



Finally Clause

Agenda

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Using finally

- When an exception occurs, the execution of the program takes a non-linear path, and could bypass certain statements
- A program establishes a connection with a database, and an exception occurs
- The program terminates, but the connection is still open
- To close the connection, **finally** block should be used
- The finally block is guaranteed to execute in all circumstances

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Using finally (Contd.).

```
import java.io.*;
class FinallyDemo{
static void funcA() throws FileNotFoundException
{
    try{
        System.out.println("inside funcA( )");
        throw new FileNotFoundException( );
    }
    finally{
        System.out.println
        ("inside finally of funcA( )");
    }
}
```

Using finally (Contd.).

```
static void funcB() {  
    try{  
        System.out.println("inside funcB( )");  
    }  
    finally{  
        System.out.println  
        ("inside finally of funB( )");  
    }  
}  
}
```

Using finally (Contd.).

```
static void funcC() {  
    try{  
        System.out.println("inside funcC( )");  
    }  
    finally{  
        System.out.println  
        ("inside finally of funcC( )");  
    }  
}
```


Using finally (Contd.).

```
public static void main(String args[]){  
    try{  
        funcA();  
    }  
    catch (Exception e){  
        System.out.println("Exception caught");  
    }  
    funcB( );  
    funcC( );  
}  
}
```

Significance of `printStackTrace()` method

- We can use the *`printStackTrace()`* method to print the program's execution stack
- This method is used for debugging

Example on printStackTrace() method

```
import java.io.*;
class PrintStackExample {
    public static void main(String args[]) {
        try {
            m1();
        }
        catch(IOException e) {
            e.printStackTrace();
        }
    }
}
```

contd..

Example on printStackTrace() method

```
static void m1() throws IOException {  
    m2();  
}  
static void m2() throws IOException {  
    m3();  
}  
static void m3() throws IOException{  
    throw new IOException();  
}  
}
```

Expected Output

java.io.IOException

at PrintStackExample.m3(PrintStackExample.java:24)
at PrintStackExample.m2(PrintStackExample.java:20)
at PrintStackExample.m1(PrintStackExample.java:16)
at PrintStackExample.main(PrintStackExample.java:5)

Quiz

What will be the result, if we try to compile and execute the following code as java Ex2 A

```
class Ex2 {  
    public static void main(String[] args) {  
        try {  
            int i= Integer.parseInt(args[0]);  
            System.out.println(i);  
        }  
        catch (NumberFormatException e) {  
            System.out.println(e);  
        }  
        System.out.println("Exception Caught");  
        finally { }  
    }  
}
```

It will throw compilation Error

Quiz(Contd.).

What will be the result, if we try to compile and execute the following code

```
public class Tester {  
    static void method() {  
        throw new Exception();  
    }  
    public static void main(String[] args) {  
        try {  
            method();  
        } catch (Throwable e) {  
            try {  
                throw new Exception();  
            } catch (Exception ex) {  
                System.out.print("exception");  
            } finally {  
                System.out.print("finally");  
            }  
        }  
    }  
}
```

It will throw compilation Error;
Why ?
How to remove the same?

Summary

In this session, you were able to:

- Learn about finally clause
- Learn about print stack trace method



Thank You

