IVS - project2

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Chapter 1

File Index

1.1 File List

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Chapter 2

File Documentation

2.1 calculator.h File Reference

C-header file.

Functions

double ADD (double x, double y)

Function for addition of two numbers of type double.

• double SUB (double x, double y)

Function for subtraction of two numbers of type double.

• double MUL (double x, double y)

Function for multiplication of two numbers of type double.

• double DIV (double x, double y)

Function for division of two numbers of type double.

unsigned long long int FCT (int n)

Function for factorial of an integer.

• double POW (double x, int n)

Function for exponentiation count.

• double SQRT (double x, int n)

Function for nth root.

• double ABSOL (double x)

Function for absolute value of a number of type double.

Variables

- int error_ret
- · int error_div_zero

2.1.1 Detailed Description

C-header file.

Date

22.4.2017

Author

Martin Minarik, Gabriel Quirschfeld, Tomas Svetlik, Jakub Zich

2.1.2 Function Documentation

2.1.2.1 ABSOL()

```
double ABSOL ( \label{eq:double x } \mbox{double } x \mbox{ )}
```

Function for absolute value of a number of type double.

Parameters

```
x real number
```

Returns

absolute value of x

2.1.2.2 ADD()

```
double ADD ( \label{eq:condition} \operatorname{double} \ x, \label{eq:condition} \operatorname{double} \ y \ )
```

Function for addition of two numbers of type double.

Parameters

X	first summand
У	second summand

Returns

sum of x and y

2.1.2.3 DIV()

```
double DIV ( \label{eq:condition} \mbox{double } x, \\ \mbox{double } y \mbox{)}
```

Function for division of two numbers of type double.

Parameters

Х	dividend
У	divisor

Warning

y cannot equal zero

Returns

fraction of x and y or 0 if error

2.1.2.4 FCT()

```
unsigned long long int FCT (  \hspace{1cm} \text{int } n \hspace{0.1cm} )
```

Function for factorial of an integer.

Parameters

n natural number

Returns

factorial of n or NAN if error

2.1.2.5 MUL()

```
double MUL ( \label{eq:condition} \mbox{double $x$,} \\ \mbox{double $y$ )}
```

Function for multiplication of two numbers of type double.

Parameters

X	first factor
У	second factor

Returns

product of x and y

2.1.2.6 POW()

```
double POW ( \label{eq:constraint} \text{double } x \text{,} \\ \text{int } n \text{ )}
```

Function for exponentiation count.

Parameters

Х	base
n	exponent

Warning

n must be positive number

Returns

product of x^n or NAN if error

2.1.2.7 SQRT()

Function for nth root.

Parameters

Χ	real number
n	index

Warning

n must be positive number

Returns

nth root of number x or 0 if error

2.1.2.8 SUB()

```
double SUB ( \label{eq:condition} \mbox{double $x$,} \\ \mbox{double $y$ )}
```

Function for subtraction of two numbers of type double.

Parameters

Χ	minuend
V	subtrahend

Returns

difference of x and y

2.2 callbacks.h File Reference

C-header file.

```
#include <gtk/gtk.h>
```

Macros

• #define MAX_DIGITS 9

Functions

• gchar * get_whole_text (GtkTextBuffer *buffer)

loads the input of calculator

• void window1_destroy ()

Function that closes the calculator if [x] is pressed.

void one_clicked ()

Function that writes 1 if 1 is pressed.

void two_clicked ()

Function that writes 2 if 2 is pressed.

void three clicked ()

Function that writes 3 if 3 is pressed.

· void four_clicked ()

Function that writes 4 if 4 is pressed.

void five_clicked ()

Function that writes 5 if 5 is pressed.

• void six_clicked ()

Function that writes 6 if 6 is pressed.

void seven_clicked ()

Function that writes 7 if 7 is pressed.

· void eight_clicked ()

Function that writes 8 if 8 is pressed.

• void nine clicked ()

Function that writes 9 if 9 is pressed.

void zero_clicked ()

Function that writes 0 if 0 is pressed.

void add_clicked ()

Function that uses ADD function if + is pressed.

void subtract_clicked ()

Function that uses SUB function if - is pressed.

void square_clicked ()

Function that uses SQRT function if square button is pressed.

void power_clicked ()

Function that uses POW function if $^{\wedge}$ is pressed.

- void faktorial_clicked ()
- void mod_clicked ()

Function that uses DIV function if $\it /$ is pressed.

void multiply_clicked ()

Function that uses MUL function if \ast is pressed.

void dot_clicked ()

Function that writes . if . is pressed.

void clear_clicked ()

Function that clears the window if the button clear is pressed.

void equal_clicked ()

Function that equals the result if = is pressed.

void abs_clicked ()

Function that counts absolute value if abs button is pressed.

Variables

- GtkTextView * widg 2
- GtkTextView * widg_1

2.2.1 Detailed Description

C-header file.

Date

22.4.2017

Author

Martin Minarik, Gabriel Quirschfeld, Tomas Svetlik, Jakub Zich

2.2.2 Function Documentation

2.2.2.1 get_whole_text()

loads the input of calculator

Parameters

buffer pointer to the text in the window of calculator

Returns

string in the input of calculator

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