

## Self Preparation:

### Exception Handling in Java :

#### 1. What is Exception Handling in Java?

The Exception Handling in Java is one of the mechanisms used to **handle the runtime errors** so that the normal flow of the application can be maintained.

#### 2. How to handle Exceptions using try and catch in Java?

- The **try** statement allows you to define a block of code to be tested for errors while it is being executed.
- The **catch** statement allows you to define a block of code to be executed, if an error occurs in the try block.

#### 3. How to handle Multiple Exceptions in Java?

A try block can be followed by one or more catch blocks. Each catch block must contain a different exception handler. So, if you have to perform different tasks at the occurrence of different exceptions, use java **multi-catch block**.

#### 4. What is the usage of finally keywords in Java?

The finally keyword is used in association with a try/catch block and guarantees that a section of code will be executed, even if an exception is thrown.

#### 5. What are the types of Exceptions in Java?

1. Checked Exception.
2. Unchecked Exception.
3. Error.

#### 6. What is the difference between Checked and Unchecked Exceptions in Java?

##### **Checked exceptions :**

- Checked exceptions happen at compile time when the source code is transformed into an executable code.

##### **Unchecked exceptions :**

- Unchecked exceptions happen at runtime when the executable program starts running.

#### 7. What is the difference between throw and throws keyword in Java?

##### **Throw :**

- The 'throw' keyword is used to explicitly throw an exception from within a block of code or a method.

**Throws :**

- The 'throws' keyword is used in the method signature to declare the exceptions that a method can potentially throw.

**8. Which one is the super class for all the Exceptions in Java?**

- The Throwable class is the superclass of all Java exceptions and errors.
- It has two subclasses, Error and Exception but they don't represent checked and unchecked exceptions.

**9. What is the difference between Exception and Error in Java?**

- In Java, both errors and exceptions are subclasses of the Throwable class.
- Errors are typically a result of inadequate system resources, while exceptions occur during the execution and compilation of a program.

**10. How to create our own / custom Exceptions in Java?**

By using throw keyword we can create custom Exception

```
Ex:  int age=20;
      if(age<18) {
          throw new ArithmeticException("Invalid age");
      }
      else {
          System.out.println("Valid");
      }
```