Generics

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   Manager

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   Control

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   Painting

:

Class Box
- Int x
- Int y
- Int z

Class Box
- String s1 : Sparrow
- String s2 : Eagle
- String s3 : Crow

Class Box
- String s : Sparrow
- int x :10 cm
- int y: 20 gm

Java generics provides us a way to create classes, methods and interfaces using type parameters.

T extends
Number

Extends keyword means that T
extends the upper bound in case
you supply an object that extends
Number class or implements
Number Interface.

Number

|
integer.   Double   long

Bounded generics

→ generic classes ''

→ generic methods

→ wild card (?) → represents an unknown type.

→ Bounded generics   → Raw Types → generic Interfaces.

⬇

Restrict
the
type to
" few classes"

void printList (List <?> List) {
===

}

Animal Box → can hold any kind of Animals.

Upper Bound: class   NumberBox < (T) extends   Number >

NumberBox < Integer >   T must be
NumberBox < Double >   subclass Number
                               or they implement
Number Box < user >   Number
                                  interface.

```
Building
   ├── Office
   ├── House
   └── Hotel
```
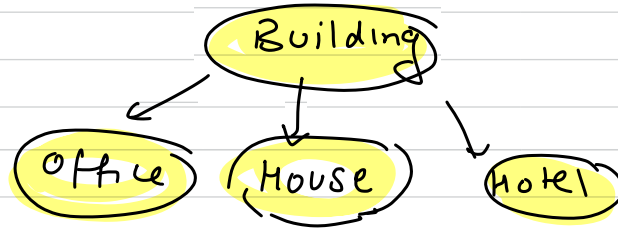
paint All Buildings (List < Building > l) {

}

List<Building> l = _____ , (work)

List<House> lh = _____ (not work)

paint All Building (___);

paint All Buildings (list<? extends Building>) {

.3

Homework:

     ↳ Lower Bound   (super)

                     ? Super ClassName

Type Erasure

     Class Box<T> {

          T data

     3

After compilation:

Class Box {

    Object data;   { internally }

}