Small Assignment

[Git + Intellij]
↳ Working with Github and Git

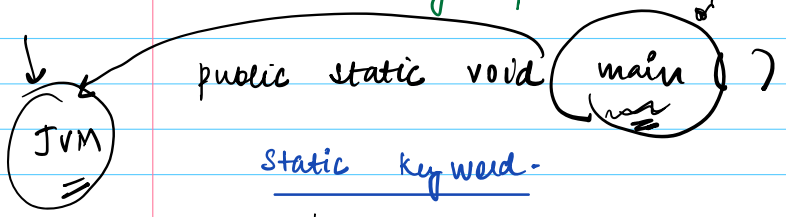
Agenda

→ Inheritance

→ Polymorphism

Client - main()
↳ Intellij debugging

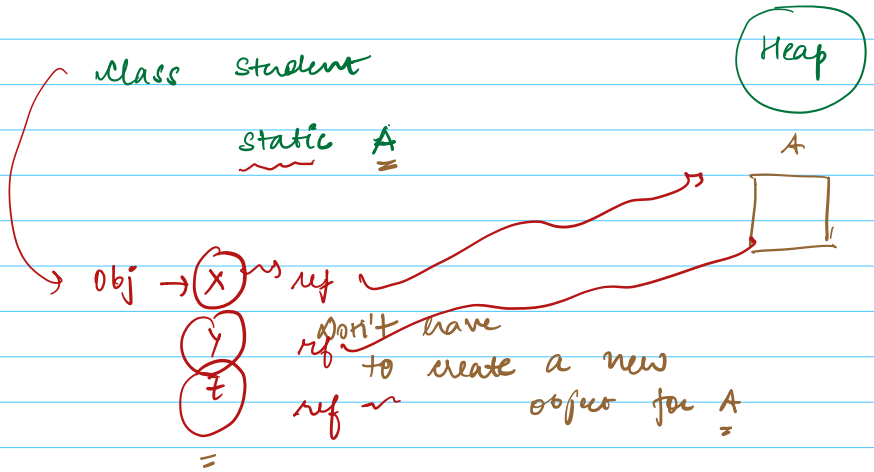
↳ Packages
↳ 3 pillars of OOPS



Static keyword -

↳ It is part of class instead of being a part of object

↳ Static is preferred → memory management



class student

private static name; (?) X

school Name

class A {

* for Better Encapsulation

* for keeping related things together

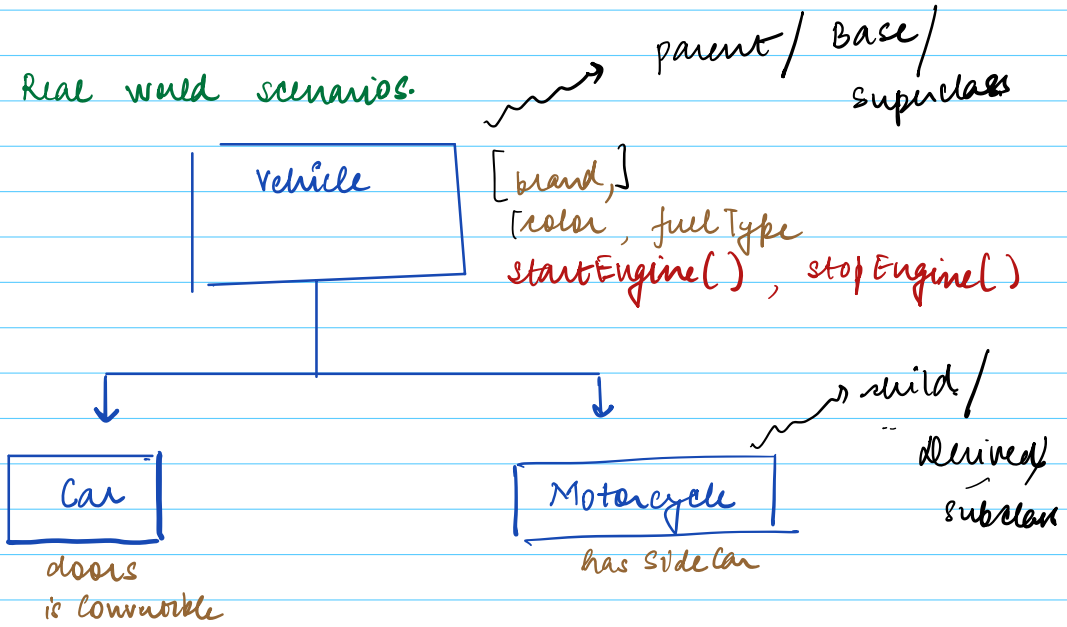
static class B {

}

Inheritance

OOP → model real life situations into software systems

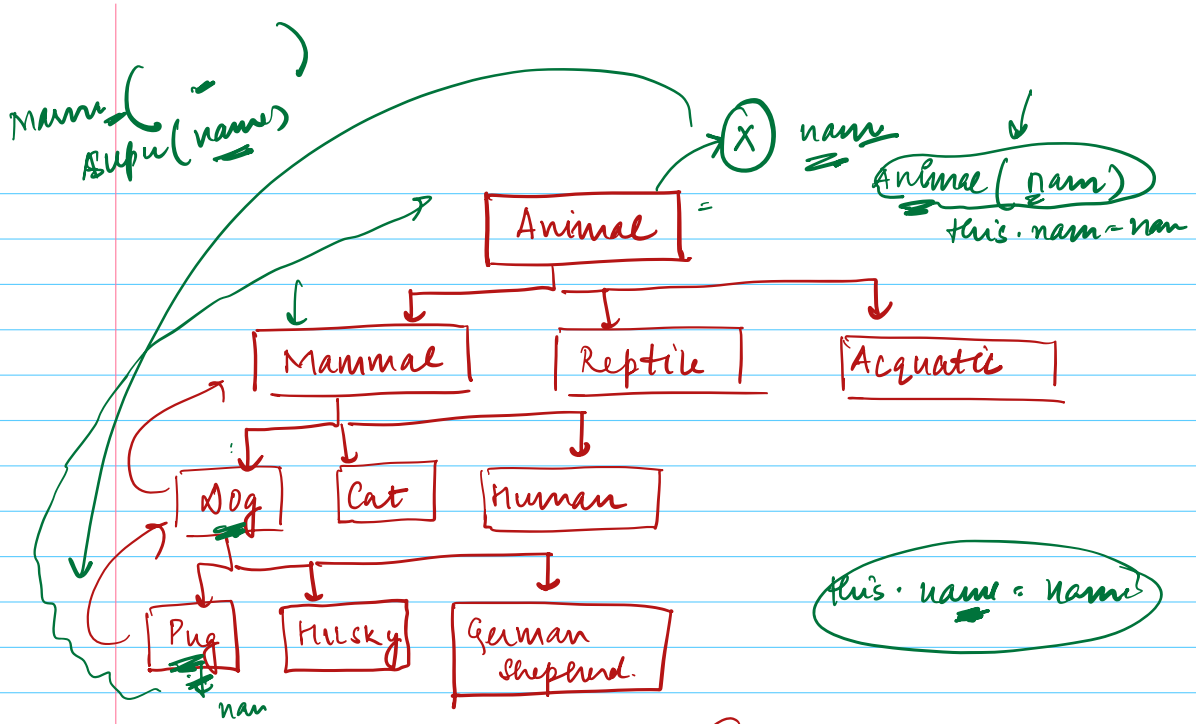
Real world scenarios.



Helps us REUSE common properties and behaviours defined in base class across derived classes.

- ✓ Code organisation
- ✓ Reusability
- ✓ Extensibility

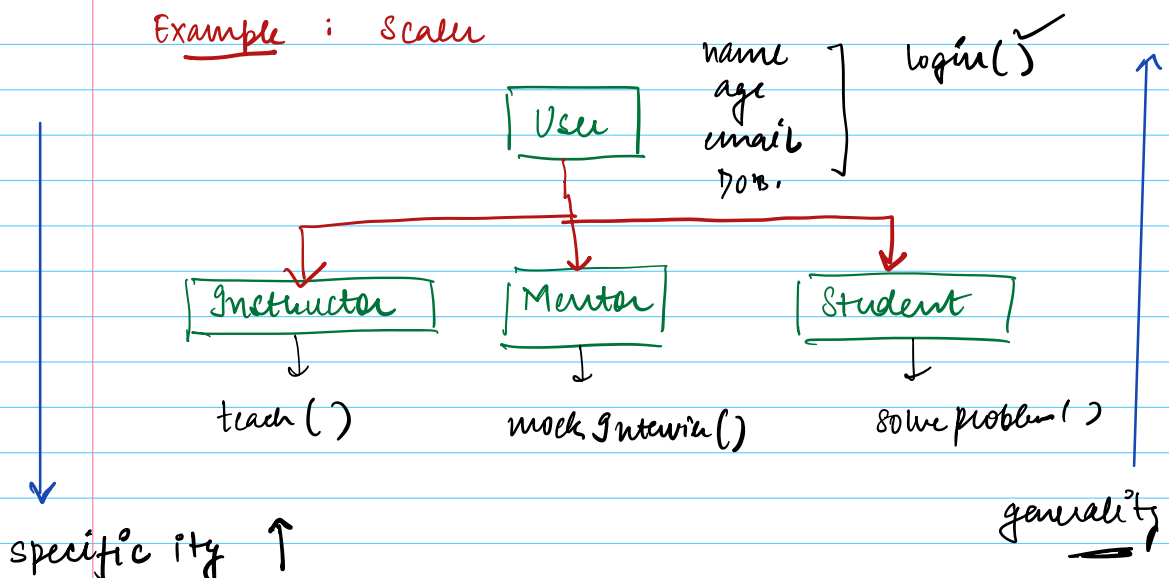
is-A Relation



Pug is a dog

Dog is a Mammal

Example : Scaler



JAVA → EXTENDS keyword

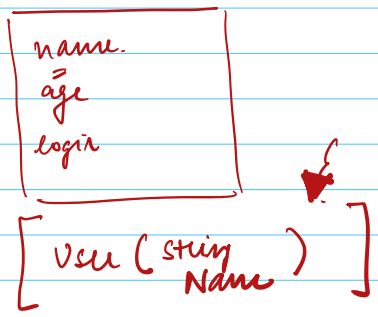
EXTENDS User

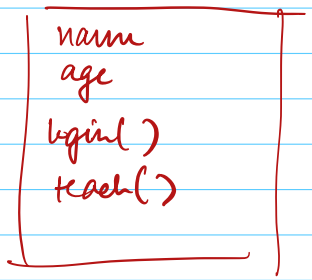
class User {
    string name
    int age
    login()
}

class Instructor {
    teach()
}

User u

Instructor





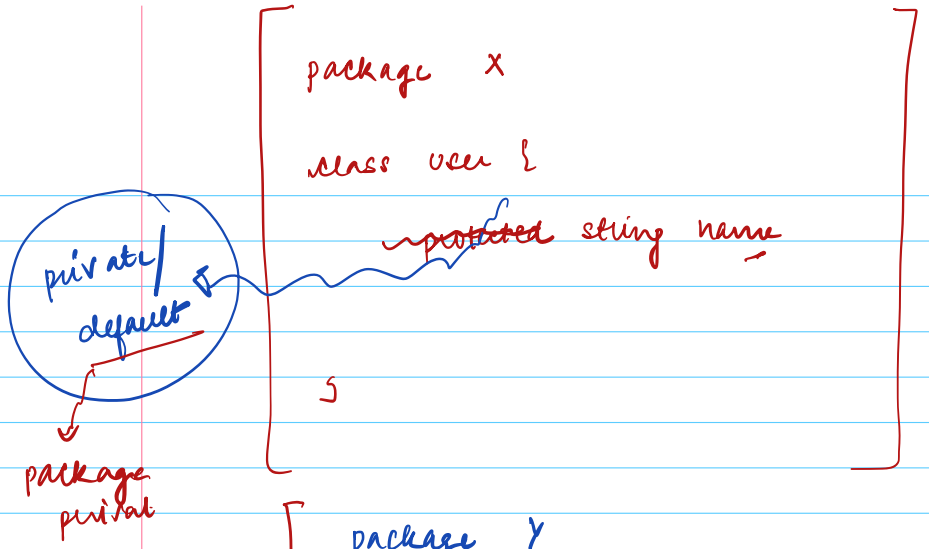
NOT SAVING SPACE

It is helping REUSE CODE

User() {
}

Default

Instructor() {
    User(); available?
}




```
package y
class student extends User {
    printMarks ( ) {
        print ( name + " - " )
    }
}
```

name = x

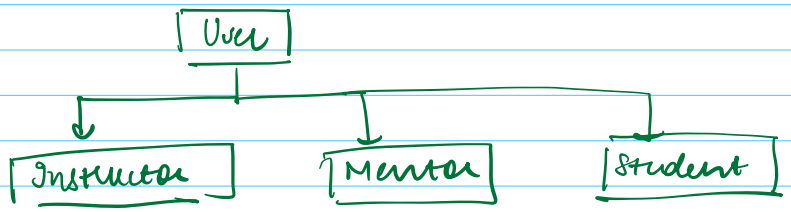
can only be accessed if property of parent class was public / protected

Polymorphism

poly → many

morph → forms

something which has many forms.




```
printName ( List<User> u ) {
    for ( user : u )
        print ( user.name )
}
```

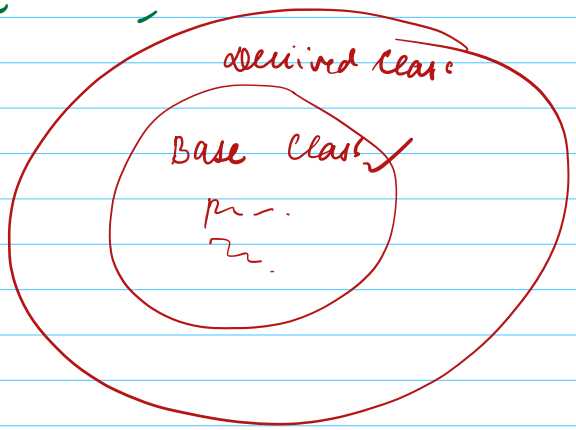
```
Instructor i = new Instructor("Anshuman")
Student    s = new Student("Uttamjeet")

printName ( [i, s] )
```

printName → Expects User type

[i, s] → Instructor / Student

We are allowed to have child class in a variable that represents parent




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