

## Exception Handling in Java

### Group Task:

Do some research in pairs and answer following questions:

#### 1 How does Java handle exceptions?

**Try-Block with executable code.** (*normaler Code*)

**Catch-Block to catch potential errors.** (*Absturz behandeln*)

**Throw command -> delegate the exception to the next class.** (*die Klasse "wirft" den Fehler weiter an eine andere Klasse*)

#### 2 Find or create a simple example which shows how exception handling is done.

```
public static void main(String args[]){  
  
    int nums[] = new int[4];  
  
    try{  
        System.out.println("Before exception is generated.");  
  
        //generate an index out of bounds exception:  
        nums[7] = 10;  
        System.out.println("this codeline won't be reached !");  
    } catch (ArrayIndexOutOfBoundsException exc){  
        //catch the exception:  
        System.out.println("We have an exception!");  
    }  
    System.out.println("After catch statement");  
}
```

**3 What class is at the top of the exception hierarchy?**

The class is « Exception ».

**4 Can I create my own exceptions? If yes, how?**

Yes, you can. Your exception extends the class "Exception".

**5 What is the difference between checked and unchecked exceptions?**

**Checked exceptions:** the programmer can handle these in his code.

**Unchecked exceptions:** unexpected exceptions which occur at runtime. (*tauchen zur Laufzeit auf und müssen vermieden werden. Sind ein Anzeichen, dass schlecht programmiert wurde*).

**6 What is wrong with following exception handling?**

```
try{
    Person p = database.lookup(details);
    System.out.println("The details belong to: " + p);
}
```

```
catch (Exception e) {  
    //Handle any checked exceptions  
    ...  
}  
catch (RuntimeException e) {  
    //Handle any unchecked exceptions  
    ...  
}
```

**RuntimeException is never reached. Exception class covers all exceptions. (*die Exception-Klasse behandelt ALLE Fehler*)**

#### Links and Infos:

<http://www.javapractices.com/topic/TopicAction.do?id=129>

<http://tutorials.jenkov.com/java-exception-handling/checked-or-unchecked-exceptions.html>

<http://docs.oracle.com/javase/tutorial/essential/exceptions/>