=> Inheritance and Polymorphism

=>

```
        ┌──────────┐
        │  Object  │
        └──────────┘
         ╱        ╲
   ┌───────┐    ┌───────┐        X
   │   A   │    │   B   │
   └───────┘    └───────┘
         ╲        ╱
        ┌───────┐
        │   C   │
        └───────┘
```

```
   ┌──────────┐
   │  Parent  │
   │ Skincolor│
   │  height  │
   │  eyes    │
   │  Nose    │
   │          │
   │          │
   └──────────┘
        ↑
   ┌──────────┐
   │  Child   │
   │ skincolor│
   │  height  │
   │  eyes    │
   │  Nose    │
   │  swimg   │
   │  smong   │
   └──────────┘
```

Inherited methods

Overridden methods

↳ Specialised methods

```
   ┌──────────┐
   │  Plane   │
   │ takeOff()│
   │  landy() │
   └──────────┘
        ↑
    ┌───┴────┐
┌───────┐  ┌─────────────┐
│ cargo │  │  Fighter    │
│landy( )│  │  landy()    │
│cargloads()│ │(everyweapsl)│
└───────┘  └─────────────┘
```
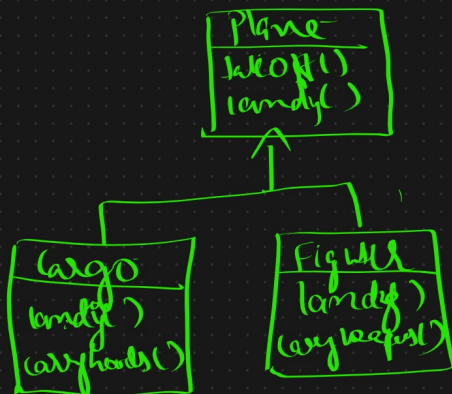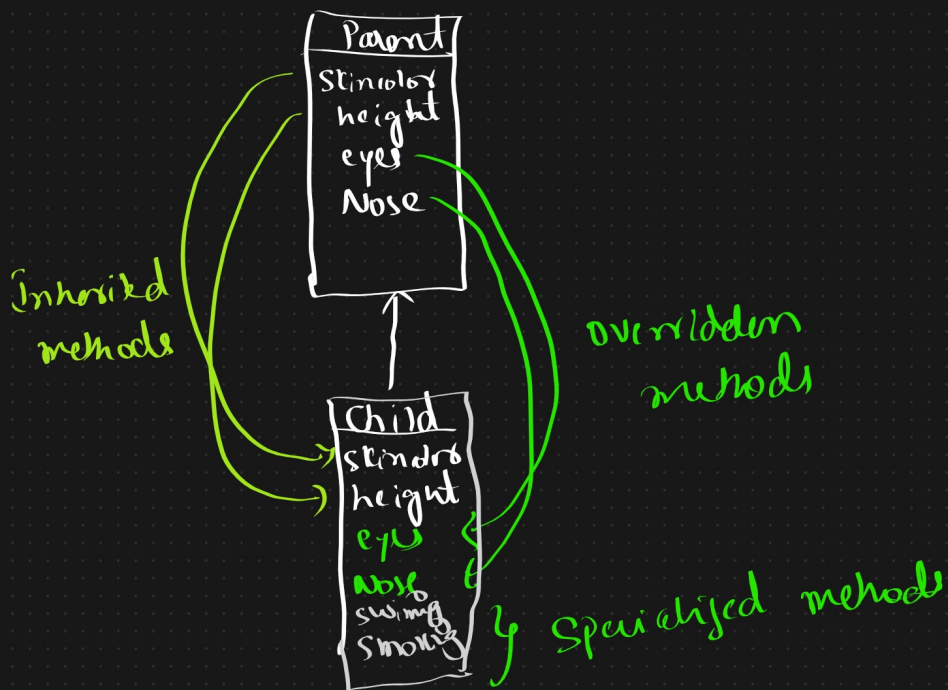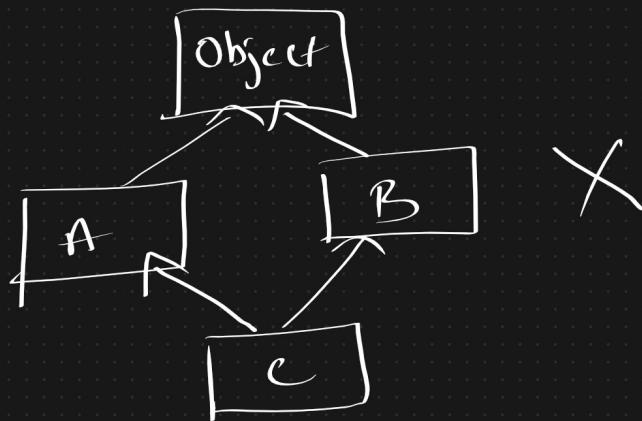
=> **Rule to override methods :-**

=> **Access specifes / Modifies**

→ Public   ✓ public intage ;
→ protected   ✓ protected int age ;
→ default   ✓   int age ;
→ private   ✓ private int age ;

✓ public void disp ( )   ✓ protected void disp( )
     of   q
       =
     y   y

  void disp( )   ✓ private void disp( )
    r   f
    y   y

Package :- Folder

Example =>   Calculator
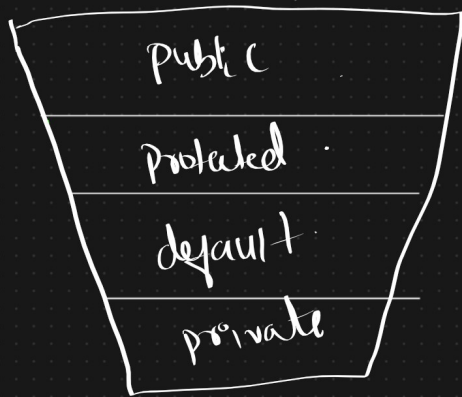   → Add => Multiple class
               → Sub => multiple class
               → Mul —
               → Div

Add → (age)   Sub
R =   A

	within a class	within a Package outside class	outside Package in (is-A relationship)	outside package no is-A relationship
Public	✓	✓	✓	✓
protected	✓	✓	✓	✗
default	✓	✓	✗	✗
private	✓	✗	✗	✗

Visibilty decreasing

Public
Protected
default
private

Visibilty increases