IVS project 2

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Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Chapter 3

Class Index

3.1 Class List

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

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

Chapter 5

Namespace Documentation

5.1 Kalkulacka Namespace Reference

Namespaces

- namespace Properties

Classes

- class ButtonEclipse
- class Form1
- class Program

5.2 Kalkulacka.Properties Namespace Reference

Classes

- class **Resources**

  A strongly-typed resource class, for looking up localized strings, etc.
- class **Settings**

5.3 MathComponentsNS Namespace Reference

Classes

- class MathComponents

5.4 MathTest Namespace Reference

Classes

- class BasicMathTests

5.5 Profiling Namespace Reference

Classes

- class Program

Chapter 6

Class Documentation

6.1 MathTest.BasicMathTests Class Reference

Public Member Functions

- void TestAddition ()
- void TestSubtraction ()
- void TestMultiplication ()
- void TestDivision ()
- void TestExponentiation ()
- void TestRoot ()
- void TestLogarithm ()
- void TestSin ()
- void TestCos ()
- void TestTan ()
- void TestArcsin ()
- void TestArccos ()
- void TestArctan ()
- void TestFactorial ()
- void TestRandom ()

Static Public Member Functions

- static decimal RoundOff (decimal value)

6.1.1 Member Function Documentation

6.1.1.1 RoundOff()

```
static decimal MathTest.BasicMathTests.RoundOff (
            decimal value )  [inline], [static]
```

6.1.1.2 TestAddition()

```
void MathTest.BasicMathTests.TestAddition ( )  [inline]
```

6.1.1.3 TestArccos()

```
void MathTest.BasicMathTests.TestArccos ( )  [inline]
```

6.1.1.4 TestArcsin()

```
void MathTest.BasicMathTests.TestArcsin ( )  [inline]
```

6.1.1.5 TestArctan()

```
void MathTest.BasicMathTests.TestArctan ( )  [inline]
```

6.1.1.6 TestCos()

```
void MathTest.BasicMathTests.TestCos ( )  [inline]
```

6.1.1.7 TestDivision()

```
void MathTest.BasicMathTests.TestDivision ( )  [inline]
```

6.1.1.8 TestExponentiation()

```
void MathTest.BasicMathTests.TestExponentiation ( )  [inline]
```

6.1.1.9 TestFactorial()

```
void MathTest.BasicMathTests.TestFactorial ( )  [inline]
```

6.1.1.10 TestLogarithm()

```
void MathTest.BasicMathTests.TestLogarithm ( )  [inline]
```

6.1.1.11 TestMultiplication()

```
void MathTest.BasicMathTests.TestMultiplication ( )  [inline]
```

6.1.1.12 TestRandom()

```
void MathTest.BasicMathTests.TestRandom ( )  [inline]
```

6.1.1.13 TestRoot()

```
void MathTest.BasicMathTests.TestRoot ( )  [inline]
```

6.1.1.14 TestSin()

```
void MathTest.BasicMathTests.TestSin ( )  [inline]
```

6.1.1.15 TestSubtraction()

```
void MathTest.BasicMathTests.TestSubtraction ( )  [inline]
```

6.1.1.16 TestTan()

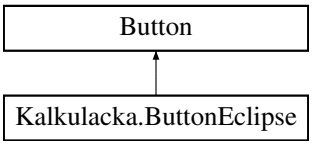
```
void MathTest.BasicMathTests.TestTan ( )  [inline]
```

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

- MathTest/BasicMathTests.cs

6.2 Kalkulacka.ButtonEclipse Class Reference

Inheritance diagram for Kalkulacka.ButtonEclipse:



Protected Member Functions

- override void OnPaint (PaintEventArgs e)

6.2.1 Member Function Documentation

6.2.1.1 OnPaint()

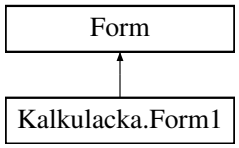
```
override void Kalkulacka.ButtonEclipse.OnPaint (
            PaintEventArgs e )  [inline], [protected]
```

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

- Kalkulacka/Class1.cs

6.3 Kalkulacka.Form1 Class Reference

Inheritance diagram for Kalkulacka.Form1:



Public Member Functions

- Form1 ()
- void Valid_Chk ((bool, decimal) result)

  Function for checking successful result.
- void ZeroClear ()

  Function for clearing textbox to zero-state.
- void Clear ()

  Fuction for clearing textbox to NULL-state.

Public Attributes

- bool

  Function for calculating binary operations.

Protected Member Functions

- override void Dispose (bool disposing)

  Clean up any resources being used.

Private Member Functions

- void funkciaNaVyuzitie ()

  Function for memory.
- void length (char d)

  Function chcecking length.
- void Form1_Load (object sender, EventArgs e)

  Panel function for extended functions of calculator.
- void shift_Click (object sender, EventArgs e)

  Function for switching panel after click on SHIFT the panel will change.
- void off_Click (object sender, EventArgs e)

  Function of switching off the application.
- void Number_click (object sender, EventArgs e)

  Function for clicked number chcecking length.
- void decPoint_Click (object sender, EventArgs e)

  Function for Decimal point only one allowed.
- void subtraction_Click (object sender, EventArgs e)

  Function for negative numbers if text box contains only zero.
- void textBox1_KeyPress (object sender, KeyPressEventArgs e)

  Function to check if there is enough space in textbox for writing pressed key (WIP)
- void operation_Click (object sender, EventArgs e)

  Function for setting the right operation save input erase textbox.
- void InstantOp_Click (object sender, EventArgs e)

  Function for resolving buttons should work and count instantly basically unary operations and binary operations with known constant.
- decimal Calculate ()
- void Mplus_Click (object sender, EventArgs e)

  Function for addition to memory Memory icon control.
- void MRC_Click (object sender, EventArgs e)

  Function for recalling memory.
- void Mminus_Click (object sender, EventArgs e)

  Function for substracting from memory Memory icon control.
- void InitializeComponent ()

  Required method for Designer support - do not modify the contents of this method with the code editor.

Private Attributes

- List< Panel > listPanel = new List<Panel>()
- MathComponentsNS.MathComponents newMath = new MathComponentsNS.MathComponents()
- bool shiftClicked = false
- string operationPerformed = ""
- decimal firstNum = 0
- decimal secondNum = 0
- decimal MEM = 0
- decimal ans = 0
- bool erase = false
- bool repeatEq = false
- System.ComponentModel.IContainer components = null

  Required designer variable.
- System.Windows.Forms.TextBox textBox1
- System.Windows.Forms.Button num1
- System.Windows.Forms.Button num2
- System.Windows.Forms.Button num3
- System.Windows.Forms.Button num4
- System.Windows.Forms.Button num5
- System.Windows.Forms.Button num6
- System.Windows.Forms.Button num7
- System.Windows.Forms.Button num8
- System.Windows.Forms.Button num9
- System.Windows.Forms.Button num0
- System.Windows.Forms.Button ANS
- System.Windows.Forms.Button decPoint
- System.Windows.Forms.Button division
- System.Windows.Forms.Button multiplication
- System.Windows.Forms.Button subtraction
- System.Windows.Forms.Button addition
- System.Windows.Forms.Button RAND
- System.Windows.Forms.Button equals
- System.Windows.Forms.Button AC
- System.Windows.Forms.Button del
- System.Windows.Forms.Button sin
- System.Windows.Forms.Button shift
- System.Windows.Forms.Panel shiftUnclickedPanel
- System.Windows.Forms.Panel shiftClickedPanel
- System.Windows.Forms.Button arcsin
- System.Windows.Forms.Button Power2
- System.Windows.Forms.Button Power3
- System.Windows.Forms.Button powerX
- System.Windows.Forms.Button log
- System.Windows.Forms.Button ln
- System.Windows.Forms.Button pi
- System.Windows.Forms.Button factorial
- System.Windows.Forms.Button root2
- System.Windows.Forms.Button cos
- System.Windows.Forms.Button arccos
- System.Windows.Forms.Button multiplication10
- System.Windows.Forms.Button PowerXMinus1
- System.Windows.Forms.Button root
- System.Windows.Forms.Button logDec
- System.Windows.Forms.Button root3

- System.Windows.Forms.Button euler
- System.Windows.Forms.Button MRC
- System.Windows.Forms.Button Mplus
- System.Windows.Forms.Button Mminus
- System.Windows.Forms.Button off
- System.Windows.Forms.Button tan
- System.Windows.Forms.Button arctan
- System.Windows.Forms.Label DisplayedM

6.3.1 Constructor & Destructor Documentation

6.3.1.1 Form1()

```
Kalkulacka.Form1.Form1 ( )  [inline]
```

6.3.2 Member Function Documentation

6.3.2.1 Calculate()

```
decimal Kalkulacka.Form1.Calculate ( )  [inline], [private]
```

6.3.2.2 Clear()

```
void Kalkulacka.Form1.Clear ( )  [inline]
```

Fuction for clearing textbox to NULL-state.

6.3.2.3 decPoint_Click()

```
void Kalkulacka.Form1.decPoint_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for Decimal point only one allowed.

6.3.2.4 Dispose()

```
override void Kalkulacka.Form1.Dispose (
            bool disposing )  [inline], [protected]
```

Clean up any resources being used.

Parameters

disposing	true if managed resources should be disposed; otherwise, false.

6.3.2.5 Form1_Load()

```
void Kalkulacka.Form1.Form1_Load (
            object sender,
            EventArgs e )  [inline], [private]
```

Panel function for extended functions of calculator.

6.3.2.6 funkciaNaVyuzitie()

```
void Kalkulacka.Form1.funkciaNaVyuzitie ( )  [inline], [private]
```

Function for memory.

6.3.2.7 InitializeComponent()

```
void Kalkulacka.Form1.InitializeComponent ( )  [inline], [private]
```

Required method for Designer support - do not modify the contents of this method with the code editor.

6.3.2.8 InstantOp_Click()

```
void Kalkulacka.Form1.InstantOp_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for resolving buttons should work and count instantly basically unary operations and binary operations with known constant.

6.3.2.9 length()

```
void Kalkulacka.Form1.length (
            char d )  [inline], [private]
```

Function chcecking length.

Parameters

in	*char*	d (clicked number or character)

6.3.2.10 Mminus_Click()

```
void Kalkulacka.Form1.Mminus_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for substracting from memory Memory icon control.

6.3.2.11 Mplus_Click()

```
void Kalkulacka.Form1.Mplus_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for addition to memory Memory icon control.

6.3.2.12 MRC_Click()

```
void Kalkulacka.Form1.MRC_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for recalling memory.

6.3.2.13 Number_click()

```
void Kalkulacka.Form1.Number_click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for clicked number chcecking length.

Returns

number in TextBox

6.3.2.14 off_Click()

```
void Kalkulacka.Form1.off_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function of switching off the application.

Returns

close of calculator

6.3.2.15 operation_Click()

```
void Kalkulacka.Form1.operation_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for setting the right operation save input erase textbox.

6.3.2.16 shift_Click()

```
void Kalkulacka.Form1.shift_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for switching panel after click on SHIFT the panel will change.

6.3.2.17 subtraction_Click()

```
void Kalkulacka.Form1.subtraction_Click (
            object sender,
            EventArgs e )  [inline], [private]
```

Function for negative numbers if text box contains only zero.

Function for subctraction of numbers

6.3.2.18 textBox1_KeyPress()

```
void Kalkulacka.Form1.textBox1_KeyPress (
            object sender,
            KeyPressEventArgs e )  [inline], [private]
```

Function to check if there is enough space in textbox for writing pressed key (WIP)

6.3.2.19 Valid_Chk()

```
void Kalkulacka.Form1.Valid_Chk (
            (bool, decimal) result )  [inline]
```

Function for checking successful result.

Returns

result if everything is good

6.3.2.20 ZeroClear()

```
void Kalkulacka.Form1.ZeroClear ( )  [inline]
```

Function for clearing textbox to zero-state.

6.3.3 Member Data Documentation

6.3.3.1 AC

```
System.Windows.Forms.Button Kalkulacka.Form1.AC  [private]
```

6.3.3.2 addition

```
System.Windows.Forms.Button Kalkulacka.Form1.addition  [private]
```

6.3.3.3 ans

```
decimal Kalkulacka.Form1.ans = 0  [private]
```

6.3.3.4 ANS

```
System.Windows.Forms.Button Kalkulacka.Form1.ANS  [private]
```

6.3.3.5 arccos

```
System.Windows.Forms.Button Kalkulacka.Form1.arccos  [private]
```

6.3.3.6 arcsin

```
System.Windows.Forms.Button Kalkulacka.Form1.arcsin  [private]
```

6.3.3.7 arctan

```
System.Windows.Forms.Button Kalkulacka.Form1.arctan  [private]
```

6.3.3.8 bool

```
Kalkulacka.Form1.bool
```

Function for calculating binary operations.

6.3.3.9 components

```
System.ComponentModel.IContainer Kalkulacka.Form1.components = null  [private]
```

Required designer variable.

6.3.3.10 cos

```
System.Windows.Forms.Button Kalkulacka.Form1.cos  [private]
```

6.3.3.11 decPoint

```
System.Windows.Forms.Button Kalkulacka.Form1.decPoint  [private]
```

6.3.3.12 del

```
System.Windows.Forms.Button Kalkulacka.Form1.del  [private]
```

6.3.3.13 DisplayedM

```
System.Windows.Forms.Label Kalkulacka.Form1.DisplayedM  [private]
```

6.3.3.14 division

```
System.Windows.Forms.Button Kalkulacka.Form1.division  [private]
```

6.3.3.15 equals

```
System.Windows.Forms.Button Kalkulacka.Form1.equals  [private]
```

6.3.3.16 erase

```
bool Kalkulacka.Form1.erase = false  [private]
```

6.3.3.17 euler

```
System.Windows.Forms.Button Kalkulacka.Form1.euler  [private]
```

6.3.3.18 factorial

```
System.Windows.Forms.Button Kalkulacka.Form1.factorial  [private]
```

6.3.3.19 firstNum

```
decimal Kalkulacka.Form1.firstNum = 0  [private]
```

6.3.3.20 listPanel

```
List<Panel> Kalkulacka.Form1.listPanel = new List<Panel>()  [private]
```

6.3.3.21 ln

```
System.Windows.Forms.Button Kalkulacka.Form1.ln  [private]
```

6.3.3.22 log

```
System.Windows.Forms.Button Kalkulacka.Form1.log  [private]
```

6.3.3.23 logDec

```
System.Windows.Forms.Button Kalkulacka.Form1.logDec  [private]
```

6.3.3.24 MEM

```
decimal Kalkulacka.Form1.MEM = 0  [private]
```

6.3.3.25 Mminus

```
System.Windows.Forms.Button Kalkulacka.Form1.Mminus  [private]
```

6.3.3.26 Mplus

```
System.Windows.Forms.Button Kalkulacka.Form1.Mplus  [private]
```

6.3.3.27 MRC

```
System.Windows.Forms.Button Kalkulacka.Form1.MRC  [private]
```

6.3.3.28 multiplication

```
System.Windows.Forms.Button Kalkulacka.Form1.multiplication  [private]
```

6.3.3.29 multiplication10

```
System.Windows.Forms.Button Kalkulacka.Form1.multiplication10  [private]
```

6.3.3.30 newMath

```
MathComponentsNS.MathComponents Kalkulacka.Form1.newMath = new MathComponentsNS.MathComponents()
[private]
```

6.3.3.31 num0

```
System.Windows.Forms.Button Kalkulacka.Form1.num0  [private]
```

6.3.3.32 num1

```
System.Windows.Forms.Button Kalkulacka.Form1.num1  [private]
```

6.3.3.33 num2

```
System.Windows.Forms.Button Kalkulacka.Form1.num2  [private]
```

6.3.3.34 num3

```
System.Windows.Forms.Button Kalkulacka.Form1.num3  [private]
```

6.3.3.35 num4

```
System.Windows.Forms.Button Kalkulacka.Form1.num4  [private]
```

6.3.3.36 num5

```
System.Windows.Forms.Button Kalkulacka.Form1.num5  [private]
```

6.3.3.37 num6

```
System.Windows.Forms.Button Kalkulacka.Form1.num6  [private]
```

6.3.3.38 num7

```
System.Windows.Forms.Button Kalkulacka.Form1.num7  [private]
```

6.3.3.39 num8

```
System.Windows.Forms.Button Kalkulacka.Form1.num8  [private]
```

6.3.3.40 num9

```
System.Windows.Forms.Button Kalkulacka.Form1.num9  [private]
```

6.3.3.41 off

```
System.Windows.Forms.Button Kalkulacka.Form1.off  [private]
```

6.3.3.42 operationPerformed

```
string Kalkulacka.Form1.operationPerformed = ""  [private]
```

6.3.3.43 pi

```
System.Windows.Forms.Button Kalkulacka.Form1.pi  [private]
```

6.3.3.44 Power2

```
System.Windows.Forms.Button Kalkulacka.Form1.Power2  [private]
```

6.3.3.45 Power3

```
System.Windows.Forms.Button Kalkulacka.Form1.Power3  [private]
```

6.3.3.46 powerX

```
System.Windows.Forms.Button Kalkulacka.Form1.powerX  [private]
```

6.3.3.47 PowerXMinus1

```
System.Windows.Forms.Button Kalkulacka.Form1.PowerXMinus1  [private]
```

6.3.3.48 RAND

```
System.Windows.Forms.Button Kalkulacka.Form1.RAND  [private]
```

6.3.3.49 repeatEq

```
bool Kalkulacka.Form1.repeatEq = false  [private]
```

6.3.3.50 root

```
System.Windows.Forms.Button Kalkulacka.Form1.root  [private]
```

6.3.3.51 root2

```
System.Windows.Forms.Button Kalkulacka.Form1.root2  [private]
```

6.3.3.52 root3

```
System.Windows.Forms.Button Kalkulacka.Form1.root3  [private]
```

6.3.3.53 secondNum

```
decimal Kalkulacka.Form1.secondNum = 0  [private]
```

6.3.3.54 shift

```
System.Windows.Forms.Button Kalkulacka.Form1.shift  [private]
```

6.3.3.55 shiftClicked

```
bool Kalkulacka.Form1.shiftClicked = false  [private]
```

6.3.3.56 shiftClickedPanel

```
System.Windows.Forms.Panel Kalkulacka.Form1.shiftClickedPanel  [private]
```

6.3.3.57 shiftUnclickedPanel

```
System.Windows.Forms.Panel Kalkulacka.Form1.shiftUnclickedPanel  [private]
```

6.3.3.58 sin

```
System.Windows.Forms.Button Kalkulacka.Form1.sin  [private]
```

6.3.3.59 subtraction

```
System.Windows.Forms.Button Kalkulacka.Form1.subtraction  [private]
```

6.3.3.60 tan

```
System.Windows.Forms.Button Kalkulacka.Form1.tan  [private]
```

6.3.3.61 textBox1

```
System.Windows.Forms.TextBox Kalkulacka.Form1.textBox1  [private]
```

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

- Kalkulacka/Form1.cs
- Kalkulacka/Form1.Designer.cs

6.4 MathComponentsNS.MathComponents Class Reference

Private Member Functions

- decimal TruncateToFit ((bool, decimal) a)
- decimal Add (decimal a, decimal b)
- decimal Subtract (decimal a, decimal b)
- decimal Multiply (decimal a, decimal b)
- decimal Divide (decimal a, decimal b)
- decimal Exponentiate (decimal b, decimal e)
- decimal Root (decimal d, decimal r)
- decimal Logarithm (decimal a, decimal b)
- decimal Sin (decimal a)
- decimal Cos (decimal a)
- decimal Tan (decimal a)
- decimal Arcsin (decimal a)
- decimal Arccos (decimal a)
- decimal Arctan (decimal a)
- decimal Factorial (decimal a)
- decimal UnconstrainedFactorial (decimal a)
- decimal Random ()
- decimal TruncateToFit ((bool, decimal) a)
- decimal Add (decimal a, decimal b)
- decimal Subtract (decimal a, decimal b)
- decimal Multiply (decimal a, decimal b)
- decimal Divide (decimal a, decimal b)
- decimal Exponentiate (decimal b, decimal e)
- decimal Root (decimal d, decimal r)
- decimal Logarithm (decimal a, decimal b)
- decimal Sin (decimal a)
- decimal Cos (decimal a)
- decimal Tan (decimal a)
- decimal Arcsin (decimal a)
- decimal Arccos (decimal a)
- decimal Arctan (decimal a)
- decimal Factorial (decimal a)
- decimal UnconstrainedFactorial (decimal a)
- decimal Random ()

Private Attributes

- bool

  truncates result to fit calc screen if less than 9 whole, leave all whole and truncate decimal to sum up to 9 max
- decimal error = (true, 0)
- decimal constPI = (false, (decimal)Math.PI)
- decimal constE = (false, (decimal)Math.E)

Static Private Attributes

- static decimal PI = PI
- static decimal E = E

6.4.1 Member Function Documentation

6.4.1.1 Add() [1/2]

```
decimal MathComponentsNS.MathComponents.Add (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.2 Add() [2/2]

```
decimal MathComponentsNS.MathComponents.Add (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.3 Arccos() [1/2]

```
decimal MathComponentsNS.MathComponents.Arccos (
            decimal a )  [inline], [private]
```

6.4.1.4 Arccos() [2/2]

```
decimal MathComponentsNS.MathComponents.Arccos (
            decimal a )  [inline], [private]
```

6.4.1.5 Arcsin() [1/2]

```
decimal MathComponentsNS.MathComponents.Arcsin (
            decimal a )  [inline], [private]
```

6.4.1.6 Arcsin() [2/2]

```
decimal MathComponentsNS.MathComponents.Arcsin (
            decimal a )  [inline], [private]
```

6.4.1.7 Arctan() [1/2]

```
decimal MathComponentsNS.MathComponents.Arctan (
            decimal a )  [inline], [private]
```

6.4.1.8 Arctan() [2/2]

```
decimal MathComponentsNS.MathComponents.Arctan (
            decimal a )  [inline], [private]
```

6.4.1.9 Cos() [1/2]

```
decimal MathComponentsNS.MathComponents.Cos (
            decimal a )  [inline], [private]
```

6.4.1.10 Cos() [2/2]

```
decimal MathComponentsNS.MathComponents.Cos (
            decimal a )  [inline], [private]
```

6.4.1.11 Divide() [1/2]

```
decimal MathComponentsNS.MathComponents.Divide (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.12 Divide() [2/2]

```
decimal MathComponentsNS.MathComponents.Divide (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.13 Exponentiate() [1/2]

```
decimal MathComponentsNS.MathComponents.Exponentiate (
            decimal b,
            decimal e )  [inline], [private]
```

6.4.1.14 Exponentiate() [2/2]

```
decimal MathComponentsNS.MathComponents.Exponentiate (
            decimal b,
            decimal e )  [inline], [private]
```

6.4.1.15 Factorial() [1/2]

```
decimal MathComponentsNS.MathComponents.Factorial (
            decimal a )  [inline], [private]
```

6.4.1.16 Factorial() [2/2]

```
decimal MathComponentsNS.MathComponents.Factorial (
            decimal a )  [inline], [private]
```

6.4.1.17 Logarithm() [1/2]

```
decimal MathComponentsNS.MathComponents.Logarithm (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.18 Logarithm() [2/2]

```
decimal MathComponentsNS.MathComponents.Logarithm (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.19 Multiply() [1/2]

```
decimal MathComponentsNS.MathComponents.Multiply (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.20 Multiply() [2/2]

```
decimal MathComponentsNS.MathComponents.Multiply (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.21 Random() [1/2]

```
decimal MathComponentsNS.MathComponents.Random ( )  [inline], [private]
```

6.4.1.22 Random() [2/2]

```
decimal MathComponentsNS.MathComponents.Random ( )  [inline], [private]
```

6.4.1.23 Root() [1/2]

```
decimal MathComponentsNS.MathComponents.Root (
            decimal d,
            decimal r )  [inline], [private]
```

6.4.1.24 Root() [2/2]

```
decimal MathComponentsNS.MathComponents.Root (
            decimal d,
            decimal r )  [inline], [private]
```

6.4.1.25 Sin() [1/2]

```
decimal MathComponentsNS.MathComponents.Sin (
            decimal a )  [inline], [private]
```

6.4.1.26 Sin() [2/2]

```
decimal MathComponentsNS.MathComponents.Sin (
            decimal a )  [inline], [private]
```

6.4.1.27 Subtract() [1/2]

```
decimal MathComponentsNS.MathComponents.Subtract (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.28 Subtract() [2/2]

```
decimal MathComponentsNS.MathComponents.Subtract (
            decimal a,
            decimal b )  [inline], [private]
```

6.4.1.29 Tan() [1/2]

```
decimal MathComponentsNS.MathComponents.Tan (
            decimal a )  [inline], [private]
```

6.4.1.30 Tan() [2/2]

```
decimal MathComponentsNS.MathComponents.Tan (
            decimal a )  [inline], [private]
```

6.4.1.31 TruncateToFit() [1/2]

```
decimal MathComponentsNS.MathComponents.TruncateToFit (
            (bool, decimal) a )  [inline], [private]
```

6.4.1.32 TruncateToFit() [2/2]

```
decimal MathComponentsNS.MathComponents.TruncateToFit (
            (bool, decimal) a )  [inline], [private]
```

6.4.1.33 UnconstrainedFactorial() [1/2]

```
decimal MathComponentsNS.MathComponents.UnconstrainedFactorial (
            decimal a )  [inline], [private]
```

6.4.1.34 UnconstrainedFactorial() [2/2]

```
decimal MathComponentsNS.MathComponents.UnconstrainedFactorial (
            decimal a )  [inline], [private]
```

6.4.2 Member Data Documentation

6.4.2.1 bool

`MathComponentsNS.MathComponents.bool [private]`

truncates result to fit calc screen if less than 9 whole, leave all whole and truncate decimal to sum up to 9 max

Function of random number generates random decimal number between 0 inclusive to 1 exclusive.

Factorial operation function without upper limit helper function, don't use in calculator.

Factorial operation function.

Function arctan.

Function arccos.

Function arcsin.

Function tangent.

Function cosine using Taylor series algorithm cos x = 1 x^2/2! + x^4/4! x^6/6! + ...

sine function using Taylor series algorithm sin x = x x^3/3! + x^5/5! x^7/7! + ...

Logarithm function expect log-argument positive expect base positive and different from 1.

Funtion of root to ath.

Division operation function.

Multiplication operation function.

Subtraction operation function.

Addition operation function.

Returns

error/scientific notation if more than 9 whole places (?)

Parameters

in	*decimal*	first addend (a)
in	*decimal*	second addend (b)

Returns

sum (result of a + b)

Parameters

in	*decimal*	minuend (a)
in	*decimal*	subtrahend (b)

Returns

difference (result of a - b)

Parameters

in	*decimal*	first factor (a)
in	*decimal*	second factor (b)

Returns

product (result of a $*$ b)

Parameters

in	*decimal*	dividend (a)
in	*decimal*	divisor (b)

Returns

quotient (result of a / b)

error if divisor is zero

non-integer exponent or base expect error (?)

Parameters

in	*decimal*	base (b)
in	*decimal*	exponent (e)

Returns

result of b^e

error if 0^0 or 0^-1

Parameters

in	*decimal*	degree d
in	*decimal*	radicand r

Returns

ath root of b

error if negative radicant

Parameters

in	*decimal*	argument (a)
in	*decimal*	base (b)

Returns

log of a with base of b

Parameters

in	*decimal*	a

Returns

result with 5 decimal places precision

Parameters

in	*decimal*	number a

Returns

result with 5 decimal places precision (?)

Parameters

in	*decimal*	number a tan x = sin x / cos x

Returns

result with 5 decimal places precision (?)

Parameters

in	*decimal*	number a

Returns

result with 5 decimal places precision (?) expect value between -pi/2 and pi/2

Parameters

in	*decimal*	number a

Returns

result with 5 decimal places precision (?) expect value between -1 and 1

Parameters

in	*decimal*	number a expect number non-negative integer not greater than 12

Returns

error if a is negative integer

error if a is greater than 12

error if a has decimal point

Parameters

in	*decimal*	number a expect number non-negative integer

Returns

error if a is negative integer

error if a has decimal point

Parameters

in	*decimal*	a
in	*decimal*	b

Returns

result of a - b

Parameters

in	*decimal*	a
in	*decimal*	b

Returns

result of a $*$ b

Parameters

in	*decimal*	a
in	*decimal*	b

Returns

result of a / b

error if division by zero

i non-integer exponent or base expect error (?)

Parameters

in	*decimal*	a
in	*decimal*	b

Returns

result of a^b

error if 0^0

Parameters

in	*decimal*	d
in	*decimal*	radicant r

Returns

ath root of b

error if negative radicant

Parameters

in	*decimal*	a
in	*decimal*	b

Returns

log of a with base of b

Parameters

in	*decimal*	a

Returns

result with 5 decimal places precision (?)

Parameters

in	*decimal*	a tan x = sin x / cos x

Returns

result with 5 decimal places precision (?)

Parameters

in	*decimal*	a

Returns

result with 5 decimal places precision (?) expect value between -pi/2 and pi/2

Parameters

in	*decimal*	a

Returns

result with 5 decimal places precision (?) expect value between -1 and 1

Parameters

in	*decimal*	a expect number non-negative integer not greater than 12

Returns

error if a is negative integer

error if a is greater than 12

error if a has decimal point

Parameters

in	*decimal*	a expect number non-negative integer

Returns

error if a is negative integer

error if a has decimal point

result with 5 decimal places precision (?)

6.4.2.2 constE

```
decimal MathComponentsNS.MathComponents.constE = (false, (decimal)Math.E)  [private]
```

6.4.2.3 constPI

```
decimal MathComponentsNS.MathComponents.constPI = (false, (decimal)Math.PI)  [private]
```

6.4.2.4 E

```
decimal MathComponentsNS.MathComponents.E = E  [static], [private]
```

6.4.2.5 error

```
decimal MathComponentsNS.MathComponents.error = (true, 0)  [private]
```

6.4.2.6 PI

```
decimal MathComponentsNS.MathComponents.PI = PI  [static], [private]
```

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

- Kalkulacka/Math.cs

6.5 Kalkulacka.Program Class Reference

Static Private Member Functions

- static void Main ()
  The main entry point for the application.

6.5.1 Member Function Documentation

6.5.1.1 Main()

```
static void Kalkulacka.Program.Main ( )  [inline], [static], [private]
```

The main entry point for the application.

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

- Kalkulacka/Program.cs

6.6 Profiling.Program Class Reference

Static Private Member Functions

- static int Main (string[] args)

6.6.1 Member Function Documentation

6.6.1.1 Main()

```
static int Profiling.Program.Main (
            string[] args )  [inline], [static], [private]
```

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

- Profiling/Program.cs

Chapter 7

File Documentation

7.1 Kalkulacka/Class1.cs File Reference

Classes

- class Kalkulacka.ButtonEclipse

Namespaces

- namespace Kalkulacka

7.2 Kalkulacka/Form1.cs File Reference

Classes

- class Kalkulacka.Form1

Namespaces

- namespace Kalkulacka

7.3 Kalkulacka/Form1.Designer.cs File Reference

Classes

- class Kalkulacka.Form1

Namespaces

- namespace Kalkulacka

7.4 Kalkulacka/Math.cs File Reference

Classes

- class MathComponentsNS.MathComponents

Namespaces

- namespace MathComponentsNS

7.5 Profiling/Math.cs File Reference

Classes

- class MathComponentsNS.MathComponents

Namespaces

- namespace MathComponentsNS

7.6 Kalkulacka/Program.cs File Reference

Classes

- class Kalkulacka.Program

Namespaces

- namespace Kalkulacka

7.7 Profiling/Program.cs File Reference

Classes

- class Profiling.Program

Namespaces

- namespace Profiling

7.8 Kalkulacka/Properties/AssemblyInfo.cs File Reference

7.9 Profiling/Properties/AssemblyInfo.cs File Reference

7.10 Kalkulacka/Properties/Resources.Designer.cs File Reference

Classes

- class **Kalkulacka.Properties.Resources**

  A strongly-typed resource class, for looking up localized strings, etc.

Namespaces

- namespace Kalkulacka
- namespace Kalkulacka.Properties

7.11 Kalkulacka/Properties/Settings.Designer.cs File Reference

Classes

- class **Kalkulacka.Properties.Settings**

Namespaces

- namespace Kalkulacka
- namespace Kalkulacka.Properties

7.12 MathTest/BasicMathTests.cs File Reference

Classes

- class MathTest.BasicMathTests

Namespaces

- namespace MathTest

7.13 MathTest/obj/Debug/netcoreapp3.1/MathTest.AssemblyInfo.cs File Reference

7.14 MathTest/obj/Release/netcoreapp3.1/MathTest.AssemblyInfo.cs File Reference

7.15 MathTest/obj/x64/Release/netcoreapp3.1/MathTest.AssemblyInfo.cs File Reference

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