

Universitatea Tehnica a Moldovei

Facultatea Calculatoare Informatica si Microelectronica

## **Medii Interactive de Dezvoltare a Produselor Soft**

Lucrare de laborator#2

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### Realizarea unui GUI Calculator

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Student gr.TI-151: Poseletchi Cristian

lector asistent: Irina Cojanu

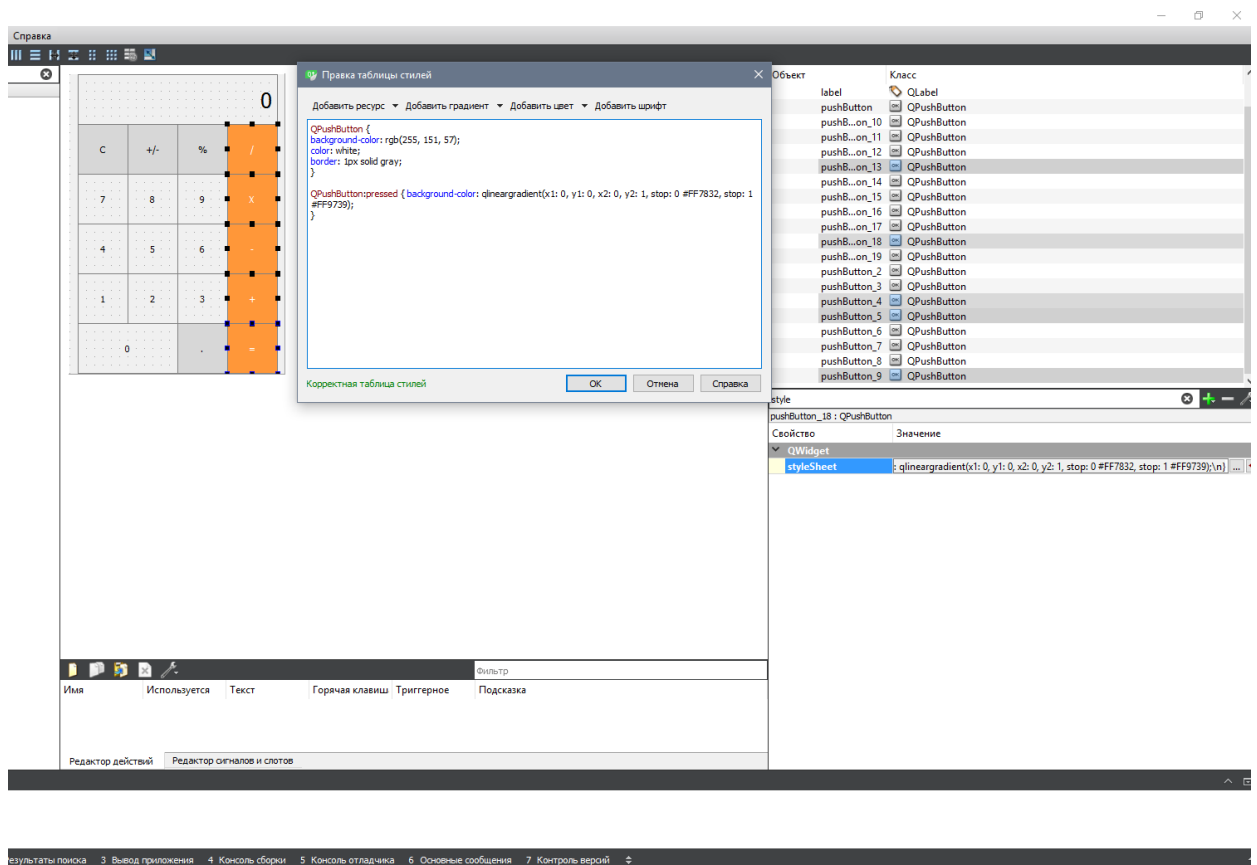
# Lucrarea de laborator#2

## 1. Scopul lucrarii:

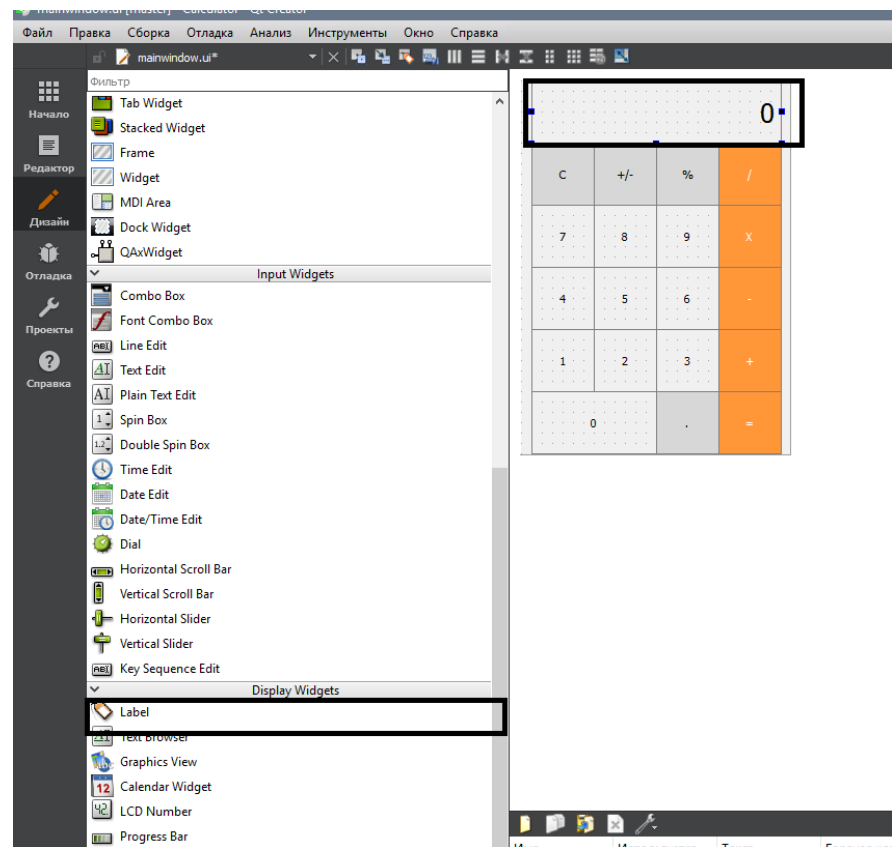
Realizarea un simplu GUI calculator care suporta urmatoarele functii: +, -, /, \*, putere, radical, InversareSemn(+/-), operatii cu numere zecimale.

## 2. Mersul lucrarii

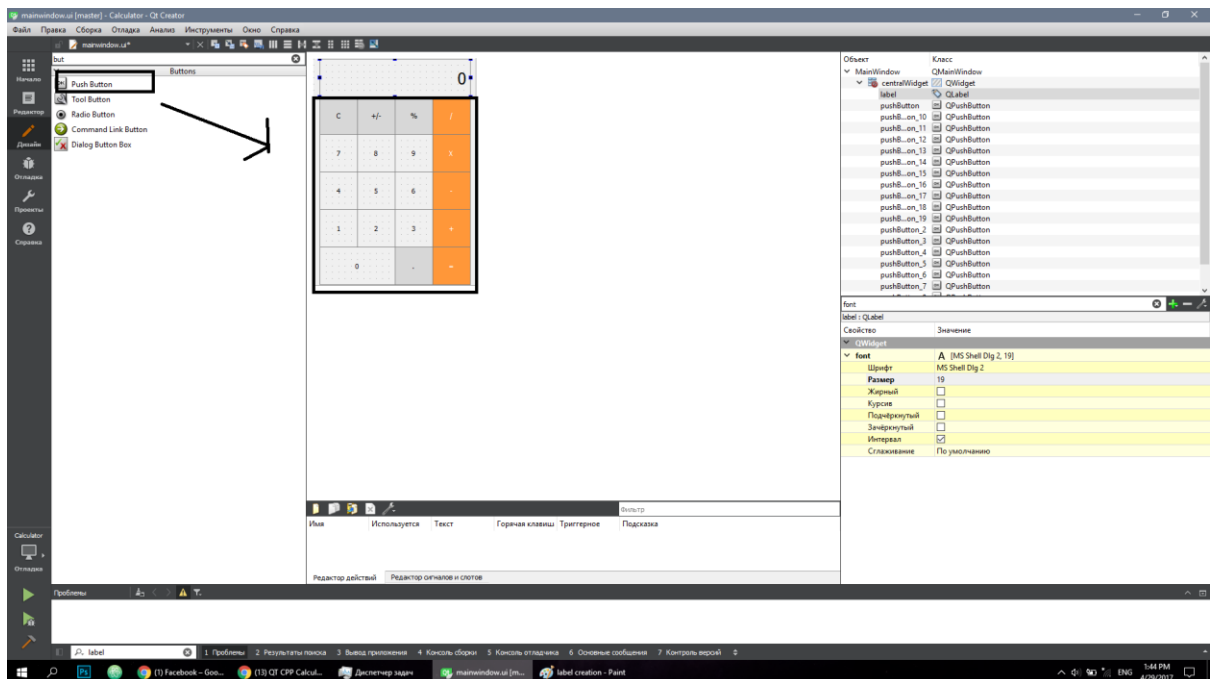
Pe parcursul acestei lucrari am realizat in calculator cu ajutorul limbajului C++ si IDE-ului Qt Creator.



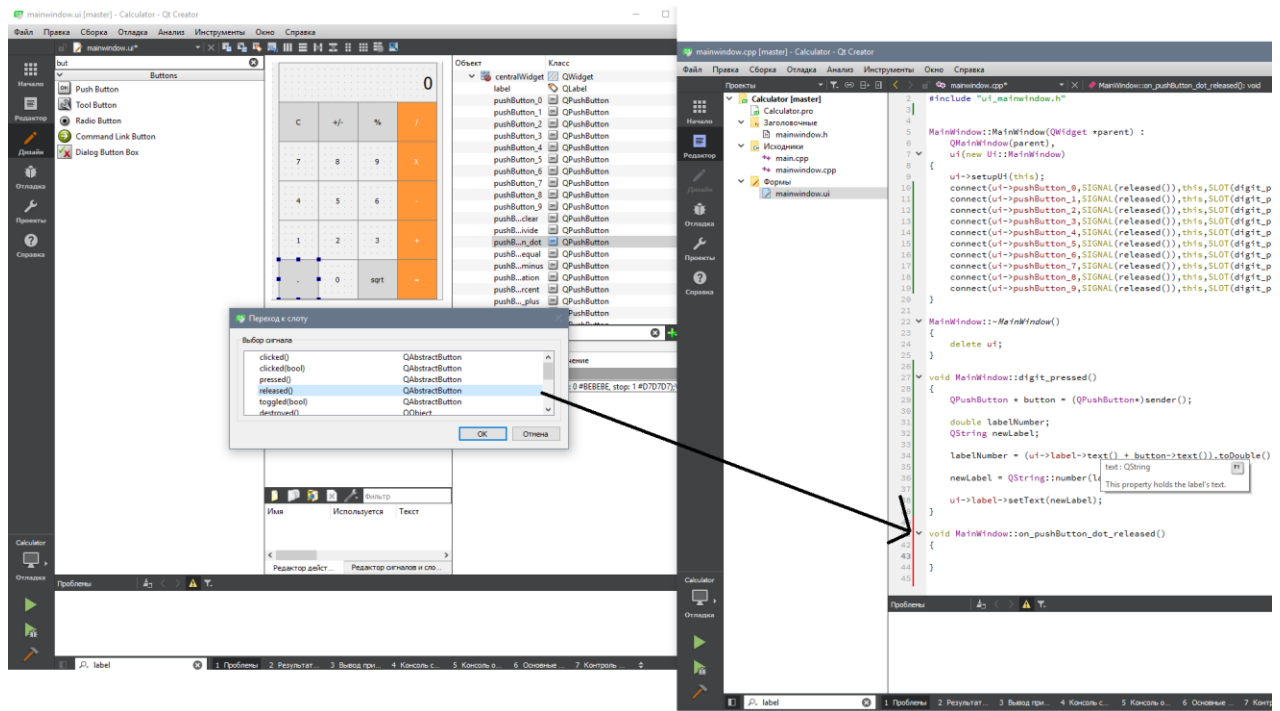
Dupa crearea formei si a design-ului am lucrat asupra stilului cu ajutorul QWidget styleSheet care are aceeasi sintaxa ca CSS.



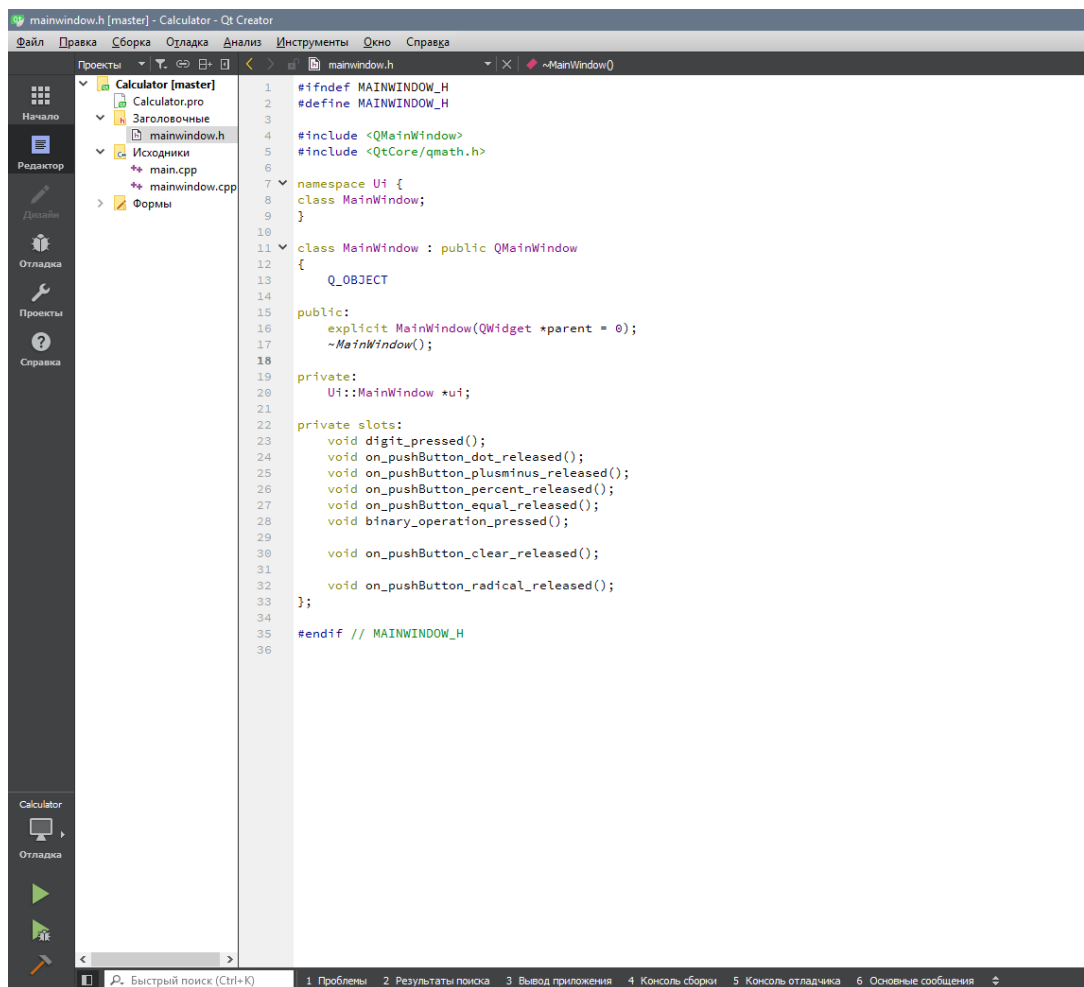
Locul pentru input l-am creat cu ajutorul Widgetului Label, care creaza un cimp ce primeste datele de la user.



Butoanele le-am creat utilizind comanda Push Button, iar apoi pentru fiecare buton am programat slotul necesar, in cazul dat Released();



In asa mod am programat fiecare buton in mainWindow.cpp



Asa arata headerul aplicatiei.

```

1 #include "mainwindow.h"
2 #include "ui_mainwindow.h"
3
4 double firstNum;
5 bool userSecondNumber = false;
6
7 MainWindow::MainWindow(QWidget *parent) :
8     QMainWindow(parent),
9     ui(new Ui::MainWindow)
10 {
11     ui->setupUi(this);
12
13     connect(ui->pushButton_0,SIGNAL(released()),this,SLOT(digit_pressed()));
14     connect(ui->pushButton_1,SIGNAL(released()),this,SLOT(digit_pressed()));
15     connect(ui->pushButton_2,SIGNAL(released()),this,SLOT(digit_pressed()));
16     connect(ui->pushButton_3,SIGNAL(released()),this,SLOT(digit_pressed()));
17     connect(ui->pushButton_4,SIGNAL(released()),this,SLOT(digit_pressed()));
18     connect(ui->pushButton_5,SIGNAL(released()),this,SLOT(digit_pressed()));
19     connect(ui->pushButton_6,SIGNAL(released()),this,SLOT(digit_pressed()));
20     connect(ui->pushButton_7,SIGNAL(released()),this,SLOT(digit_pressed()));
21     connect(ui->pushButton_8,SIGNAL(released()),this,SLOT(digit_pressed()));
22     connect(ui->pushButton_9,SIGNAL(released()),this,SLOT(digit_pressed()));
23
24     connect(ui->pushButton_plusminus,SIGNAL(released()),this,SLOT(plusminus_released()));
25     connect(ui->pushButton_percent,SIGNAL(released()),this,SLOT(percent_released()));
26
27     connect(ui->pushButton_minus,SIGNAL(released()),this,SLOT(binary_operation_pressed()));
28     connect(ui->pushButton_plus,SIGNAL(released()),this,SLOT(binary_operation_pressed()));
29     connect(ui->pushButton_divide,SIGNAL(released()),this,SLOT(binary_operation_pressed()));
30     connect(ui->pushButton_multiplication,SIGNAL(released()),this,SLOT(binary_operation_pressed()));
31     connect(ui->pushButton_radical,SIGNAL(released()),this,SLOT(radical_released()));
32
33     ui->pushButton_multiplication->setCheckable(true);
34     ui->pushButton_minus->setCheckable(true);
35     ui->pushButton_plus->setCheckable(true);
36     ui->pushButton_divide->setCheckable(true);
37     ui->pushButton_radical->setCheckable(true);
38 }
39
40 MainWindow::~MainWindow()
41 {
42     delete ui;
43 }
44
45 void MainWindow::digit_pressed()
46 {
47     QPushButton * button = (QPushButton*)sender();
48
49     double labelNumber;
50     QString newLabel;
51
52     if((ui->pushButton_plus->isChecked() || ui->pushButton_minus->isChecked() ||

```

Asa am conectat forma si mainWindow.

App Screens:



## **Concluzie:**

In urma efectuării acestei lucrări a fost creată o mică aplicație în C++ prin Qt creator. Lucrarea dată a permis însușirea mai aprofundată a limbajului C++, mai ales a pointerilor și a favorizat explorarea bibliotecii Qt care are un potențial foarte vast care permite și crearea unor aplicații mai complexe sau jocuri. Mediul Qt este foarte ușor de folosit și are o interfață foarte user-friendly, plus la asta este cross-platform.