Sifon Industries

1.0

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Contents

1 Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

2 Class Index

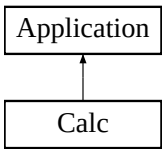
2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

3 Class Documentation

3.1 Calc Class Reference

Inheritance diagram for Calc:



Public Member Functions

- void **start** (Stage stage) throws Exception

Static Public Member Functions

- static void main (String[ ] args)

Static Public Attributes

- static FXMLDocumentController **controller**

3.1.1 Detailed Description

Author

kudlav
AdamKuba

3.1.2 Member Function Documentation

3.1.2.1 main()

```
static void Calc.main (
            String [] args )  [static]
```

Parameters

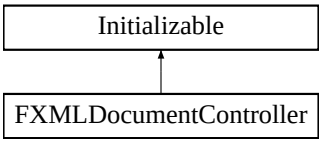
args	the command line arguments

The documentation for this class was generated from the following file:

- Calc.java

3.2 FXMLDocumentController Class Reference

Inheritance diagram for FXMLDocumentController:



Public Member Functions

- void **initialize** (URL url, ResourceBundle rb)
- void **keyPressed** (char key)

3.2.1 Detailed Description

Author

Rengyr
AdamKuba

The documentation for this class was generated from the following file:

- FXMLDocumentController.java

3.3 MathLib Class Reference

Class with static mathematical methods.

Static Public Member Functions

- static BigDecimal idiv (BigDecimal a, BigDecimal b)
  Returns the division of double arguments.
- static BigDecimal imul (BigDecimal a, BigDecimal b)
  Returns the multiplication of double arguments.
- static BigDecimal sub (BigDecimal a, BigDecimal b)
  Returns the subtraction of double arguments.
- static BigDecimal add (BigDecimal a, BigDecimal b)
  Returns the addition of double arguments.
- static BigDecimal nRoot (BigInteger n, BigDecimal a)
  Returns the Nth root implemented by the formula from `wikipedia`.
- static BigDecimal exp (BigInteger n, BigDecimal a)
  Returns the n-th power of a.
- static BigDecimal fac (int a)
  Returns the factorial of argument.
- static BigDecimal mod (BigInteger a, BigInteger b)
  Returns the remainder of integer arguments.

3.3.1 Detailed Description

Class with static mathematical methods.

3.3.2 Member Function Documentation

3.3.2.1 add()

```
static BigDecimal MathLib.add (
            BigDecimal a,
            BigDecimal b )  [static]
```

Returns the addition of double arguments.

Author

mmusil

Parameters

a	first summand
b	second summand

Returns

a + b

3.3.2.2 exp()

```
static BigDecimal MathLib.exp (
            BigInteger n,
            BigDecimal a )  [static]
```

Returns the n-th power of a.

Author

kudlav

Parameters

n	exponent
a	base

Returns

result of exponentiation (n-th power of a)

3.3.2.3 fac()

```
static BigDecimal MathLib.fac (
            int a )  [static]
```

Returns the factorial of argument.

If arguments is negative, the result is -1.

Author

mmusil

Parameters

a	number from which is factorial counted

Returns

factorial from a, -1 for negative argument

3.3.2.4 idiv()

```
static BigDecimal MathLib.idiv (
            BigDecimal a,
            BigDecimal b )  [static]
```

Returns the division of double arguments.

Besides of zero division, special cases are returning values as specified in Java SE Specifications (IEEE 754).

Author

Rengyr

Parameters

a	dividend
b	divisor

Returns

the value dividend / divisor

Exceptions

ArithmeticException	if there is division by zero

3.3.2.5 imul()

```
static BigDecimal MathLib.imul (
            BigDecimal a,
            BigDecimal b )  [static]
```

Returns the multiplication of double arguments.

Author

AdamKuba

Parameters

a	multiplicand
b	multiplier

Returns

result of multiplication

3.3.2.6 mod()

```
static BigDecimal MathLib.mod (
            BigInteger a,
            BigInteger b )  [static]
```

Returns the remainder of integer arguments.

Author

Rengyr

Parameters

a	the dividend
b	the divisor

Returns

remainder of dividend and divisor

3.3.2.7 nRoot()

```
static BigDecimal MathLib.nRoot (
            BigInteger n,
            BigDecimal a )  [static]
```

Returns the Nth root implemented by the formula from wikipedia.

Author

AdamKuba

Parameters

n	degree
a	radicand

Returns

nth root of the radicand

3.3.2.8 sub()

```
static BigDecimal MathLib.sub (
            BigDecimal a,
            BigDecimal b )  [static]
```

Returns the subtraction of double arguments.

Author

kudlav

Parameters

a	minuend (the number from that is subtracted)
b	subtrahend (the number being subtracted)

Returns

difference (result of subtraction)

The documentation for this class was generated from the following file:

- MathLib.java

3.4 MathLibTests Class Reference

Class with JUnit tests for MathLib.

Public Member Functions

- void divideTest ()
  Junit tests for MathLib#idiv(double, double) method.
- void zeroDivisionTest ()
  Junit tests for zero division in MathLib#idiv(double, double) method.
- void modTest ()
  Junit tests for MathLib#mod(int, int) method.
- void multiplicationTest ()
  Junit tests for MathLib#imul(double, double) method.
- void additionTest ()
  Junit tests for MathLib#add(double, double) method.
- void subtractionTest ()
  Junit tests for MathLib#sub(double, double) method.
- void facTest ()
  Junit tests for MathLib#fac(int) method.
- void expTest ()
  Junit tests for MathLib#exp(int, double) method.
- void nRootTest ()
  Junit tests for MathLib#nRoot(int, double) method.

3.4.1 Detailed Description

Class with JUnit tests for MathLib.

Author

Rengyr
AdamKuba

The documentation for this class was generated from the following file:

- MathLibTests.java

3.5 Profiling Class Reference

Class created for profiling MathLib methods via standard deviation calculation.

Static Public Member Functions

- static void main (String[ ] args)
  Main method.

3.5.1 Detailed Description

Class created for profiling MathLib methods via standard deviation calculation.

3.5.2 Member Function Documentation

3.5.2.1 main()

```
static void Profiling.main (
            String [] args )  [static]
```

Main method.

Make file named "test" with 100 random numbers and create Profiling class.

Parameters

args	

The documentation for this class was generated from the following file:

- Profiling.java

Index