**Java Exception Handling examples**

[**EXCEPTION HANDLING**](http://beginnersbook.com/category/technology/java-guide/exception-handling/)

Here we have shared examples of few most frequently seen exceptions in java. These examples will help you understand [**Exception handling in Java**](http://beginnersbook.com/2013/04/java-exception-handling/).

**Example 1: Arithmetic exception**

Class: Java.lang.ArithmeticException  
This is a built-in-class present in java.lang package. This exception occurs when an integer is divided by zero.

class ExceptionDemo1

{

public static void main(String args[])

{

try{

int num1=30, num2=0;

int output=num1/num2;

System.out.println ("Result = " +output);

}

catch(ArithmeticException e){

System.out.println ("Arithmetic Exception: You can't divide an integer by 0");

}

}

}

**Output of above program:**

Arithmetic Exception: You can't divide an integer by 0

**Explanation:** In the above example I’ve divided an integer by a zero and due to which ArithmeticException is thrown.

**Example 2: ArrayIndexOutOfBounds Exception**

Class: Java.lang.ArrayIndexOutOfBoundsException

This is a built in class present in java.lang package. This exception occurs when the referenced element does not exist in the array. For e.g. If array is having only 5 elements and we are trying to display 7th element then it would throw this exception.

Example:

class ExceptionDemo2

{

public static void main(String args[])

{

try{

int a[]=new int[10];

//Array has only 10 elements

a[11] = 9;

}

catch(ArrayIndexOutOfBoundsException e){

System.out.println ("ArrayIndexOutOfBounds");

}

}

}

**Output:**

ArrayIndexOutOfBounds

In the above example the array is initialized to store only 10 elements indexes 0 to 9. Since we are invoking index 11 that’s why it is throwing this exception.

**Example 3: NumberFormat Exception**

Class: Java.lang.NumberFormatException

The object of the above built-in class gets created whenever a string is parsed to any numeric variable.  
For E.g. The statement int num=Integer.parseInt ("XYZ") ; would throw NumberFormatException because String “XYZ” cannot be parsed to int.

Complete Code:

class ExceptionDemo3

{

public static void main(String args[])

{

try{

int num=Integer.parseInt ("XYZ") ;

System.out.println(num);

}catch(NumberFormatException e){

System.out.println("Number format exception occurred");

}

}

}

Output:

Number format exception occurred

**Example 4: StringIndexOutOfBound Exception**

Class: Java.lang.StringIndexOutOfBoundsException

* An object of this class gets created whenever an index is invoked of a string, which is not in the range.
* Each character of a string object is stored in a particular index starting from 0.
* To get a character present in a particular index of a string we can use a[**method charAt(int)**](http://beginnersbook.com/2013/12/java-string-charat-method-example/) of **[java.lang.String](http://beginnersbook.com/2013/12/java-strings/" \t "_blank)** where int argument is the index.

E.g.

class ExceptionDemo4

{

public static void main(String args[])

{

try{

String str="easysteps2buildwebsite";

System.out.println(str.length());;

char c = str.charAt(0);

c = str.charAt(40);

System.out.println(c);

}catch(StringIndexOutOfBoundsException e){

System.out.println("StringIndexOutOfBoundsException!!");

}

}

}

Output:

22

StringIndexOutOfBoundsException!!

Exception occurred because the referenced index was not present in the String.

**Example 5: NullPointer Exception**

Class: Java.lang.NullPointer Exception  
An object of this class gets created whenever a member is invoked with a “null” object.  
Example:

package beginnersbook.com;

class Exception2

{

public static void main(String args[])

{

try{

String str=null;

System.out.println (str.length());

}catch(NullPointerException e){

System.out.println("NullPointerException..");

}

}

}

Output:

NullPointerException..

Here, length() is the function, which should be used on an object. However in the above example String object str is null so it is not an object due to which NullPointerException occurred.