

Calculator

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

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

object	
calculator.Ui_MainWindow	7

Chapter 2

Class Index

2.1 Class List

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

calculator.Ui_MainWindow	7
----------------------------------------------------	---

Chapter 3

File Index

3.1 File List

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

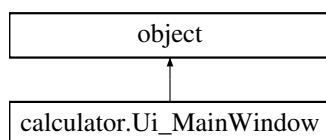
[calculator.py](#) ??

Chapter 4

Class Documentation

4.1 calculator.Ui_MainWindow Class Reference

Inheritance diagram for calculator.Ui_MainWindow:



Public Member Functions

- def [setUpUi](#) (self, MainWindow)
- def [displayWrite](#) (self, input)
- def [displayClear](#) (self)
- def [displayDeleteLast](#) (self)
- def [evaluate](#) (self)
- def [keyPressEvent](#) (self, e)
- def [retranslateUi](#) (self, MainWindow)

Public Attributes

- [centralwidget](#)
- [verticalLayout](#)
- [gridLayout](#)
- [label](#)
- [push_ob](#)
- [push_cb](#)
- [push_factorial](#)
- [push_clearall](#)
- [push_backspace](#)
- [push_n7](#)
- [push_n8](#)
- [push_n9](#)
- [push_mul](#)

- [push_pow](#)
- [push_n4](#)
- [push_n5](#)
- [push_n6](#)
- [push_div](#)
- [push_nthrt](#)
- [push_n1](#)
- [push_n2](#)
- [push_n3](#)
- [push_plus](#)
- [push_logarithm](#)
- [push_n0](#)
- [push_comma](#)
- [push_dot](#)
- [push_minus](#)
- [push_eq](#)
- [error](#)

Static Public Attributes

- bool [error](#) = False

4.1.1 Detailed Description

Definition at line [14](#) of file [calculator.py](#).

4.1.2 Member Function Documentation

4.1.2.1 displayClear()

```
def calculator.Ui_MainWindow.displayClear (  
    self )
```

Definition at line [388](#) of file [calculator.py](#).

4.1.2.2 displayDeleteLast()

```
def calculator.Ui_MainWindow.displayDeleteLast (  
    self )
```

Definition at line [391](#) of file [calculator.py](#).

4.1.2.3 displayWrite()

```
def calculator.Ui_MainWindow.displayWrite (
    self,
    input )
```

Definition at line 381 of file [calculator.py](#).

4.1.2.4 evaluate()

```
def calculator.Ui_MainWindow.evaluate (
    self )
```

Definition at line 412 of file [calculator.py](#).

4.1.2.5 keyPressEvent()

```
def calculator.Ui_MainWindow.keyPressEvent (
    self,
    e )
```

Definition at line 420 of file [calculator.py](#).

4.1.2.6 retranslateUi()

```
def calculator.Ui_MainWindow.retranslateUi (
    self,
    MainWindow )
```

Definition at line 434 of file [calculator.py](#).

4.1.2.7 setupUi()

```
def calculator.Ui_MainWindow.setupUi (
    self,
    MainWindow )
```

Definition at line 18 of file [calculator.py](#).

4.1.3 Member Data Documentation

4.1.3.1 centralwidget

`calculator.Ui_MainWindow.centralwidget`

Definition at line 35 of file [calculator.py](#).

4.1.3.2 error [1/2]

`bool calculator.Ui_MainWindow.error = False [static]`

Definition at line 16 of file [calculator.py](#).

4.1.3.3 error [2/2]

`calculator.Ui_MainWindow.error`

Definition at line 382 of file [calculator.py](#).

4.1.3.4 gridLayout

`calculator.Ui_MainWindow.gridLayout`

Definition at line 49 of file [calculator.py](#).

4.1.3.5 label

`calculator.Ui_MainWindow.label`

Definition at line 54 of file [calculator.py](#).

4.1.3.6 push_backspace

`calculator.Ui_MainWindow.push_backspace`

Definition at line 116 of file [calculator.py](#).

4.1.3.7 push_cb

`calculator.Ui_MainWindow.push_cb`

Definition at line 83 of file [calculator.py](#).

4.1.3.8 push_clearall

`calculator.Ui_MainWindow.push_clearall`

Definition at line 105 of file [calculator.py](#).

4.1.3.9 push_comma

`calculator.Ui_MainWindow.push_comma`

Definition at line 303 of file [calculator.py](#).

4.1.3.10 push_div

`calculator.Ui_MainWindow.push_div`

Definition at line 215 of file [calculator.py](#).

4.1.3.11 push_dot

`calculator.Ui_MainWindow.push_dot`

Definition at line 314 of file [calculator.py](#).

4.1.3.12 push_eq

`calculator.Ui_MainWindow.push_eq`

Definition at line 336 of file [calculator.py](#).

4.1.3.13 `push_factorial`

`calculator.Ui_MainWindow.push_factorial`

Definition at line 94 of file [calculator.py](#).

4.1.3.14 `push_logarithm`

`calculator.Ui_MainWindow.push_logarithm`

Definition at line 281 of file [calculator.py](#).

4.1.3.15 `push_minus`

`calculator.Ui_MainWindow.push_minus`

Definition at line 325 of file [calculator.py](#).

4.1.3.16 `push_mul`

`calculator.Ui_MainWindow.push_mul`

Definition at line 161 of file [calculator.py](#).

4.1.3.17 `push_n0`

`calculator.Ui_MainWindow.push_n0`

Definition at line 292 of file [calculator.py](#).

4.1.3.18 `push_n1`

`calculator.Ui_MainWindow.push_n1`

Definition at line 237 of file [calculator.py](#).

4.1.3.19 push_n2

`calculator.Ui_MainWindow.push_n2`

Definition at line 248 of file [calculator.py](#).

4.1.3.20 push_n3

`calculator.Ui_MainWindow.push_n3`

Definition at line 259 of file [calculator.py](#).

4.1.3.21 push_n4

`calculator.Ui_MainWindow.push_n4`

Definition at line 182 of file [calculator.py](#).

4.1.3.22 push_n5

`calculator.Ui_MainWindow.push_n5`

Definition at line 193 of file [calculator.py](#).

4.1.3.23 push_n6

`calculator.Ui_MainWindow.push_n6`

Definition at line 204 of file [calculator.py](#).

4.1.3.24 push_n7

`calculator.Ui_MainWindow.push_n7`

Definition at line 128 of file [calculator.py](#).

4.1.3.25 `push_n8`

`calculator.Ui_MainWindow.push_n8`

Definition at line 139 of file [calculator.py](#).

4.1.3.26 `push_n9`

`calculator.Ui_MainWindow.push_n9`

Definition at line 150 of file [calculator.py](#).

4.1.3.27 `push_nthrt`

`calculator.Ui_MainWindow.push_nthrt`

Definition at line 226 of file [calculator.py](#).

4.1.3.28 `push_ob`

`calculator.Ui_MainWindow.push_ob`

Definition at line 72 of file [calculator.py](#).

4.1.3.29 `push_plus`

`calculator.Ui_MainWindow.push_plus`

Definition at line 270 of file [calculator.py](#).

4.1.3.30 `push_pow`

`calculator.Ui_MainWindow.push_pow`

Definition at line 171 of file [calculator.py](#).

4.1.3.31 `verticalLayout`

`calculator.Ui_MainWindow.verticalLayout`

Definition at line 47 of file [calculator.py](#).

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

- [calculator.py](#)

Chapter 5

File Documentation

5.1 calculator.py

```
00001 #!/usr/bin/env python3
00002
00003 # Form implementation generated from reading ui file 'gui.ui'
00004 #
00005 # Created by: PyQt5 UI code generator
00006 #
00007 # WARNING: Any manual changes made to this file will be lost when pyuic6 is
00008 # run again. Do not edit this file unless you know what you are doing.
00009
00010 from PyQt5 import QtCore, QtWidgets
00011 from PyQt5.QtCore import Qt
00012 from mathlib.calc_exp import calc_output
00013
00014 class Ui_MainWindow(object):
00015
00016     error = False
00017
00018     def setupUi(self, MainWindow):
00019         MainWindow.setObjectName("MainWindow")
00020         MainWindow.setEnabled(True)
00021         MainWindow.resize(400, 400)
00022         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Preferred,
QtWidgets.QSizePolicy.Policy.Preferred)
00023         sizePolicy.setHorizontalStretch(1)
00024         sizePolicy.setVerticalStretch(0)
00025         sizePolicy.setHeightForWidth(MainWindow.sizePolicy().hasHeightForWidth())
00026         MainWindow.setSizePolicy(sizePolicy)
00027         MainWindow.setMinimumSize(QtCore.QSize(400, 400))
00028         MainWindow.setAutoFillBackground(False)
00029         MainWindow.setStyleSheet("font: 400 18pt \"Monospace\";\n"
00030 "background-color: rgb(73, 71, 105);\n"
00031 "\n"
00032 "")
00033         MainWindow.keyPressEvent = self.keyPressEvent
00034         MainWindow.setFocusPolicy(Qt.FocusPolicy.StrongFocus)
00035         self.centralwidget = QtWidgets.QWidget(MainWindow)
00036         self.centralwidget.setEnabled(True)
00037         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.MinimumExpanding,
QtWidgets.QSizePolicy.Policy.MinimumExpanding)
00038         sizePolicy.setHorizontalStretch(8)
00039         sizePolicy.setVerticalStretch(8)
00040         sizePolicy.setHeightForWidth(self.centralwidget.sizePolicy().hasHeightForWidth())
00041         self.centralwidget.setSizePolicy(sizePolicy)
00042         self.centralwidget.setStyleSheet("background-color:rgb(86, 85, 109);\n"
00043 "margin: 3%;\n"
00044 "color:white;\n"
00045 "")
00046         self.centralwidget.setObjectName("centralwidget")
00047         self.verticalLayout = QtWidgets.QVBoxLayout(self.centralwidget)
00048         self.verticalLayout.setObjectName("verticalLayout")
00049         self.gridLayout = QtWidgets.QGridLayout()
00050         self.gridLayout.setContentsMargins(0, -1, -1, -1)
00051         self.gridLayout.setSpacing(0)
00052         self.gridLayout.setObjectName("gridLayout")
00053
00054         self.label = QtWidgets.QLabel(self.centralwidget)
00055         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Preferred,
QtWidgets.QSizePolicy.Policy.Preferred)
```

```

00056         sizePolicy.setHorizontalStretch(0)
00057         sizePolicy.setVerticalStretch(13)
00058         sizePolicy.setHeightForWidth(self.label.sizePolicy().hasHeightForWidth())
00059         self.label.setSizePolicy(sizePolicy)
00060         self.label.setStyleSheet("background-color: rgb(255, 255, 255);\n"
00061 "color:rgb(0,0,0);\n"
00062 "padding: 10%;\n"
00063 "font-size:26px;")
00064         self.label.setText("")
00065         self.label.setScaledContents(False)
00066
00067         self.label.setAlignment(QtCore.Qt.AlignmentFlag.AlignRight|QtCore.Qt.AlignmentFlag.AlignTrailing|QtCore.Qt.AlignmentFlag.AlignLeft)
00068         self.label.setWordWrap(False)
00069         self.label.setIndent(10)
00070         self.label.setObjectName("label")
00071         self.gridLayout.addWidget(self.label, 0, 0, 1, 5)
00072
00073         self.push_ob = QtWidgets.QPushButton(self.centralwidget)
00074         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
00075         QtWidgets.QSizePolicy.Policy.Preferred)
00076         sizePolicy.setHorizontalStretch(0)
00077         sizePolicy.setVerticalStretch(10)
00078         sizePolicy.setHeightForWidth(self.push_ob.sizePolicy().hasHeightForWidth())
00079         self.push_ob.setSizePolicy(sizePolicy)
00080         self.push_ob.setAutoFillBackground(False)
00081         self.push_ob.setStyleSheet("background-color: rgb(94, 92, 100);")
00082         self.push_ob.setObjectName("push_ob")
00083         self.gridLayout.addWidget(self.push_ob, 1, 0, 1, 1)
00084
00085         self.push_cb = QtWidgets.QPushButton(self.centralwidget)
00086         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
00087         QtWidgets.QSizePolicy.Policy.Preferred)
00088         sizePolicy.setHorizontalStretch(0)
00089         sizePolicy.setVerticalStretch(10)
00090         sizePolicy.setHeightForWidth(self.push_cb.sizePolicy().hasHeightForWidth())
00091         self.push_cb.setSizePolicy(sizePolicy)
00092         self.push_cb.setAutoFillBackground(False)
00093         self.push_cb.setStyleSheet("background-color: rgb(94, 92, 100);")
00094         self.push_cb.setObjectName("push_cb")
00095         self.gridLayout.addWidget(self.push_cb, 1, 1, 1, 1)
00096
00097         self.push_factorial = QtWidgets.QPushButton(self.centralwidget)
00098         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
00099         QtWidgets.QSizePolicy.Policy.Preferred)
00100         sizePolicy.setHorizontalStretch(0)
00101         sizePolicy.setVerticalStretch(10)
00102         sizePolicy.setHeightForWidth(self.push_factorial.sizePolicy().hasHeightForWidth())
00103         self.push_factorial.setSizePolicy(sizePolicy)
00104         self.push_factorial.setAutoFillBackground(False)
00105         self.push_factorial.setStyleSheet("background-color: rgb(94, 92, 100);")
00106         self.push_factorial.setObjectName("push_factorial")
00107         self.gridLayout.addWidget(self.push_factorial, 1, 2, 1, 1)
00108
00109         self.push_clearall = QtWidgets.QPushButton(self.centralwidget)
00110         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
00111         QtWidgets.QSizePolicy.Policy.Preferred)
00112         sizePolicy.setHorizontalStretch(0)
00113         sizePolicy.setVerticalStretch(10)
00114         sizePolicy.setHeightForWidth(self.push_clearall.sizePolicy().hasHeightForWidth())
00115         self.push_clearall.setSizePolicy(sizePolicy)
00116         self.push_clearall.setAutoFillBackground(False)
00117         self.push_clearall.setStyleSheet("background-color: rgb(94, 92, 100);")
00118         self.push_clearall.setObjectName("push_clearall")
00119         self.gridLayout.addWidget(self.push_clearall, 1, 3, 1, 1)
00120
00121         self.push_backspace = QtWidgets.QPushButton(self.centralwidget)
00122         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
00123         QtWidgets.QSizePolicy.Policy.Preferred)
00124         sizePolicy.setHorizontalStretch(0)
00125         sizePolicy.setVerticalStretch(10)
00126         sizePolicy.setHeightForWidth(self.push_backspace.sizePolicy().hasHeightForWidth())
00127         self.push_backspace.setSizePolicy(sizePolicy)
00128         self.push_backspace.setAutoFillBackground(False)
00129         self.push_backspace.setStyleSheet("background-color: rgb(94, 92, 100);\n"
00130 "font-size: 30px;")
00131         self.push_backspace.setObjectName("push_backspace")
00132         self.gridLayout.addWidget(self.push_backspace, 1, 4, 1, 1)
00133
00134         self.push_n7 = QtWidgets.QPushButton(self.centralwidget)
00135         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
00136         QtWidgets.QSizePolicy.Policy.Preferred)
00137         sizePolicy.setHorizontalStretch(0)
00138         sizePolicy.setVerticalStretch(10)
00139         sizePolicy.setHeightForWidth(self.push_n7.sizePolicy().hasHeightForWidth())
00140         self.push_n7.setSizePolicy(sizePolicy)
00141         self.push_n7.setAutoFillBackground(False)
00142         self.push_n7.setStyleSheet("")

```

```
00136         self.push_n7.setObjectName("push_n7")
00137         self.gridLayout.addWidget(self.push_n7, 2, 0, 1, 1)
00138
00139         self.push_n8 = QtWidgets.QPushButton(self.centralwidget)
00140         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00141         sizePolicy.setHorizontalStretch(0)
00142         sizePolicy.setVerticalStretch(10)
00143         sizePolicy.setHeightForWidth(self.push_n8.sizePolicy().hasHeightForWidth())
00144         self.push_n8.setSizePolicy(sizePolicy)
00145         self.push_n8.setAutoFillBackground(False)
00146         self.push_n8.setStyleSheet("")
00147         self.push_n8.setObjectName("push_n8")
00148         self.gridLayout.addWidget(self.push_n8, 2, 1, 1, 1)
00149
00150         self.push_n9 = QtWidgets.QPushButton(self.centralwidget)
00151         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00152         sizePolicy.setHorizontalStretch(0)
00153         sizePolicy.setVerticalStretch(10)
00154         sizePolicy.setHeightForWidth(self.push_n9.sizePolicy().hasHeightForWidth())
00155         self.push_n9.setSizePolicy(sizePolicy)
00156         self.push_n9.setAutoFillBackground(False)
00157         self.push_n9.setStyleSheet("")
00158         self.push_n9.setObjectName("push_n9")
00159         self.gridLayout.addWidget(self.push_n9, 2, 2, 1, 1)
00160
00161         self.push_mul = QtWidgets.QPushButton(self.centralwidget)
00162         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00163         sizePolicy.setHorizontalStretch(0)
00164         sizePolicy.setVerticalStretch(10)
00165         sizePolicy.setHeightForWidth(self.push_mul.sizePolicy().hasHeightForWidth())
00166         self.push_mul.setSizePolicy(sizePolicy)
00167         self.push_mul.setAutoFillBackground(False)
00168         self.push_mul.setStyleSheet("background-color: rgb(119, 118, 123);")
00169         self.push_mul.setObjectName("push_mul")
00170         self.gridLayout.addWidget(self.push_mul, 2, 3, 1, 1)
00171         self.push_pow = QtWidgets.QPushButton(self.centralwidget)
00172         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00173         sizePolicy.setHorizontalStretch(0)
00174         sizePolicy.setVerticalStretch(10)
00175         sizePolicy.setHeightForWidth(self.push_pow.sizePolicy().hasHeightForWidth())
00176         self.push_pow.setSizePolicy(sizePolicy)
00177         self.push_pow.setAutoFillBackground(False)
00178         self.push_pow.setStyleSheet("background-color: rgb(119, 118, 123);")
00179         self.push_pow.setObjectName("push_pow")
00180         self.gridLayout.addWidget(self.push_pow, 2, 4, 1, 1)
00181
00182         self.push_n4 = QtWidgets.QPushButton(self.centralwidget)
00183         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00184         sizePolicy.setHorizontalStretch(0)
00185         sizePolicy.setVerticalStretch(10)
00186         sizePolicy.setHeightForWidth(self.push_n4.sizePolicy().hasHeightForWidth())
00187         self.push_n4.setSizePolicy(sizePolicy)
00188         self.push_n4.setAutoFillBackground(False)
00189         self.push_n4.setStyleSheet("")
00190         self.push_n4.setObjectName("push_n4")
00191         self.gridLayout.addWidget(self.push_n4, 3, 0, 1, 1)
00192
00193         self.push_n5 = QtWidgets.QPushButton(self.centralwidget)
00194         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00195         sizePolicy.setHorizontalStretch(0)
00196         sizePolicy.setVerticalStretch(10)
00197         sizePolicy.setHeightForWidth(self.push_n5.sizePolicy().hasHeightForWidth())
00198         self.push_n5.setSizePolicy(sizePolicy)
00199         self.push_n5.setAutoFillBackground(False)
00200         self.push_n5.setStyleSheet("")
00201         self.push_n5.setObjectName("push_n5")
00202         self.gridLayout.addWidget(self.push_n5, 3, 1, 1, 1)
00203
00204         self.push_n6 = QtWidgets.QPushButton(self.centralwidget)
00205         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00206         sizePolicy.setHorizontalStretch(0)
00207         sizePolicy.setVerticalStretch(10)
00208         sizePolicy.setHeightForWidth(self.push_n6.sizePolicy().hasHeightForWidth())
00209         self.push_n6.setSizePolicy(sizePolicy)
00210         self.push_n6.setAutoFillBackground(False)
00211         self.push_n6.setStyleSheet("")
00212         self.push_n6.setObjectName("push_n6")
00213         self.gridLayout.addWidget(self.push_n6, 3, 2, 1, 1)
00214
00215         self.push_div = QtWidgets.QPushButton(self.centralwidget)
```

```

00216         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00217         sizePolicy.setHorizontalStretch(0)
00218         sizePolicy.setVerticalStretch(10)
00219         sizePolicy.setHeightForWidth(self.push_div.sizePolicy().hasHeightForWidth())
00220         self.push_div.setSizePolicy(sizePolicy)
00221         self.push_div.setAutoFillBackground(False)
00222         self.push_div.setStyleSheet("background-color: rgb(119, 118, 123);")
00223         self.push_div.setObjectName("push_div")
00224         self.gridLayout.addWidget(self.push_div, 3, 3, 1, 1)
00225
00226         self.push_nthrt = QtWidgets.QPushButton(self.centralwidget)
00227         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00228         sizePolicy.setHorizontalStretch(0)
00229         sizePolicy.setVerticalStretch(10)
00230         sizePolicy.setHeightForWidth(self.push_nthrt.sizePolicy().hasHeightForWidth())
00231         self.push_nthrt.setSizePolicy(sizePolicy)
00232         self.push_nthrt.setAutoFillBackground(False)
00233         self.push_nthrt.setStyleSheet("background-color: rgb(119, 118, 123);")
00234         self.push_nthrt.setObjectName("push_nthrt")
00235         self.gridLayout.addWidget(self.push_nthrt, 3, 4, 1, 1)
00236
00237         self.push_n1 = QtWidgets.QPushButton(self.centralwidget)
00238         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00239         sizePolicy.setHorizontalStretch(0)
00240         sizePolicy.setVerticalStretch(10)
00241         sizePolicy.setHeightForWidth(self.push_n1.sizePolicy().hasHeightForWidth())
00242         self.push_n1.setSizePolicy(sizePolicy)
00243         self.push_n1.setAutoFillBackground(False)
00244         self.push_n1.setStyleSheet("")
00245         self.push_n1.setObjectName("push_n1")
00246         self.gridLayout.addWidget(self.push_n1, 4, 0, 1, 1)
00247
00248         self.push_n2 = QtWidgets.QPushButton(self.centralwidget)
00249         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00250         sizePolicy.setHorizontalStretch(0)
00251         sizePolicy.setVerticalStretch(10)
00252         sizePolicy.setHeightForWidth(self.push_n2.sizePolicy().hasHeightForWidth())
00253         self.push_n2.setSizePolicy(sizePolicy)
00254         self.push_n2.setAutoFillBackground(False)
00255         self.push_n2.setStyleSheet("")
00256         self.push_n2.setObjectName("push_n2")
00257         self.gridLayout.addWidget(self.push_n2, 4, 1, 1, 1)
00258
00259         self.push_n3 = QtWidgets.QPushButton(self.centralwidget)
00260         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00261         sizePolicy.setHorizontalStretch(0)
00262         sizePolicy.setVerticalStretch(10)
00263         sizePolicy.setHeightForWidth(self.push_n3.sizePolicy().hasHeightForWidth())
00264         self.push_n3.setSizePolicy(sizePolicy)
00265         self.push_n3.setAutoFillBackground(False)
00266         self.push_n3.setStyleSheet("")
00267         self.push_n3.setObjectName("push_n3")
00268         self.gridLayout.addWidget(self.push_n3, 4, 2, 1, 1)
00269
00270         self.push_plus = QtWidgets.QPushButton(self.centralwidget)
00271         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00272         sizePolicy.setHorizontalStretch(0)
00273         sizePolicy.setVerticalStretch(10)
00274         sizePolicy.setHeightForWidth(self.push_plus.sizePolicy().hasHeightForWidth())
00275         self.push_plus.setSizePolicy(sizePolicy)
00276         self.push_plus.setAutoFillBackground(False)
00277         self.push_plus.setStyleSheet("background-color: rgb(119, 118, 123);")
00278         self.push_plus.setObjectName("push_plus")
00279         self.gridLayout.addWidget(self.push_plus, 4, 3, 1, 1)
00280
00281         self.push_logarithm = QtWidgets.QPushButton(self.centralwidget)
00282         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00283         sizePolicy.setHorizontalStretch(0)
00284         sizePolicy.setVerticalStretch(10)
00285         sizePolicy.setHeightForWidth(self.push_logarithm.sizePolicy().hasHeightForWidth())
00286         self.push_logarithm.setSizePolicy(sizePolicy)
00287         self.push_logarithm.setAutoFillBackground(False)
00288         self.push_logarithm.setStyleSheet("background-color: rgb(119, 118, 123);")
00289         self.push_logarithm.setObjectName("push_logarithm")
00290         self.gridLayout.addWidget(self.push_logarithm, 4, 4, 1, 1)
00291
00292         self.push_n0 = QtWidgets.QPushButton(self.centralwidget)
00293         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00294         sizePolicy.setHorizontalStretch(0)

```

```

00295         sizePolicy.setVerticalStretch(10)
00296         sizePolicy.setHeightForWidth(self.push_n0.sizePolicy().hasHeightForWidth())
00297         self.push_n0.setSizePolicy(sizePolicy)
00298         self.push_n0.setAutoFillBackground(False)
00299         self.push_n0.setStyleSheet("")
00300         self.push_n0.setObjectName("push_n0")
00301         self.gridLayout.addWidget(self.push_n0, 5, 0, 1, 1)
00302
00303         self.push_comma = QtWidgets.QPushButton(self.centralwidget)
00304         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00305         sizePolicy.setHorizontalStretch(0)
00306         sizePolicy.setVerticalStretch(10)
00307         sizePolicy.setHeightForWidth(self.push_comma.sizePolicy().hasHeightForWidth())
00308         self.push_comma.setSizePolicy(sizePolicy)
00309         self.push_comma.setAutoFillBackground(False)
00310         self.push_comma.setStyleSheet("")
00311         self.push_comma.setObjectName("push_comma")
00312         self.gridLayout.addWidget(self.push_comma, 5, 1, 1, 1)
00313
00314         self.push_dot = QtWidgets.QPushButton(self.centralwidget)
00315         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00316         sizePolicy.setHorizontalStretch(0)
00317         sizePolicy.setVerticalStretch(10)
00318         sizePolicy.setHeightForWidth(self.push_dot.sizePolicy().hasHeightForWidth())
00319         self.push_dot.setSizePolicy(sizePolicy)
00320         self.push_dot.setAutoFillBackground(False)
00321         self.push_dot.setStyleSheet("")
00322         self.push_dot.setObjectName("push_dot")
00323         self.gridLayout.addWidget(self.push_dot, 5, 2, 1, 1)
00324
00325         self.push_minus = QtWidgets.QPushButton(self.centralwidget)
00326         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00327         sizePolicy.setHorizontalStretch(0)
00328         sizePolicy.setVerticalStretch(10)
00329         sizePolicy.setHeightForWidth(self.push_minus.sizePolicy().hasHeightForWidth())
00330         self.push_minus.setSizePolicy(sizePolicy)
00331         self.push_minus.setAutoFillBackground(False)
00332         self.push_minus.setStyleSheet("background-color: rgb(119, 118, 123);")
00333         self.push_minus.setObjectName("push_minus")
00334         self.gridLayout.addWidget(self.push_minus, 5, 3, 1, 1)
00335
00336         self.push_eq = QtWidgets.QPushButton(self.centralwidget)
00337         sizePolicy = QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Preferred)
00338         sizePolicy.setHorizontalStretch(0)
00339         sizePolicy.setVerticalStretch(10)
00340         sizePolicy.setHeightForWidth(self.push_eq.sizePolicy().hasHeightForWidth())
00341         self.push_eq.setSizePolicy(sizePolicy)
00342         self.push_eq.setAutoFillBackground(False)
00343         self.push_eq.setStyleSheet("background-color: rgb(229, 165, 10);")
00344         self.push_eq.setObjectName("push_eq")
00345         self.gridLayout.addWidget(self.push_eq, 5, 4, 1, 1)
00346
00347         self.verticalLayout.addLayout(self.gridLayout)
00348         MainWindow.setCentralWidget(self.centralwidget)
00349
00350         self.retranslateUi(MainWindow)
00351         QtCore.QMetaObject.connectSlotsByName(MainWindow)
00352
00353         self.push_n1.clicked.connect(lambda: self.displayWrite("1"))
00354         self.push_n2.clicked.connect(lambda: self.displayWrite("2"))
00355         self.push_n3.clicked.connect(lambda: self.displayWrite("3"))
00356         self.push_n4.clicked.connect(lambda: self.displayWrite("4"))
00357         self.push_n5.clicked.connect(lambda: self.displayWrite("5"))
00358         self.push_n6.clicked.connect(lambda: self.displayWrite("6"))
00359         self.push_n7.clicked.connect(lambda: self.displayWrite("7"))
00360         self.push_n8.clicked.connect(lambda: self.displayWrite("8"))
00361         self.push_n9.clicked.connect(lambda: self.displayWrite("9"))
00362         self.push_n0.clicked.connect(lambda: self.displayWrite("0"))
00363
00364         self.push_plus.clicked.connect(lambda: self.displayWrite("+"))
00365         self.push_minus.clicked.connect(lambda: self.displayWrite("-"))
00366         self.push_mul.clicked.connect(lambda: self.displayWrite("*"))
00367         self.push_div.clicked.connect(lambda: self.displayWrite("/"))
00368         self.push_comma.clicked.connect(lambda: self.displayWrite(","))
00369         self.push_ob.clicked.connect(lambda: self.displayWrite("("))
00370         self.push_cb.clicked.connect(lambda: self.displayWrite(")"))
00371         self.push_logarithm.clicked.connect(lambda: self.displayWrite("log"))
00372         self.push_nthrt.clicked.connect(lambda: self.displayWrite("nrt"))
00373         self.push_pow.clicked.connect(lambda: self.displayWrite("^"))
00374         self.push_factorial.clicked.connect(lambda: self.displayWrite("!"))
00375         self.push_dot.clicked.connect(lambda: self.displayWrite("."))
00376
00377         self.push_eq.clicked.connect(self.evaluate)

```

```

00378         self.push_backspace.clicked.connect(self.displayDeleteLast)
00379         self.push_clearall.clicked.connect(self.displayClear)
00380
00381     def displayWrite(self, input):
00382         if (self.errorerror == True):
00383             self.errorerror = False
00384             self.label.setText("")
00385             text=self.label.text()
00386             self.label.setText(text+input)
00387
00388     def displayClear(self):
00389         self.label.setText("")
00390
00391     def displayDeleteLast(self):
00392         text=self.label.text()
00393
00394         if (self.errorerror == True):
00395             self.errorerror = False
00396             self.label.setText("")
00397
00398         elif text != "":
00399
00400             if text[-1] == 'g':
00401                 self.label.setText(text[:-3])
00402             elif len(text) > 1:
00403                 if text[-2] == '^':
00404                     self.label.setText(text[:-2])
00405                 elif text[-1] == '(' and text[-2] == 't':
00406                     self.label.setText(text[:-4])
00407                 else:
00408                     self.label.setText(text[:-1])
00409             else:
00410                 self.label.setText(text[:-1])
00411
00412     def evaluate(self):
00413         retValue = str(calc_output(self.label.text()))
00414         if retValue == "False":
00415             self.label.setText("Špatně zadaný výraz!")
00416             self.errorerror = True
00417         else:
00418             self.label.setText(retValue)
00419
00420     def keyPressEvent(self, e):
00421         if e.key() >=48 and e.key() <=57:
00422             self.displayWrite(str(e.key()-48))
00423         elif e.key() == Qt.Key.Key_Backspace:
00424             self.displayDeleteLast()
00425         elif e.key() == Qt.Key.Key_Return or e.key() == Qt.Key.Key_Enter:
00426             self.evaluate()
00427         elif (e.key() >= 40 and e.key() <= 47) or e.key() == 33:
00428             self.displayWrite(chr(e.key()))
00429
00430
00431     # def keyPressEvent(self, e):
00432     #
00433
00434     def retranslateUi(self, MainWindow):
00435         _translate = QtCore.QCoreApplication.translate
00436         MainWindow.setWindowTitle(_translate("MainWindow", "Kalkulačka"))
00437         self.push_ob.setText(_translate("MainWindow", "("))
00438         self.push_cb.setText(_translate("MainWindow", ")"))
00439         self.push_factorial.setText(_translate("MainWindow", "!"))
00440         self.push_clearall.setText(_translate("MainWindow", "CA"))
00441         self.push_backspace.setText(_translate("MainWindow", ""))
00442         self.push_n7.setText(_translate("MainWindow", "7"))
00443         self.push_n8.setText(_translate("MainWindow", "8"))
00444         self.push_n9.setText(_translate("MainWindow", "9"))
00445         self.push_mul.setText(_translate("MainWindow", "*"))
00446         self.push_pow.setText(_translate("MainWindow", "x"))
00447         self.push_n4.setText(_translate("MainWindow", "4"))
00448         self.push_n5.setText(_translate("MainWindow", "5"))
00449         self.push_n6.setText(_translate("MainWindow", "6"))
00450         self.push_div.setText(_translate("MainWindow", "÷"))
00451         self.push_nthrt.setText(_translate("MainWindow", "x"))
00452         self.push_n1.setText(_translate("MainWindow", "1"))
00453         self.push_n2.setText(_translate("MainWindow", "2"))
00454         self.push_n3.setText(_translate("MainWindow", "3"))
00455         self.push_plus.setText(_translate("MainWindow", "+"))
00456         self.push_dot.setText(_translate("MainWindow", "."))
00457         self.push_n0.setText(_translate("MainWindow", "0"))
00458         self.push_comma.setText(_translate("MainWindow", ","))
00459         self.push_logarithm.setText(_translate("MainWindow", "LOG"))
00460         self.push_minus.setText(_translate("MainWindow", "-"))
00461         self.push_eq.setText(_translate("MainWindow", "="))
00462
00463
00464 if __name__ == "__main__":

```



```
00465     import sys
00466     app = QtWidgets.QApplication(sys.argv)
00467     MainWindow = QtWidgets.QMainWindow()
00468     ui = Ui_MainWindow()
00469     ui.setupUi(MainWindow)
00470     MainWindow.show()
00471     sys.exit(app.exec())
```


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