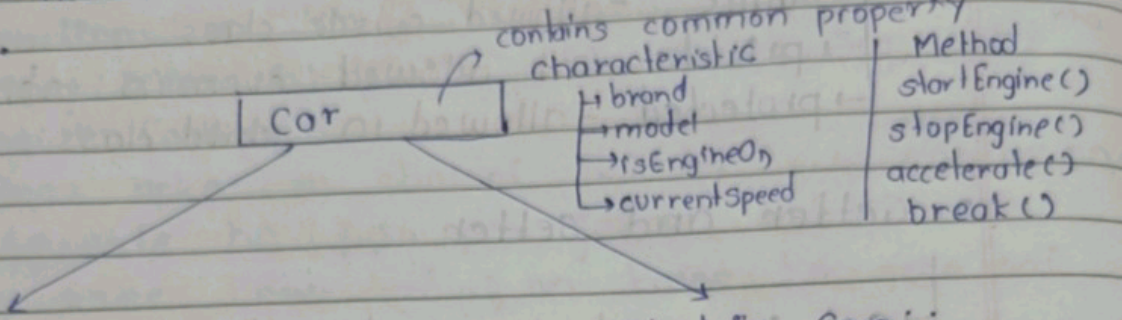
Lec3 : Inheritance and Polymorphism

What is Inheritance ? (Parent - child relation)
- Inheriting of properties and behaviours from another class (which will be called as parent class)

- And the class which is inherting is called child class.

Ex :



Manual Car
special feature of that car
- currentGear
- shiftGear()

Electric Car
- battery Percentage
- checkBattery()

How does class Inherit

```
class ManualCar : public Car
```

↳ this tells how the ~~fune~~ class is getting inherited

Code in VS

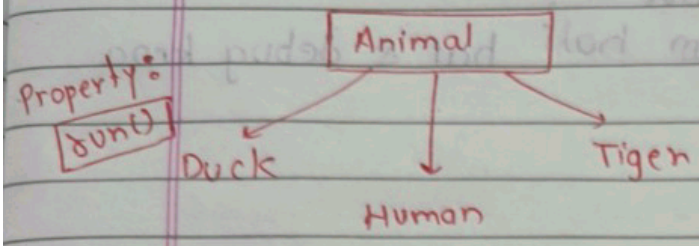
if it is public (used 99%)
↳ toh saare method and characteristic of parent class will behave some $like agr koi waha private hai toh access hi nhi hoga agar public hai toh public & protected hai toh protected

if it is protected
- ↳ private : access ✗
- ↳ protected : protected
- ↳ public : protected

if it is private
- ↳ No access : private
- ↳ protected : private
- ↳ public : private

Polymorphism : many forms

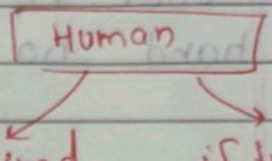
Type - I
- Ek hi behaviour alag alag log alag tarah se behave karte hai...



↳ this is called dynamic polymorphism

↳ Method ~~Overload~~ Overriding

Type - II
- Ek hi behaviour ko ek hi person depending upon parameters alag behave krta hai.



↳ this is called static polymorphism

Method Overloading

Ex:
Ab humme pata hai ManualCar and ElectricCar alag alag tarah se accelerate hongi toh hum main Car class mein usse declare kar skte hai and unke unke class mein woh apne properties ke hissab se define kar skte hai
↳ Dynamic Polymorphism : yaha overriding ho rha.

Static Polymorphism : yaha overloading hoga
Ab hum individual car lete ManualCar ab humme pata hai agar gaadi start hai & speed constant hai & accelerate dheere se kiya to speed slowly badegi whi jor se kiya toh jor se
⇒ In short same func name different parame or no. of parameter or datatype.

Date

Homework

1) What is Operator Overloading?
- Operator like + / - / * ko hum apne hisab se khudke class me redefine kar skte hai

2) Why Java /c don't have it?
- Code ki readability kam hoti hai & debug krna hard ho jayega...