

Input

Source Code:

```
namespace MainProject
{
    class MainClass
    {
        public void MainMethod()
        {
            TestProject.TestClass obj1 = new TestProject.TestClass();
        }
    }
}
+
using System;
namespace TestProject
{
    public class TestClass
    {
        private static readonly Random random = new Random();
        private static readonly object syncLock = new object();
        public bool circuit()
        {
            lock (syncLock)
            {
                if (random.NextDouble() < 0.5)
                {
                    return true;
                }
                else
                {
                    return false;
                }
            }
        }
        public bool grn_SR()
        {
            lock (syncLock)
            {
                if (random.NextDouble() < 0.5)
                {
                    return true;
                }
                else
                {
                    return false;
                }
            }
        }
        public bool org_SR()
        {
            lock (syncLock)
            {
                if (random.NextDouble() < 0.5)
                {
                    return true;
                }
            }
        }
    }
}
```

```
        else
        {
            return false;
        }
    }
}
public bool prt()
{
    lock (syncLock)
    {
        if (random.NextDouble() < 0.5)
        {
            return true;
        }
        else
        {
            return false;
        }
    }
}
public bool rd1()
{
    lock (syncLock)
    {
        if (random.NextDouble() < 0.5)
        {
            return true;
        }
        else
        {
            return false;
        }
    }
}
public bool rd2()
{
    lock (syncLock)
    {
        if (random.NextDouble() < 0.5)
        {
            return true;
        }
        else
        {
            return false;
        }
    }
}
public bool red_MR()
{
    lock (syncLock)
    {
        if (random.NextDouble() < 0.5)
        {
            return true;
        }
    }
}
```

```
        else
        {
            return false;
        }
    }
}
}
```

Class Name:

MainClass

Method Name:

MainMethod

Path Constraint:

obj1.circuit() && obj1.rd2() && obj1.red_MR() && (obj1.grn_SR() || obj1.org_SR()) && !(obj1.prt() ||
!obj1.rd1())

Output

Path Constraint:

obj1.circuit()&&obj1.rd2()&&obj1.red_MR()&&(obj1.org_SR())&&(!(obj1.prt())&&obj1.rd1())

Results:

(obj1.circuit(), True)

(obj1.rd2(), True)

(obj1.red_MR(), True)

(obj1.org_SR(), True)

(obj1.prt(), False)

(obj1.rd1(), True)

Path Constraint:

obj1.circuit()&&obj1.rd2()&&obj1.red_MR()&&(obj1.grn_SR())&&(!(obj1.prt())&&obj1.rd1())

Results:

(obj1.circuit(), True)

(obj1.rd2(), True)

(obj1.red_MR(), True)

(obj1.grn_SR(), True)

(obj1.prt(), False)

(obj1.rd1(), True)

Execution Time: 641 ms