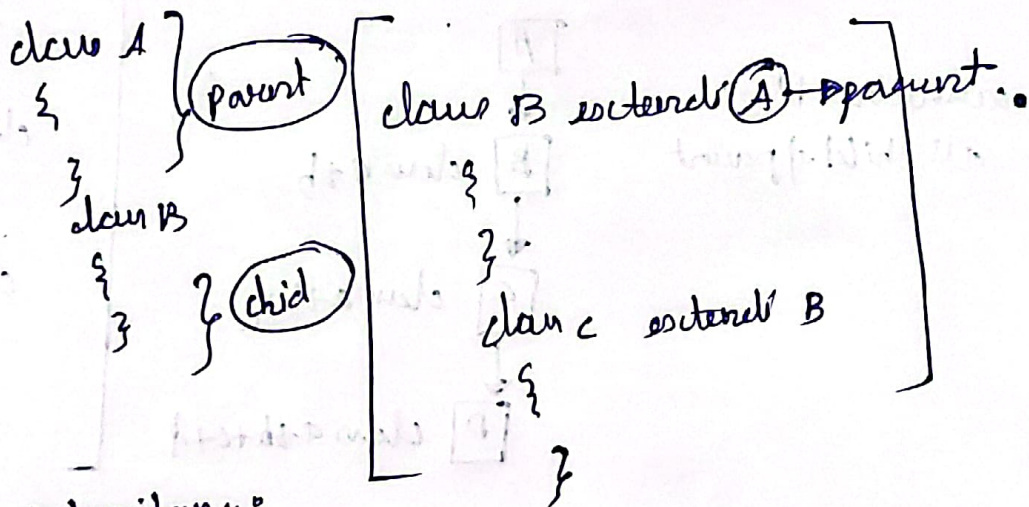# INHERITANCE

(devl 1) class A 5 function . 1. Superclass / base class

(devl 2) class B . 4 function . (5+4) → child class / subclass / devir

- Acquiring method of variables from parent class to child class
- reuse the properties / features of parent class.

Extend Keyword :

parent class details child class access

class A
{
} (parent)

}
class B
{
} } (child)

class B extend (A) → parent.
{
.
}
class c extend B
{
}
}

Types of Inheritance :

① Single Level
② Multi level   } JAVA support
③ hierarchical

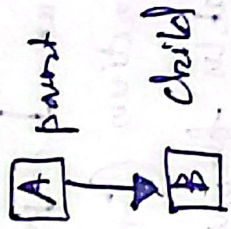④ Hybrid   } support but we need to use
⑤ Multiple   Inheritance Interface

① single
② multi level

Use of Inheritance :

- Code reusability
- No code duplication.
- Method overriding
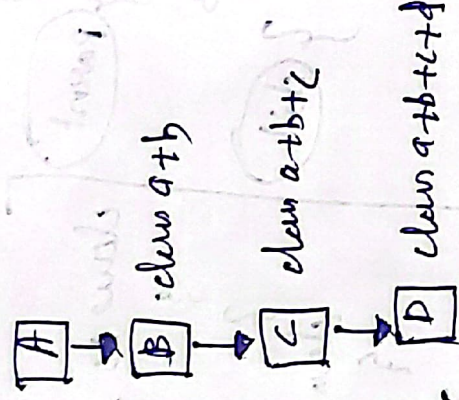
① Single level Inheritance :

A ──→ B

[A] parent
[B] child

② Multilevel Inheritance :

[A] ──→ [B] ──→ [C] ──→ [D]

• connection b/w
all child of parent

B → clacc a+b
C → clacc a+b+c
D → clacc a+b+c+d

SYNTAX
clacc A
{
}
clacc B extend A
{
}
clacc c extend B
{
}
clacc D extend c
{
}

③ Heirarchial Inheritance

[A] [B]
/   \
C   [B]
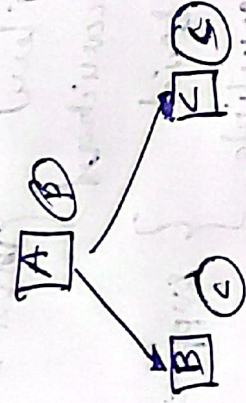
NO connection b/w
child only
parent hand
new parent
details

SYNTAX :
clacc A
{
}
clacc B extend A
{
}
clacc c extend A
{
}

Program Sample:

```
Package OOP;

class Dog
{
    public void barking() ->
    {
        sysout("Dog is barking");
    }
}

class cat extends Dog
{
    public void eating() -> method
    {
        sysout("cat is eating");
    }
}

public class Main
{
    PSVM {
        cat c = new cat();

        c.barking();
        c.eating();
    }
}
```

After cat

```
class bird extends cat
{
    public void flying()
    {
        sysout("Bird is flying");
    }
}

cat object +
Bird b = new Bird();
b.barking();
b.eating();
b.flying();
}
```

Heirarcha)

class Dog

eg:

class cat extends Dog

class bird extends Dog

PSVM → cat obj + Doy + details'
     → bird obj + Dog details

Assign: WORD Documents

Patin / string vowels / Fibancers / prime

① string Reuse ?