

## throw keyword:

The throw keyword in Java is used to explicitly throw an exception from a method or any block of code. We can throw either checked or unchecked exception. The throw keyword is mainly used to throw **custom exceptions**.

### Syntax:

```
throw Instance
```

### Example:

```
throw new ArithmeticException("/ by zero");
```

**Note:** The Exception *Instance* must be of type **Throwable** or a subclass of **Throwable**. For example Exception is a sub-class of Throwable and user defined exceptions are typically inherited from Exception class.

## throws keyword:

throws is a keyword in Java which is used in the signature of method to indicate that this method might throw one of the listed type exceptions.

### Syntax:

```
type method_name(parameters) throws exception_list
```

→exception\_list is a comma separated list of all the

→exceptions which a method might throw.

In a program, if there is a chance of rising an exception then compile always warn us about it and compulsorily we should handle that checked exception, Otherwise we will get compile time error saying **unreported exception <ExceptionName> must be caught or declared to be thrown**.

To prevent this compile time error we can handle the exception in two ways:

1. By using try catch
2. By using **throws** keyword

**Note:**

→throws keyword is required only for checked exception and usage of throws keyword for unchecked exception is meaningless.

→throws keyword is required only to convince compiler and usage of throws keyword does not prevent abnormal termination of program.

## Difference between throw and throws

throw	throws
<b>throw keyword is used to throw an exception explicitly.</b>	throws keyword is used to declare an exception possible during its execution.
<b>throw keyword is followed by an instance of Throwable class or one of its sub-classes.</b>	throws keyword is followed by one or more Exception class names separated by commas.
<b>throw keyword is declared inside a method body.</b>	throws keyword is used with method signature (method declaration).
<b>We cannot throw multiple exceptions using throw keyword.</b>	We can declare multiple exceptions (separated by commas) using throws keyword.