Java Exception Handling

1. Explain different types of Errors in Java.

Ans: In any programming language we categorise error into 2 types
- Syntax Error/CompileTime Mistake
- Logical Error/RunTime Mistake

Syntax error/CompileTime Mistake

- It refers to the mistake done by the programmer gith respect to syntax.
- These mistakes are identified by the compiler, so we say it as "CompileTimeMistake".

Logical Error/ RunTimeMistakes

- It refers to the mistakes done by the programmer in terms of writing a logic.
- Thede mistakes are identified by jvm during the execution of a program, so we say it as "RunTimeMistake".

2. What is an Exception in Java?

Ans: An unwanted/expected event that disturbs the normal flog of execution of a program id called "Exception handling"
- The main objective of Exception handling id to handle the exception
- Its id 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 were trapped in the try block.

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

```
package Exeception_Handling;

public class Launch5 {
    public static void main(String args[])
    {
```

```java
    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 occurs, the program will terminate Exception handling ensures the smooth running of a program without program termination.

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

Ans: Errors typically happen while an application id running. For instance, Out of Memory Error occurs in cade 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 tried 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.

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

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.