JAVA.LANG.STRICTMATH.SINH METHOD

Description

The **java.lang.StrictMath.sinh** method returns the hyperbolic sine of a double value. The hyperbolic sine of x is defined to be **$(e^x - e^{-x})/2$** where **e** is **Euler's number**.It include these cases:

- If the argument is NaN or an infinity, then the result is NaN.
- If the argument is infinite, then the result is an infinity with the same sign as the argument.
- If the argument is zero, then the result is a zero with the same sign as the argument.

Declaration

Following is the declaration for **java.lang.StrictMath.sinh** method

```
public static double sinh(double x)
```

Parameters

- **x** -- This is the number whose hyperbolic sine is to be returned.

Return Value

This method returns the hyperbolic sine of x.

Exception

- **NA**

Example

The following example shows the usage of java.lang.StrictMath.sinh method.

```
package com.tutorialspoint;

import java.lang.*;

public class StrictMathDemo {

   public static void main(String[] args) {

   double d1 = (90*Math.PI)/180 , d2 = 50, d3 = 0;

   // returns the hyperbolic sine of a double value

   double sinhValue = StrictMath.sinh(d1);
   System.out.println("Hyperbolic sine of d1 = " + sinhValue);

   sinhValue = StrictMath.sinh(d2);
   System.out.println("Hyperbolic sine of d2 = " + sinhValue);

   sinhValue = StrictMath.sinh(d3);
   System.out.println("Hyperbolic sine of d3 = " + sinhValue);
  }
}
```

Let us compile and run the above program, this will produce the following result:

```
Hyperbolic sin of d1 = 2.3012989023072947
Hyperbolic sin of d2 = 2.592352764293536E21
```

```
Hyperbolic_sin_of_d3 = 0.0
```