Program 14

File Name: InterruptHandling.java

```
1.  public class InterruptHandling {
2.      public static void main(String[] args) {
3.          Thread thread = new Thread(() -> {
4.              try {
5.                  System.out.println("Thread will sleep for 5 seconds.");
6.                  Thread.sleep(5000);
7.                  System.out.println("Thread woke up after sleep.");
8.              } catch (InterruptedException e) {
9.                  System.out.println("Thread was interrupted during sleep.");
10.             }
11.         });
12.         thread.start();
13.         try {
14.             Thread.sleep(2000); // Main thread sleeps for 2 seconds
15.             thread.interrupt(); // Interrupt the sleeping thread
16.         } catch (InterruptedException e) {
17.             e.printStackTrace();
18.         }
19.     }
```

Program 15

Example of join() Method in Java

The following program shows the usage of the join() method.

FileName: ThreadJoinExample.java

```
1.  // A Java program for understanding
2.  // the joining of threads
3.
4.  // import statement
5.  import java.io.*;
6.
7.  // The ThreadJoin class is the child class of the class Thread
8.  class ThreadJoin extends Thread
9.  {
10. // overriding the run method
11. public void run()
12. {
13. for (int j = 0; j < 2; j++)
```

```
{
try
{
// sleeping the thread for 300 milli seconds
Thread.sleep(300);

System.out.println("The current thread name is: " + Thread.currentThread().getName
());
}
// catch block for catching the raised exception
catch(Exception e)
{
System.out.println("The exception has been caught: " + e);
}
System.out.println( j );
}
}
}

public class ThreadJoinExample
{
// main method
public static void main (String argvs[])
{

// creating 3 threads
ThreadJoin th1 = new ThreadJoin();
ThreadJoin th2 = new ThreadJoin();
ThreadJoin th3 = new ThreadJoin();

// thread th1 starts
th1.start();

// starting the second thread after when
// the first thread th1 has ended or died.
try
{

System.out.println("The current thread name is: "+ Thread.currentThread().getName(
));

// invoking the join() method
th1.join();
}

// catch block for catching the raised exception
catch(Exception e)
{
```

```
System.out.println("The exception has been caught " + e);
}

// thread th2 starts
th2.start();

// starting the th3 thread after when the thread th2 has ended or died.
try
{

System.out.println("The current thread name is: " + Thread.currentThread().getName
());
th2.join();
}

// catch block for catching the raised exception
catch(Exception e)
{
System.out.println("The exception has been caught " + e);
}

// thread th3 starts
th3.start();
}
}
```

Output:

```
The current thread name is: main
The current thread name is: Thread - 0
0
The current thread name is: Thread - 0
1
The current thread name is: main
The current thread name is: Thread - 1
0
The current thread name is: Thread - 1
1
The current thread name is: Thread - 2
0
The current thread name is: Thread - 2
1
```