Dynamic | Runtime | Overriding → Different Classes

* When a parent class method is used differently in multiple child classes, the process is called overriding.

Parent RBI → (rate of interest) 6.9%

C1	C2	C3
HDFC	IDBI	ICICI
roi - 7.1%	roi - 6.5%	roi 7.8%

using according to their business requirement!

* Nested Classes | Inner Class :→
  - → Account Dept
  - → Loan Dept

PAN – |CIBIL Score|

NSDL

```
outer
class Main {
    class Inner {      → inner
    }
    main() {
    }
}
```

→ When we want something to be exclusive for a class, we use an inner class.

Fees → Account

Academ

Fees

* Outer_Class.Inner_Class in_obj = out_obj.new Inner_Class();

Syntax for nested class object.

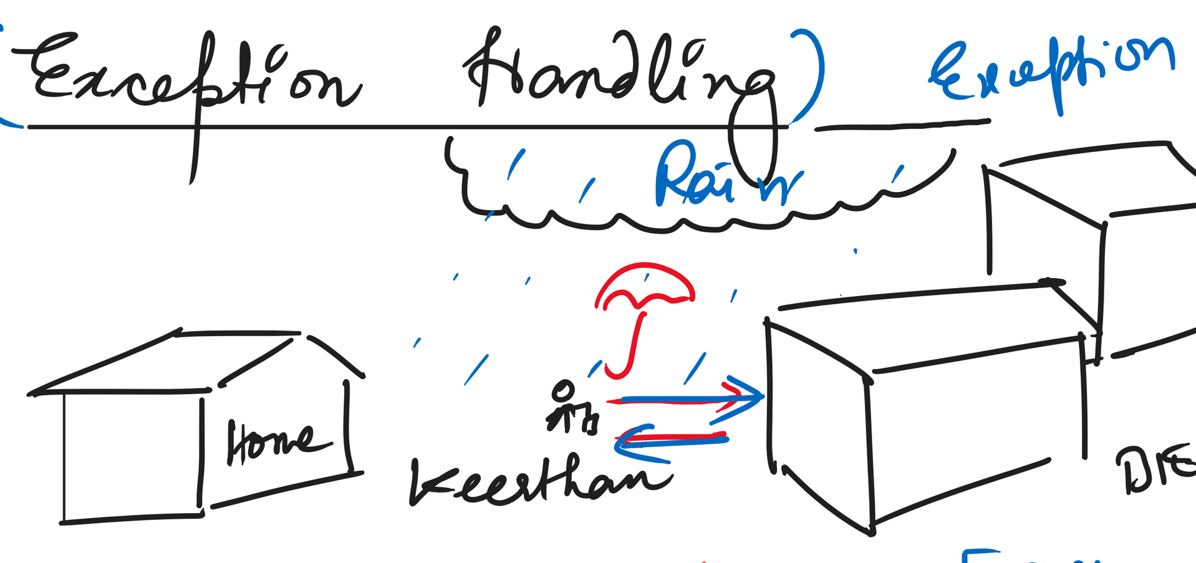
Association

Relation b/w all classes, interfaces inside an application.

Employee has an address | Cat is a animal → cat

Aggregation	Composition
* No extends keyword	Inheritance (extends)
Car | MP3 Player	Car | Engine
Loose Coupling	Tight Coupling
HAS-A Relationship	IS-A Relationship

(Exception Handling) Exception



{ ; Syntax

10/0

Anything that disturbs / disrupts the normal flow of execution of code is called an exception.

Raincoat / auto / umbrella handler

Error → Game, 32GB RAM, 8GB, Out of Memory Error — Can't be handled

Exception — can be handled

The process of handling exceptions is Exception Handling

→ (Throwable) → |Object| java.lang.Object → Parent of all classes in java

- Errors
  - CT
  - RT
- Exception
  - Checked (Known)
  - Unchecked (Unknown)
  - User Defined (custom exceptions)

C++	Java	Python
try ( ) { }	try ( ) { }	try:
catch ( ) { ~ClassName(); destructor }	catch ( ) { }	except:
No finally block!	finally { } ✓	finally: ✓

* Can we run a java application without using the "main" method?

⇒ No, main method is mandatory.

All java resources are started in the static block.

Till 1.6 it was not mandatory.

↳ we were using static block:

```
static {

}
```

1.7 version — main is mandatory

```
{
    (Object)
    Instance Initializer Block (IIB)
    If we want to pass any info to each object, we use IIB.
}
```

Order of execution:

- * Static block contents → This is always first
- * main method contents → if written earlier
- * IIB contents → if written earlier
- * finally block executes → at the end

* multiple static blocks → Top to Bottom
* multiple IIBs → Top to Bottom

try, catch, finally, static, IIB, throw, throws, Throwable.

throw ↓ user defined exceptions

* The throw keyword is used to create User Defined Exceptions (Custom Exceptions)

* For checked exception we must use try-catch or throws.

* For unchecked exceptions it's not mandatory to use try-catch or throws.

* The throws keyword is used to suppress the warnings in the method signature itself.
⇒ method_name() throws {

(i) (try with resources) }

* Can we write a try block without catch and finally? *** Oracle / Amazon / Microsoft

(ii) Then how is the resource getting closed?