

6th March 23 Exception Handling Assignment-21

1. Explain different types of Errors in Java.

Ans: In any programming language we categorize error into 2 types

- Syntax Error/CompileTime Mistakes
- Logical Error/RunTime Mistakes

Syntax error/CompileTime Mistake

- It refers to the mistakes done by the programmer with respect to syntax
- These mistakes are identified by the compiler, so we say it as "Compile Time Mistake".

Logical Error/RunTime Mistake

- It refers to the mistakes done by the programmer in terms of creating a logic
- These mistakes are identified by JVM during the execution of a program, due to which it is called "RunTime Mistake".

2. What is an Exception in Java?

Ans: An unwanted/unexpected event that disturbs the normal flow of execution of a program is called "Exception handling".

- The main objective of Exception handling is to handle the exception.
- It is available for graceful termination of program.

3. How can you handle exceptions in java? Explain with an example .

Ans: Exception handling can be performed using:

Try: the set of statements or code which required monitoring for an exception is kept under this block.

Catch: this block catches all exceptions that are trapped in the try block.

Finally: this block is always performed irrespective of the catching of exceptions in the try or catch block.

Ex: class Launch

```
{  
public static void main(String args[])
```

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```
{  
try  
{  
System.out.print("Hello" + " " + 1 / 0);  
}  
catch(ArithmeticException e)  
{  
System.out.print("£world");  
}  
}  
}
```

4. Why do we need exception handling in Java?

Ans: If there is no try and catch block while an exception occurred, the program will terminate. Exception handling endures the smooth running of a program without program termination.

5. What is the difference between exception and error in java?

Ans: Error typically happens while an application is running. For instance, Out of Memory Error occurred in case the JVM runs out of memory. On the other hand, exceptions are mainly caused by the application. For instance, Null Pointer Exception happens when an app tries to get through a null object.

6. Name the different types of exceptions in Java.

Ans: Based on handling by JVM, there are typically two types of exceptions in Java:

Checked: Occur during the compilation. Here, the compiler checks whether the exception is handled and throws an error accordingly.

Unchecked: Occur during program execution. These are not detectable during the compilation process.

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7. Can we just use try instead of finally and catch blocks? Give an example .

Ans: No, doing so will show a compilation error. Catch or finally block must always accompany try block. We can remove either finally block or catch block, but never both.