Brno University of Technology Faculty of Information Technology

IVS

New Meta Calculator Documentation

Blašková Barbora, xblask04@stud.fit.vutbr.cz Crkoň Jakub, xcrkon00@stud.fit.vutbr.cz Koštialik Gabriel, xkosti07@stud.fit.vutbr.cz

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IVS-New-Meta

Prostredi

Ubuntu 64bit

Autori

New Meta

- xblask04 Barbora Blašková
- xcrkon00 Jakub Crkoň
- xkosti05 Gabriel Koštialik

Licence

GNU GENERAL PUBLIC LICENSE Version 3, 29 June 2007

Hierarchical Index

2.1 Class Hierarchy

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

ath	18
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Calculator	5
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Credits_Controller	6
GUI_Controller	8
Help_controller	17

Class Index

3.1 Class List

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

alculator	5
Fredits_Controller	6
GUI_Controller	8
lelp_controller	17
nath	18
nathTest	25

File Index

4.1 File List

Here is a list of all documented files with brief descriptions:

/nome/bblaskova/NetBeansProjects/IVS-New-Meta/src/Calculator.java	
Main class - Calculator	29
/home/bblaskova/NetBeansProjects/IVS-New-Meta/src/GUI_Controller.java	
Contains button actions	29
/home/bblaskova/NetBeansProjects/IVS-New-Meta/src/math.java	
Class with mathematic operation used in calculator	30
/home/bblaskova/NetBeansProjects/IVS-New-Meta/test/mathTest.java	
Tests for math.java library	30

Class Documentation

5.1 Calculator Class Reference

Inheritance diagram for Calculator:



Public Member Functions

· void start (Stage stage) throws Exception

Static Public Member Functions

• static void main (String[] args)

Main function of the calculator.

5.1.1 Member Function Documentation

5.1.1.1 main()

Main function of the calculator.

Parameters

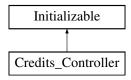
args the command line arguments

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

• /home/bblaskova/NetBeansProjects/IVS-New-Meta/src/Calculator.java

5.2 Credits_Controller Class Reference

Inheritance diagram for Credits_Controller:



Public Member Functions

• void initialize (URL url, ResourceBundle rb)

Private Member Functions

- void GNU_link (ActionEvent event) throws IOException
 Link pressed.
- void creditsAction (ActionEvent event)

Credits button pressed.

void closeAction (ActionEvent event)

Close button pressed.

Private Attributes

- Button closeAbout
- ToggleButton creditsButton
- · Pane bg_pane
- TextArea bg_pane_text
- TextField dsg
- TextField crt
- TextField dcm
- · Hyperlink link

5.2.1 Member Function Documentation

5.2.1.1 closeAction()

Close button pressed.

Parameters

event Represents action of pressing a button Close Credits window.

5.2.1.2 creditsAction()

Credits button pressed.

Parameters

event

Represents action of pressing a button Make textField with credits visible.

5.2.1.3 GNU_link()

Link pressed.

Parameters

event | Represents action of pressing a button Click on link opens wanted URL in browser window.

5.2.1.4 initialize()

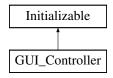
Initializes the controller class.

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

• /home/bblaskova/NetBeansProjects/IVS-New-Meta/src/Credits_Controller.java

5.3 GUI_Controller Class Reference

Inheritance diagram for GUI_Controller:



Public Member Functions

• void initialize (URL url, ResourceBundle rb)

Private Member Functions

• void zeroAction (ActionEvent event)

Zero button pressed.

void oneAction (ActionEvent event)

Button '1' pressed.

void twoAction (ActionEvent event)

Button '2' pressed.

void threeAction (ActionEvent event)

Button '3' pressed.

• void fourAction (ActionEvent event)

Button '4' pressed.

void fiveAction (ActionEvent event)

Button '5' pressed.

void sixAction (ActionEvent event)

Button '6' pressed.

• void sevenAction (ActionEvent event)

Button '7' pressed.

void eigthAction (ActionEvent event)

Button '8' pressed.

• void nineAction (ActionEvent event)

Button '9' pressed.

• void DELAction (ActionEvent event)

Button 'DEL' pressed.

• void CAction (ActionEvent event)

Button 'C' pressed.

void equalAction (ActionEvent event)

Button '=' pressed.

void dotAction (ActionEvent event)

Button '.' pressed.

void plusAction (ActionEvent event)

Button '+' pressed.

void minusAction (ActionEvent event)

Button '-' pressed.

void moduloAction (ActionEvent event)

Button " pressed.

void sqrtAction (ActionEvent event)

Button 'sqrt' pressed.

void powAction (ActionEvent event)

Button "\" pressed.

• void multiAction (ActionEvent event)

Button '*' pressed.

void divAction (ActionEvent event)

Button '/' pressed.

· void factAction (ActionEvent event)

Button '!' pressed.

void helpAction (ActionEvent event)

Button '?' pressed.

· void mid result ()

Function print result of selected operation on display. Depending on value in operation, function calls wanted method from math library. Function use value of operand_one as first operand, load number on display into operand_two and use it as second operand for selected operation. Check if number is integer or floating point number and print value on display.

long is_int (double x)

Function will cheeck whether the given number is integer or not.

· void reset ()

Fucntion resets calculator display and all needed calculator variables.

Private Attributes

- · TextField display
- TextField OP_display
- · double operand one
- · boolean dot flag
- · int operation

5.3.1 Member Function Documentation

5.3.1.1 CAction()

Button 'C' pressed.

Parameters

vent Represents action of pressing a button When button 'C' is pressed calls function reset.

5.3.1.2 DELAction()

Button 'DEL' pressed.

Parameters

event

Represents action of pressing a button Delete last inserted value on display. If after DEL display would be empty also resets all calculator variables.

5.3.1.3 divAction()

Button '/' pressed.

Parameters

event

Represents action of pressing a button Function load value on display into operand_one. Set operation value on 4. Set reset_D on true. Set dot_flag on false;

5.3.1.4 dotAction()

Button '.' pressed.

Parameters

event

Represents action of pressing a button Prints dot on display. Only one dot can be displayed.

5.3.1.5 eigthAction()

Button '8' pressed.

Parameters

event

Represents action of pressing a button Print eight on display. If reset_D is true also reset display.

5.3.1.6 equalAction()

Button '=' pressed.

Parameters

event

Represents action of pressing a button When button '=' is pressed calls function mid_result().

5.3.1.7 factAction()

Button '!' pressed.

Parameters

event

Represents action of pressing a button Set operation value on 8. Function load value on display into operand_one and call mid_result(). Set reset_D on true. Set dot_flag on false;

5.3.1.8 fiveAction()

Button '5' pressed.

Parameters

event

Represents action of pressing a button Print five on display. If reset_D is true also reset display.

5.3.1.9 fourAction()

Button '4' pressed.

Parameters

event

Represents action of pressing a button Print four on display. If reset_D is true also reset display.

5.3.1.10 helpAction()

Button '?' pressed.

Parameters

event

Represents action of pressing a button Function opens HELP window.

5.3.1.11 is_int()

Function will cheeck whether the given number is integer or not.

Parameters

x Number to be checked.

Returns

Integer representation of number if number was x.0, or -1 if not.

5.3.1.12 minusAction()

Button '-' pressed.

Parameters

event

Represents action of pressing a button If display length is zero function prints '-' on display if display is empty. If display length is not zero function load value on display into operand_one. Set operation value on 3. Set reset_D on true. Set dot_flag on false;

5.3.1.13 moduloAction()

Button " pressed.

Parameters

event

Represents action of pressing a button Function load value on display into operand_one. Set operation value on 6. Set reset_D on true. Set dot_flag on false;

5.3.1.14 multiAction()

Button '*' pressed.

Parameters

event

Represents action of pressing a button Function load value on display into operand_one. Set operation value on 2. Set reset_D on true. Set dot_flag on false;

5.3.1.15 nineAction()

Button '9' pressed.

Parameters

event Represents action of pressing a button Print nine on display. If reset_D is true also reset display.

5.3.1.16 oneAction()

```
void GUI_Controller.oneAction (
            ActionEvent event ) [inline], [private]
```

Button '1' pressed.

Parameters

event | Represents action of pressing a button Print one on display. If reset_D is true also reset display.

5.3.1.17 plusAction()

```
void GUI_Controller.plusAction (
            ActionEvent event ) [inline], [private]
```

Button '+' pressed.

Parameters

event

Represents action of pressing a button Function load value on display into operand_one. Set operation value on 1. Set reset_D on true. Set dot_flag on false;

5.3.1.18 powAction()

```
void GUI_Controller.powAction (
            ActionEvent event ) [inline], [private]
```

Button '^' pressed.

Parameters

event

Represents action of pressing a button Function load value on display into operand_one. Set operation value on 5. Set reset_D on true. Set dot_flag on false;

5.3.1.19 sevenAction()

```
void GUI_Controller.sevenAction (
            ActionEvent event ) [inline], [private]
```

Button '7' pressed.

Parameters

event

Represents action of pressing a button Print seven on display. If reset D is true also reset display.

5.3.1.20 sixAction()

Button '6' pressed.

Parameters

event

Represents action of pressing a button Print six on display. If reset_D is true also reset display.

5.3.1.21 sqrtAction()

Button 'sqrt' pressed.

Parameters

event

Represents action of pressing a button Function load value on display into operand_one. Set operation value on 7. Set reset_D on true. Set dot_flag on false;

5.3.1.22 threeAction()

Button '3' pressed.

Parameters

event

Represents action of pressing a button Print three on display. If reset_D is true also reset display.

5.3.1.23 twoAction()

Button '2' pressed.

Parameters

event Represents action of pressing a button Print two on display. If reset_D is true also reset display.

5.3.1.24 zeroAction()

Zero button pressed.

Parameters

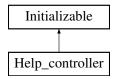
event | Represents action of pressing a button Print zero on display. If reset_D is true also reset display.

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

/home/bblaskova/NetBeansProjects/IVS-New-Meta/src/GUI Controller.java

5.4 Help_controller Class Reference

Inheritance diagram for Help_controller:



Public Member Functions

• void initialize (URL url, ResourceBundle rb)

Private Member Functions

void closeAction (ActionEvent event)

Button 'About' pressed.

· void creditsAction (ActionEvent event)

Button 'About' pressed.

Private Attributes

• Button closeWindow

5.4.1 Member Function Documentation

5.4.1.1 closeAction()

Button 'About' pressed.

Parameters

event Represents action of pressing a button Function close Help window.

5.4.1.2 creditsAction()

Button 'About' pressed.

Parameters

event Represents action of pressing a button Function opens Credits window.

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

• /home/bblaskova/NetBeansProjects/IVS-New-Meta/src/Help_controller.java

5.5 math Class Reference

Static Public Member Functions

- static double add (double x, double y)
 Function will add two double numbers.
- static long add (long x, long y)

Function will add two integer numbers.

static double add (double x, long y)

Function will add two numbers - one integer and one double.

• static double add (long x, double y)

Function will add two numbers - one integer and one double.

• static double sub (double x, double y)

Substraction of two numbers.

• static double multiply (double x, double y)

Function will multiply two double numbers.

• static long multiply (long x, long y)

Function will multiply two integer numbers.

• static double multiply (long x, double y)

Function will multiply two numbers - one double and one integer.

• static double multiply (double x, long y)

Function will multiply two numbers - one double and one integer.

• static double divide (double x, double y)

Division of two numbers.

static long factorial (long num)

Function will calculate a factorial of a given number.

- static double pow (double x, int y)
- static int pow (int x, int y)
- static long mod (long x, long y)

Modulo function.

• static double root (double x, double root)

Sqrt function.

5.5.1 Member Function Documentation

```
5.5.1.1 add() [1/4] static double math.add ( double x, double y ) [inline], [static]
```

Function will add two double numbers.

Parameters

Х	first number for operation
У	second number for operation

Returns

result of adding two parameters

```
5.5.1.2 add() [2/4] static long math.add ( long x, \\ long y ) [inline], [static]
```

Function will add two integer numbers.

Parameters

X	first number for operation
У	second number for operation

Returns

result of adding two parameters

Function will add two numbers - one integer and one double.

Parameters

X	first number for operation
У	second number for operation

Returns

result of adding two parameters

```
5.5.1.4 add() [4/4] static double math.add ( long \ x, \\ double \ y \ ) \ [inline], \ [static]
```

Function will add two numbers - one integer and one double.

Parameters

Χ	first number for operation
У	second number for operation

Returns

result of adding two parameters

5.5.1.5 divide()

```
static double math.divide ( \label{eq:double x, double y, limit} \mbox{double } y \; ) \; \mbox{[inline], [static]}
```

Division of two numbers.

Parameters

Х	divident
у	divisor

Returns

result of dividing two numbers

5.5.1.6 factorial()

Function will calculate a factorial of a given number.

Parameters

num number from which we want factorial to be calculated from

Returns

value of the factorial

5.5.1.7 mod()

```
static long math.mod ( \label{eq:long x, long y } \log \ y \ ) \quad \mbox{[inline], [static]}
```

Modulo function.

Parameters

Χ	divident
у	divisor

Returns

the remainder from division

Function will multiply two double numbers.

Parameters

X	first number for operation
У	second number for operation

Returns

result of multiplying two numbers

```
5.5.1.9 multiply() [2/4] static long math.multiply ( long \ x, \\ long \ y \ ) \ [inline], \ [static]
```

Function will multiply two integer numbers.

Parameters

Х	first number for operation
У	second number for operation

Returns

result of multiplying two numbers

```
5.5.1.10 multiply() [3/4] static double math.multiply ( long \ x, \\ double \ y \ ) \ [inline], \ [static]
```

Function will multiply two numbers - one double and one integer.

Parameters

X	first number for operation
У	second number for operation

Returns

result of multiplying two numbers

```
5.5.1.11 multiply() [4/4] static double math.multiply ( double x,
```

Function will multiply two numbers - one double and one integer.

long y) [inline], [static]

Parameters

Х	first number for operation
у	second number for operation

Returns

result of multiplying two numbers

Parameters

X	floating point base value
У	power value

Returns

result of raising x to the power y

Parameters

X	floating point base value	
У	power value	

Returns

result of raising x to the power y

5.5.1.14 root()

```
static double math.root ( \label{eq:continuous} \mbox{double } x, \\ \mbox{double } root \mbox{) [inline], [static]}
```

Sqrt function.

Parameters

Χ	number to be rooted
root	root of the number

Returns

result of operation

5.5.1.15 sub()

```
static double math.sub ( \label{eq:constraints} \mbox{double } x, \mbox{double } y \; ) \; \mbox{[inline], [static]}
```

Substraction of two numbers.

Parameters

X	first number for operation
У	second number for operation

Returns

result of substracting two numbers

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

• /home/bblaskova/NetBeansProjects/IVS-New-Meta/src/math.java

5.6 mathTest Class Reference

Public Member Functions

- · void setUp () throws Exception
- void tearDown () throws Exception
- void testAdd ()
- void testSub ()
- void testMultiply ()
- void testDivide ()
- void testFactorial ()
- void testPow ()
- void testMod ()
- void testAdd_double_double ()
- void testAdd long long ()
- void testAdd_double_long ()
- void testAdd_long_double ()
- void testMultiply_double_double ()
- void testMultiply_long_long ()
- void testMultiply_long_double ()
- void testMultiply_double_long ()
- void testPow_double_int ()
- void testPow_int_int ()
- void testRoot ()

Static Public Member Functions

- · static void setUpClass () throws Exception
- static void tearDownClass () throws Exception

5.6.1 Member Function Documentation

```
5.6.1.1 testAdd()
void mathTest.testAdd ( ) [inline]
Test of add method, of class math.
5.6.1.2 testAdd_double_double()
void mathTest.testAdd_double_double ( ) [inline]
Test of add method, of class math. Double, Double
5.6.1.3 testAdd_double_long()
void mathTest.testAdd_double_long ( ) [inline]
Test of add method, of class math. Double, Long
5.6.1.4 testAdd_long_double()
void mathTest.testAdd_long_double ( ) [inline]
Test of add method, of class math. Long, Double
5.6.1.5 testAdd_long_long()
void mathTest.testAdd_long_long ( ) [inline]
Test of add method, of class math. Long, Long
5.6.1.6 testDivide()
void mathTest.testDivide ( ) [inline]
Test of divide method, of class math.
5.6.1.7 testFactorial()
void mathTest.testFactorial ( ) [inline]
Test of factorial method, of class math.
5.6.1.8 testMod()
void mathTest.testMod ( ) [inline]
```

Test of mod method, of class math.

```
5.6.1.9 testMultiply()
void mathTest.testMultiply ( ) [inline]
Test of multiply method, of class math.
5.6.1.10 testMultiply_double_double()
void mathTest.testMultiply_double_double ( ) [inline]
Test of multiply method, of class math. Double, Double
5.6.1.11 testMultiply_double_long()
void mathTest.testMultiply_double_long ( ) [inline]
Test of multiply method, of class math. Double, Long
5.6.1.12 testMultiply_long_double()
void mathTest.testMultiply_long_double ( ) [inline]
Test of multiply method, of class math. Long, Double
5.6.1.13 testMultiply_long_long()
void mathTest.testMultiply_long_long ( ) [inline]
Test of multiply method, of class math. Long, Long
5.6.1.14 testPow()
void mathTest.testPow ( ) [inline]
Test of pow method, of class math.
5.6.1.15 testPow_double_int()
void mathTest.testPow_double_int ( ) [inline]
Test of pow method, of class math. Double, Int
5.6.1.16 testPow_int_int()
void mathTest.testPow_int_int ( ) [inline]
```

Test of pow method, of class math. Int, Int

5.6.1.17 testRoot()

```
void mathTest.testRoot ( ) [inline]
```

Test of root method, of class math.

5.6.1.18 testSub()

```
void mathTest.testSub ( ) [inline]
```

Test of sub method, of class math.

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

• /home/bblaskova/NetBeansProjects/IVS-New-Meta/test/mathTest.java

File Documentation

6.2.1 Detailed Description

Contains button actions.

FXML Controller class

xcrkon00

Author

6.1	/home/bblaskova/NetBeansProjects/IVS-New-Meta/src/Calculator.java File Reference
Main	class - Calculator.
Class	es
•	class Calculator
6.1.1	Detailed Description
Main	class - Calculator.
Author	
	xcrkon00
6.2	/home/bblaskova/NetBeansProjects/IVS-New-Meta/src/GUI_Controller.java File Reference
Conta	ins button actions.
Class	es
•	class GUI_Controller

6.3 /home/bblaskova/NetBeansProjects/IVS-New-Meta/src/math.java File Reference

Class with mathematic operation used in calculato	Class	with	mathematic of	operation	used in	calculator
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Classes

· class math

6.3.1 Detailed Description

Class with mathematic operation used in calculator.

Author

xblask04

6.4 /home/bblaskova/NetBeansProjects/IVS-New-Meta/test/mathTest.java File Reference

Tests for math.java library.

Classes

· class mathTest

6.4.1 Detailed Description

Tests for math.java library.

Author

xkosti07

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