

CISC 3115 TY2

Exception and Call Stack

Hui Chen

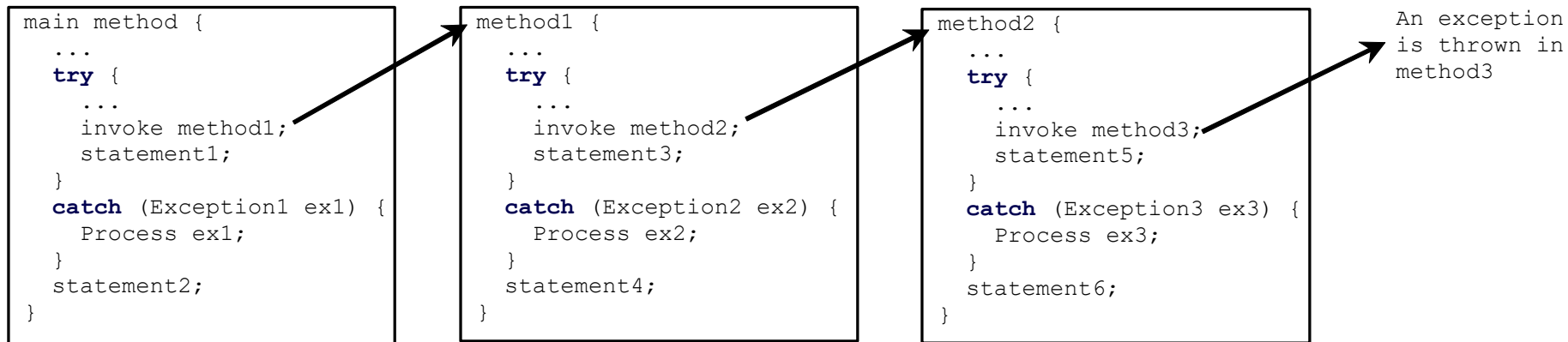
Department of Computer & Information Science

CUNY Brooklyn College

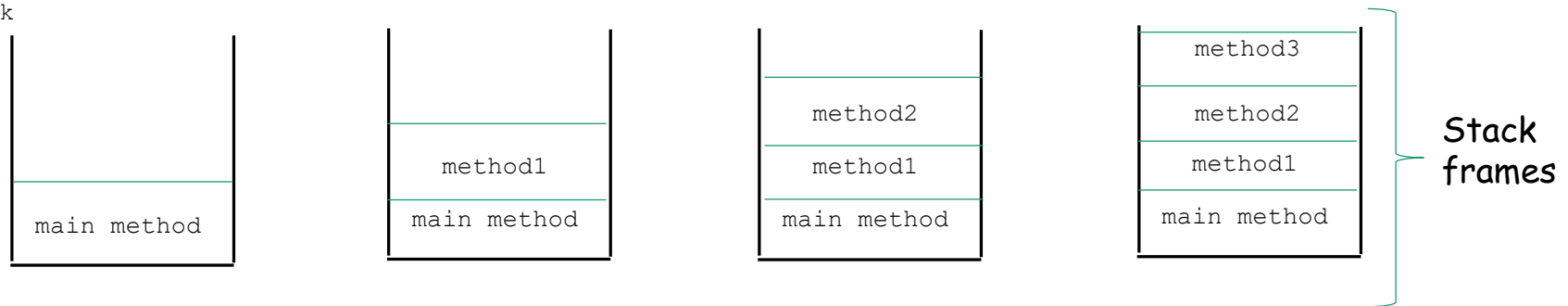
Outline

- Discussed
 - Error and error handling
 - Two approaches
 - Exception
 - The throwable class hierarchy
 - System errors and semantics
 - Runtime exceptions and semantics
 - Checked errors and semantics
 - Declaring, throwing, and catching exception
- Exception and call stack

Exception and Call Stack



Call Stack



Example: Call Stack and Stack Trace

```
MINGW64:/c/Users/hui/work/course/CISC3115/SamplePrograms/C14aException/stacktrace
hui@ThinkpadE450 MINGW64 ~/work/course/CISC3115/SamplePrograms/C14aException/stacktrace (master)
$ javac StackTraceDemo.java

hui@ThinkpadE450 MINGW64 ~/work/course/CISC3115/SamplePrograms/C14aException/stacktrace (master)
$ ls
Course.class  StackTraceDemo.class  Student.class
Course.java   StackTraceDemo.java   Student.java

hui@ThinkpadE450 MINGW64 ~/work/course/CISC3115/SamplePrograms/C14aException/stacktrace (master)
$ java StackTraceDemo
Exception in thread "main" java.lang.IllegalStateException: No way to compute GPA if no courses.
    at Student.getGPA(Student.java:3)
    at Course.addStudent(Course.java:12)
    at StackTraceDemo.doSth(StackTraceDemo.java:10)
    at StackTraceDemo.main(StackTraceDemo.java:4)

hui@ThinkpadE450 MINGW64 ~/work/course/CISC3115/SamplePrograms/C14aException/stacktrace (master)
$
```

Questions

- Concept of call stack and stack frame
- Exception and stack trace