**Exception:**

While program execution programmer faces abnormal situation depending on code declaration.

IF such situation which cannot be perform by JVM then JVM trigger an event this is known as exception.

If any abnormal situation is identified then results in termination of java program.

**How to handel exception?**

Handling the event generated by JVM during program execution is known as exception handling.

The risky code can be written in try and catch block

Ex:

try

{

//Risky code

}

Catch(ExceptionName refVariable)

{

//Envent handled

}

**Try block:**

* It is use to declare risky code
* Controller visists the try block only once through out lifetime of program.
* Multiple try blocks are not allowed

**Catch block:**

* Catch block is use to handel event generated from try block
* Catch block will get executed only if event generated in try block

**package** exception;

**public** **class** Demo {

**public** **static** **void** main(String[] args) {

String str = **null**;

**try**

{

System.***out***.println(str.length()); //Risky code

}

**catch**(NullPointerException e) {

System.***out***.println("Null pointer execption and it is handled");

}

System.***out***.println("-----End of program-------");

}

}

**package** exception;

**public** **class** Demo1 {

**public** **static** **void** main(String[] args) {

**int** a=10;

**int** b=0;

**try**

{

**int** c=a/b; // Risky code

}

**catch** (ArithmeticException e){

System.***out***.println("Arithmetic exception handeled");

}**catch** (NullPointerException e)

{

System.***out***.println("Null pointer exception handled");

}**catch**(ArrayIndexOutOfBoundsException e)

{

System.***out***.println("Array index out of bond excption is hnadled");

}**catch**(Exception e) {

System.***out***.println("Generic exception handled");

}

System.***out***.println("THis is last line");

}

}

**package** exception;

**public** **class** Demo2 {

**public** **static** **void** main(String[] args) {

String [] ar= {"ramesh", "suresh", "dinesh" };

System.***out***.println(ar.length);

**try** {

System.***out***.println(ar[4]); // Risky code

}

**catch**(ArrayIndexOutOfBoundsException e) {

System.***out***.println("Exception handelled");

}

System.***out***.println("This is last line");

}

}

Finally block:  
=> This is close costly resources of current program.

* It is basically use after catch block.
* we can declare finally block after try block but it not good peactice.
* So after try block catch block shouls be used then finally block.

Throws keyword: This is the keyword use to declare type of exception generated inside the class or method.

throw : this is use create new custom exception.

difference between final, finally and finalize

Final => Keyword

Finally => block

Finalize => is method present in garbage collection