

# Up casting

i) Child c = new Child();

Parent p = c;

→ p is Child.  
type is Parent.

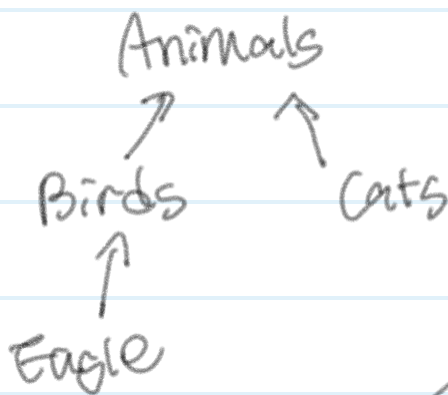
ii) Parent p = new Child();

⇒ integrate many childs to same type,  
access all methods, variables from the parent.

⇒ overridden methods can be used.

Methods that only Child has

## Down Casting / Unboxing



✱ Error : Animals  $\neq$  Birds.  
Animals  $\supset$  Birds.



if ( a instanceof Birds ) {  
Birds b = (Birds) a;  
runtime check }

# Object Array

```
class Hello {}
```

```
Hello[] h = new Hello[3];
```

only classes extend from the same parent class

```
Parent p = new Parent[5];
```

```
p[0] = new Child();
```

↳ auto downcasting.