

Throws Keyword

Throws keyword in Java is used in the method declaration. It provides information to the caller method about exceptions being thrown and the caller method has to take the responsibility of handling the exception.

Throws keyword is used in case of checked exception only because if we are not handling runtime exceptions (unchecked exceptions), Java compiler does not give any error related to runtime exceptions. If an error occurs, we are unable to do anything.

```
public class ThrowsTest1 {
    public static void main(String[] args)
    {
        Thread.sleep(1000);
        System.out.println("Hello Java");
    }
}
```

```
public class ThrowsTest1 {
    public static void main(String[] args) throws InterruptedException
    {
        Thread.sleep(1000);
        System.out.println("Hello Java");
    }
}
```

```
package throwsProgram;
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;

public class ThrowsTest2
{
    private String firstName, lastName;
    void accept() throws IOException
    {
        // Reading data from keyboard.
        // Creating an object of InputStreamReader class.
        InputStreamReader sr = new InputStreamReader(System.in);

        // Creating an object of BufferedReader class.
        BufferedReader br = new BufferedReader(sr);
    }
}
```

```

        System.out.println("Enter your first name");
        firstName = br.readLine();
        System.out.println("Enter your last name");
        lastName = br.readLine();
    }
    void display() {
        System.out.println("Full Name: " +firstName+ " " +lastName);
    }
    public static void main(String[] args) throws IOException
    {
        ThrowsTest2 obj = new ThrowsTest2();
        obj.accept();
        obj.display();
    }
}

```

```

package throwsProgram;
import java.io.IOException;
public class ThrowsTest3 {
    static void display() throws IOException
    {
        System.out.println("Hello Java");
        throw new IOException();
    }
    public static void main(String[] args) {
        ThrowsTest3 obj = new ThrowsTest3();
        try {
            obj.display();
        }
        catch (IOException e) {
            System.out.println("Caught an exception: \n" +e);
        }
    }
}

```

Difference between Throw and Throws in Java

There are some key difference between throw and throws keywords in Java. They are as:

1. The keyword throw is used to throw an exception explicitly, while throws clause is used to declare an exception.
2. Throw is followed by an instance variable, while throws is followed by the name of exception class.
3. We use throw keyword inside method body to call an exception, while throws clause is used in method signature.

4. With throw keyword, we cannot throw more than one exception at a time, while we can declare multiple exceptions with throws.