

Exceptions

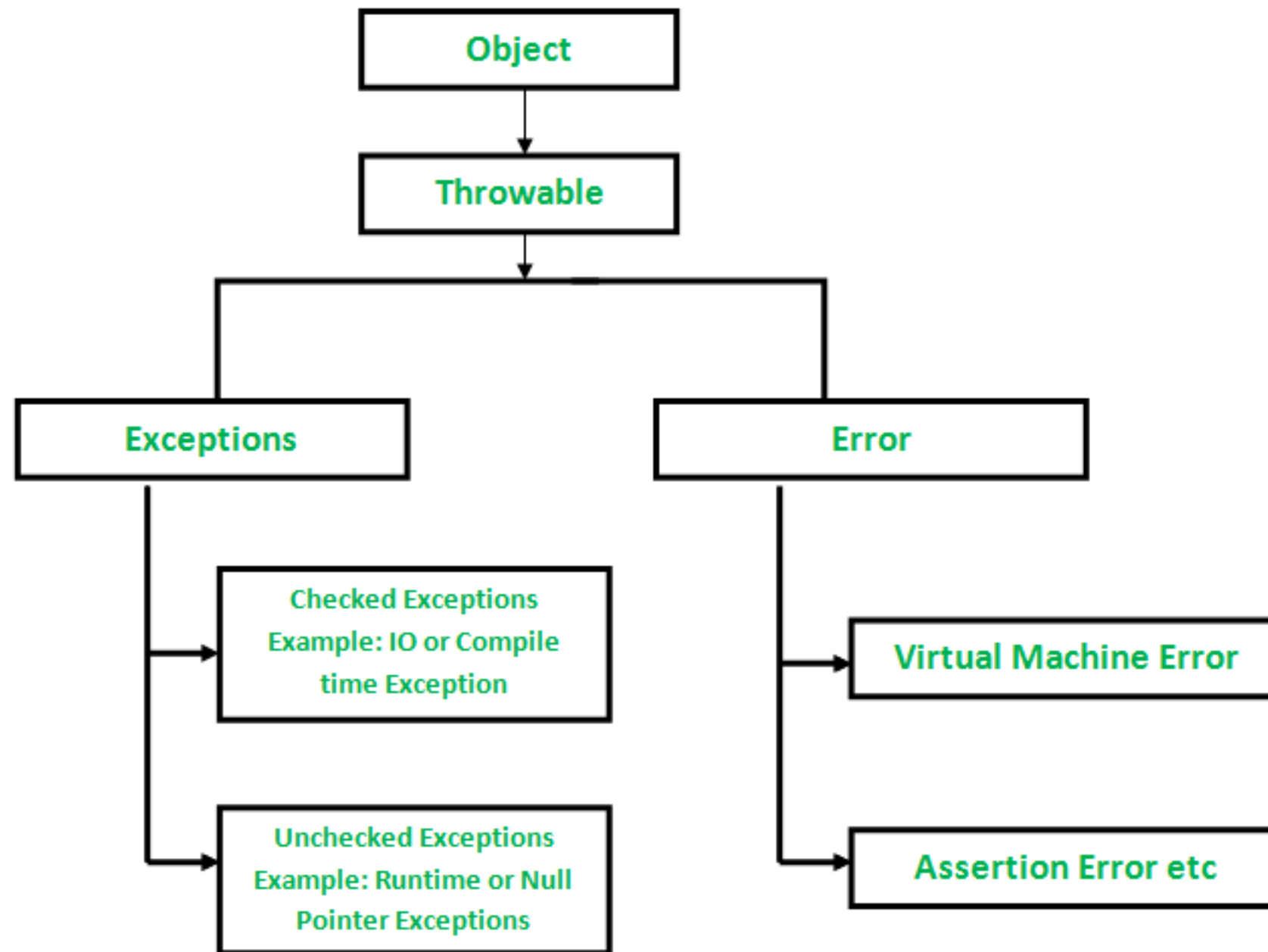
What is Exception?

An exception is a problem that arises during the execution of a program. When an Exception occurs the normal flow of the program is disrupted and the program terminates abnormally.

Exception can occur for many different reasons as:

- A user has entered an invalid data.
- A file that needs to be opened cannot be found.
- A network connection has been lost in the middle of communications or the JVM has run out of memory.

Exception Hierarchy



Exception handling

- try and catch

```
int hours = -3;
int numberOfSeconds = 0;
try {
    numberOfSeconds = instance.getNumberOfSeconds(hours);
}
catch (IllegalArgumentException exception) {
    numberOfSeconds = instance.getNumberOfSeconds(hours * -1);
}
System.out.println(numberOfSeconds);
```

- throws

```
public class CheckedExceptions {
    public static void main(String[] args) {
        CheckedExceptions instance = new CheckedExceptions();
        try {
            instance.methodWithCheckedException();
        }
        catch (IOException e) {
            e.printStackTrace();
        }
    }

    private void methodWithCheckedException() throws IOException {
        throw new IOException();
    }
}
```

Good practices

- Try block as small as possible
- Using exception appropriate to situation
- if You create your exception name it properly
- Don't create too many exceptions!