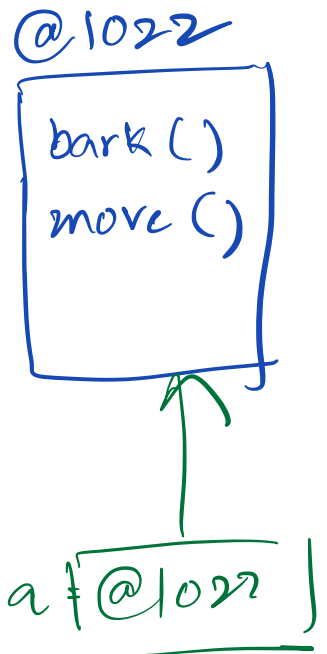
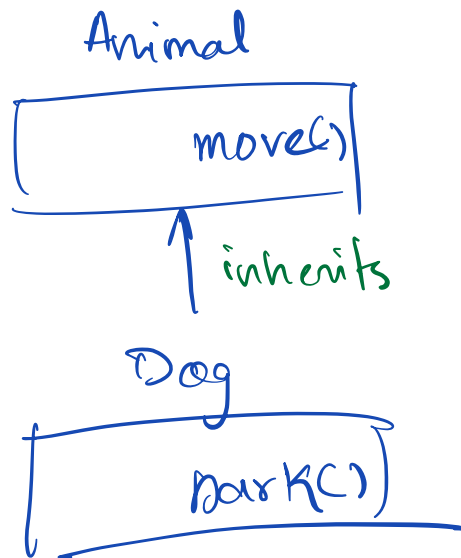
```
function( student s, admin a, mentor m ) {
```

```
list < ? > user ≠ new list();  
    user.append(s); user.append(a);  
    user.append(m);  
}
```

User $u = \underline{\text{new Student}()};$

reference
variable

vice versa doesn't
work



① $\text{Animal } a = \text{new Dog}();$

② $a.bark();$ X

③ $a.move();$

compile time
error

Parent class reference can hold child class
object.

But Parent class reference can't call
& child class attr & methods.

```

function (Student s) {
    s.c → ;
    s.age ... ;
    s ..
} print Username (s);

```

Compile Time Polymorphism — Inheritance
 Run time Polymorphism . Method Overloading
 ↳ Method Overriding

Method Overloading :

```

student (String name)
student (String name, int age)
student (int id, String name, int age)

```

```

doSomething (int)
doSomething (int, int)

```

void fun (int) ✓
void fun (String) ✓

void fun (String, int) ✓
void fun (int, String) ✓

void fun (int) ✓
void fun (float) ✓

void fun (String 8) X
void fun (String X) X

Variable name
doesn't matter

fun ("Akash")

fun ("Sam")

void fun (int) in Java X
int fun (int) Error

int y = fun (5);

fun (6);

return type func-name (params)

↙
In java return
type doesn't matter
for method overloading

↘
Only this part is
checked.

Breaks (9:20)

Method Overriding

class A {

void doSomething(int) {

}

class B extends A {

→ void
int

doSomething(int);

doSomething(int);

} X compile
time
error.

void doSomething (int);

void doSomething (int, int);

}

B b = new B();

b.doSomething();