4. Exception and file handling.

* Exception:
An exception is an unexpted event

Class Error Examples.
{
public state void main (String args [])
{
recursive method (10)
}
void static recursivemethod (int i)
{
while (i != 0)

* Dealing with error.

1] Syntax Error or Compile time error.
errors that are detected by the Compiler in Compilation are called as Compile errors or syntax errors.

2] Run time Error.
class file of the program but when the time of running the program, it shows the error and that type of error called run-time error.

3] Logical error.
This type of error is occured when there

is some mistake in logic of user like user wants to multiply two numbers and user puts addition marks instead of multiplication then it is called as logical error.

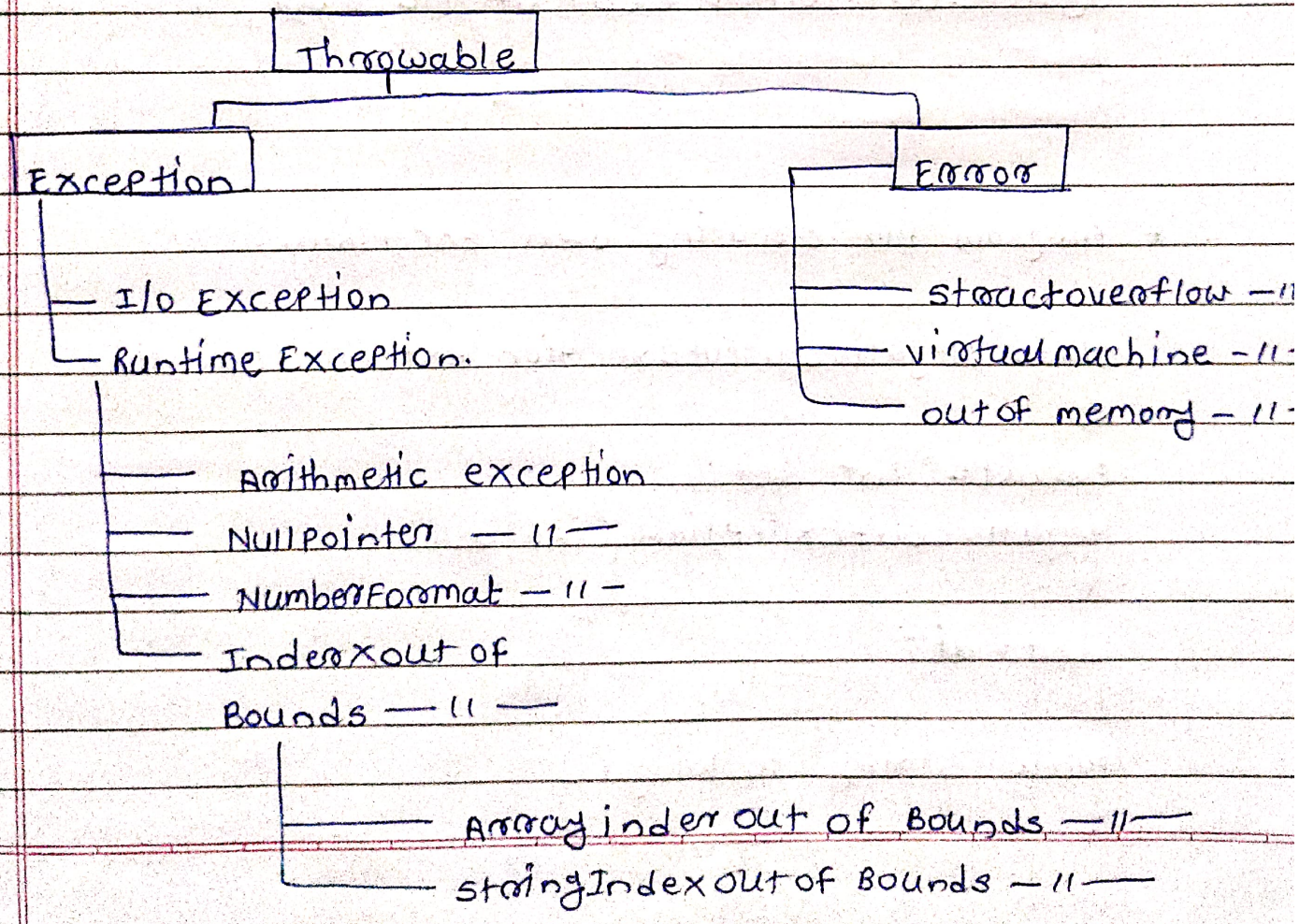
* Exception and exception class.

- Exception.

we can define exception as an event occurs during the execution of a program that interrupts the normal flow of the program.

- Exception class.

All exception classes are subtypes of the java.lang.Exception class. the exception class is a subclass of the throwable class.



* Program for binary and catch blocks. An array declared with two elements. Then the code tries to access the 3rd element of the array which throws an exception.

```
import java.io.*;
Public class Excer test
{
public static void main(string args[])
{
try
{
int a[] = new [int[2];
system.out.println("Access element tree :"+a[3]);
} catch (ArrayIndexoutofBoundsException e){
system.out.println("exception thrown :"+e);
}
system.out.println("out of the block");
}
}
```

* Program for creating own exception.

```
class Negativeoutputexception extends Exception.
{
Private int det;
NegativeoutException (int a)
{
det = a;
}
public string tostring ()
{
```

```
return "NegativeOutputException[" + det + "]";
}
}
class OwnException
{
public static void main (String args[])
{
int x = Integer.parseInt (args[0]);
int y = Integer.parseInt (args[1]);;
int z;
try
{
z = x * y;
if (z<0)
throw new NegativeOutputException (z);
System.out.println("output:"+z);
}
Catch (NegativeOutputExption e)
{
system.out.println ("Caught:"+e);
}
}
}
```

* Types of exceptions.

1) checked exceptions.
2) Unchecked exceptions.
3) Errors.

* Exception Handling
A Java exception is an object the describes an exceptional condition that has occured in a program code.
1) try
2) catch
3) finally.

* Throws and throw keywords.

* Creating, Reading and deleting files.

* Streams.
All the inputs and output operation of file uses streams.

- a stream can be defined as "a logical device that represents the flow of a sequence of characters.