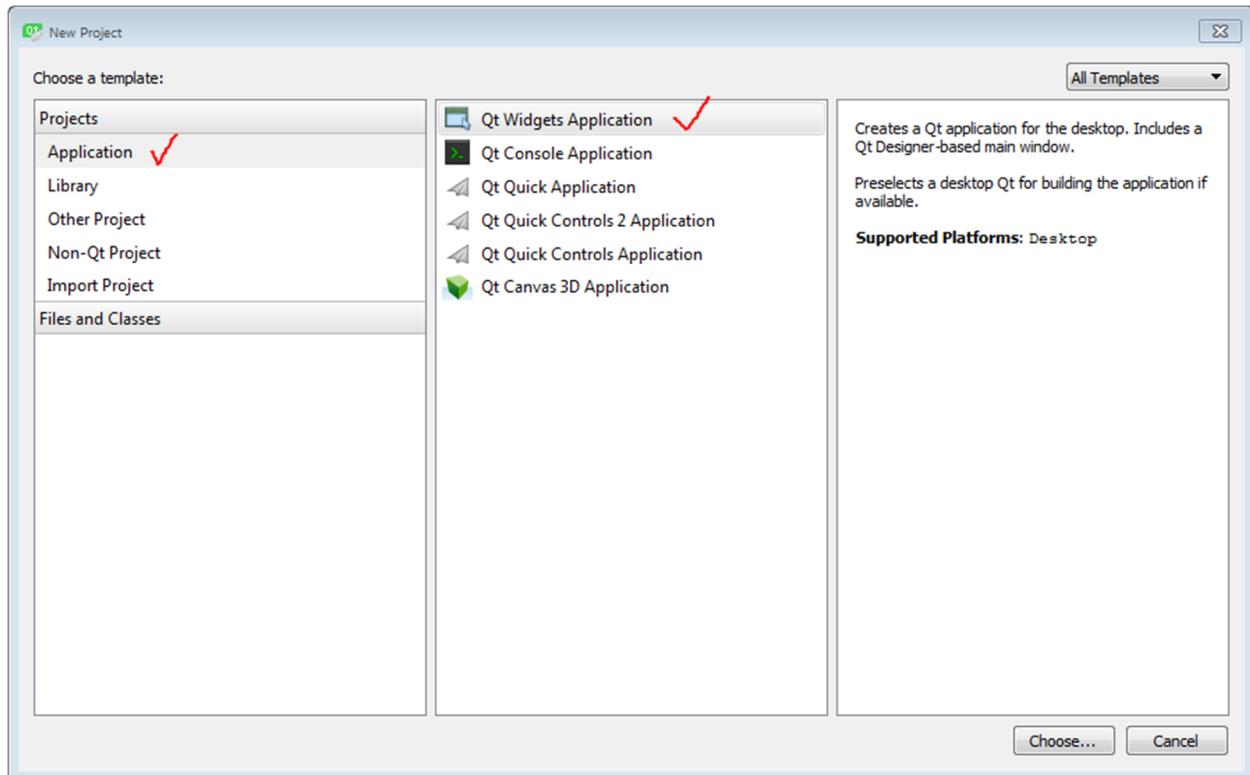
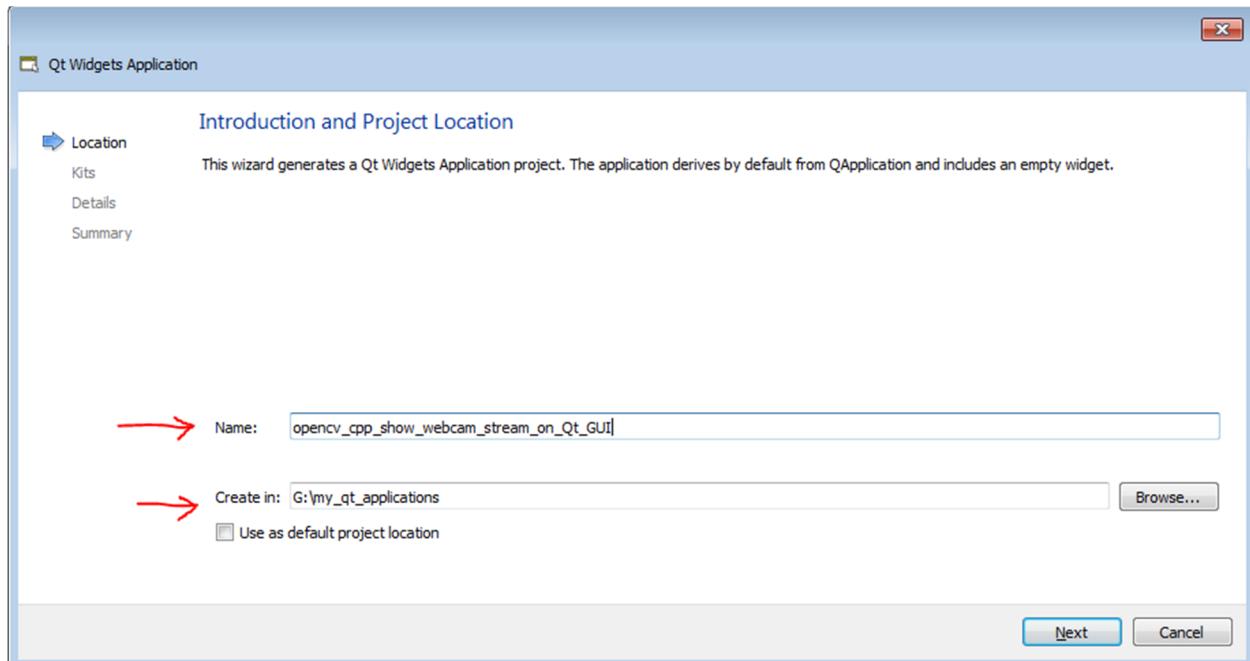


## 1. Click “New Project”

## 2. Choose “Qt Widgets Application”



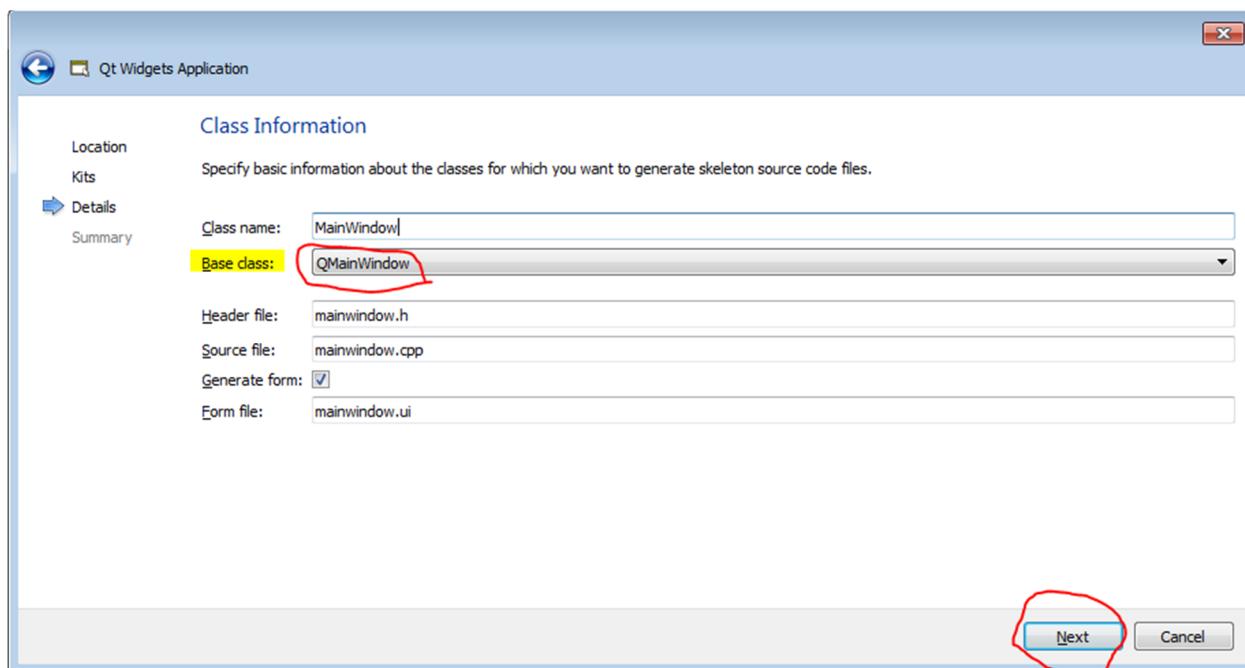
## 3. Give a name to your project and define location to create your new project



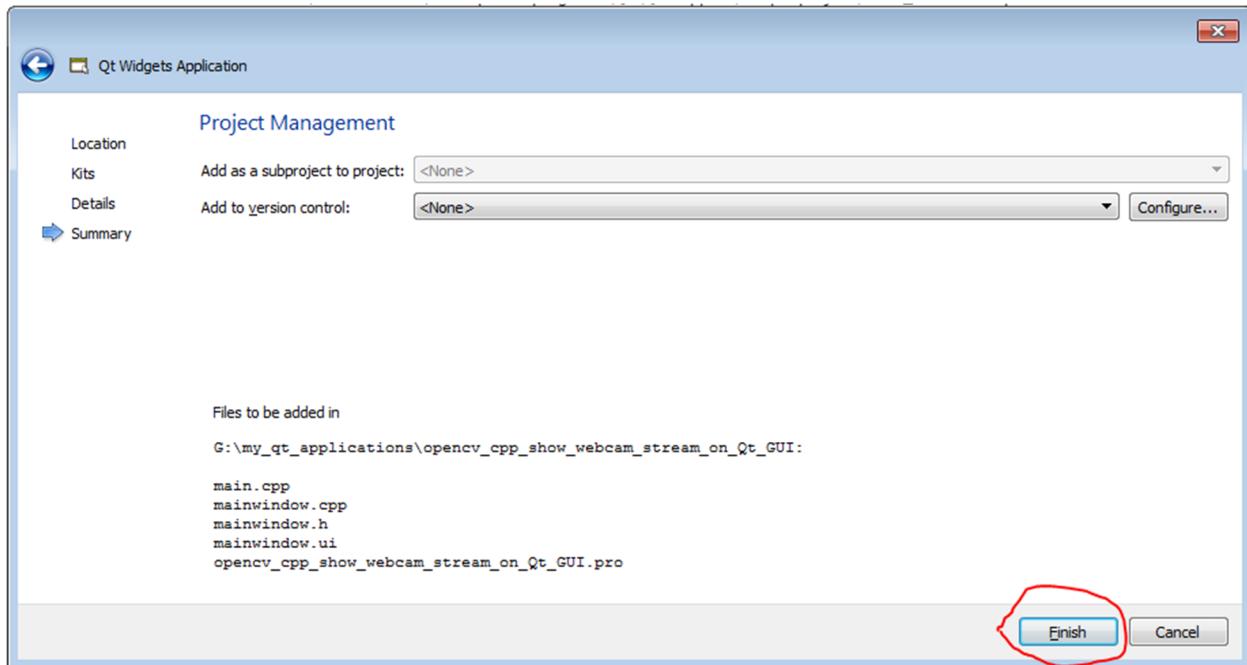
#### 4. Select “kit” and click “Next”



#### 5. Select “QMainWindow” and click “Next”



## 6. “Finish” the creation of your new project



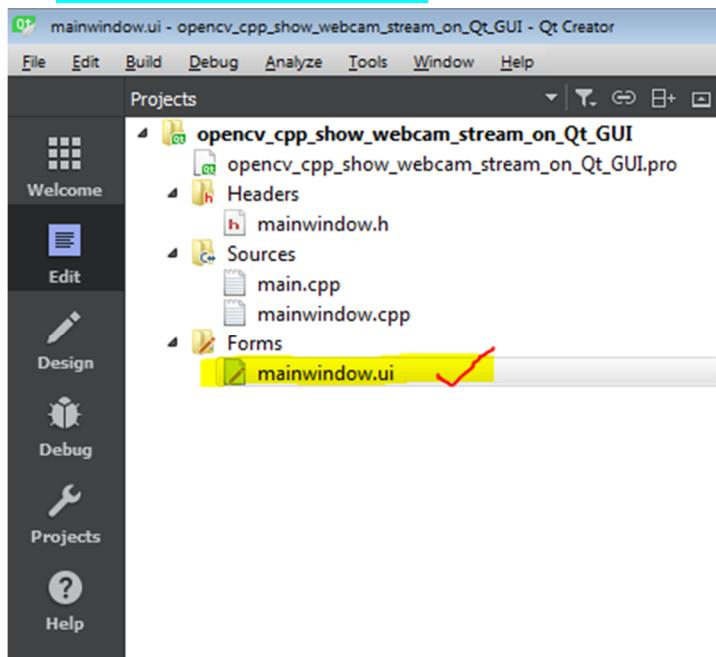
## 7. Click “opencv\_cpp\_show\_webcam\_stream\_on\_Qt\_GUI.pro” and define your openCV path and libraries.

INCLUDEPATH += G:\\opencv\\build\\include \\

LIBS += -LG:\\opencv\\build\\bin \\  
libopencv\_calib3d310 \\  
libopencv\_core310 \\  
libopencv\_features2d310 \\  
libopencv\_flann310 \\  
libopencv\_highgui310 \\  
libopencv\_imgcodecs310 \\  
libopencv\_imgproc310 \\  
libopencv\_ml310 \\  
libopencv\_objdetect310 \\  
libopencv\_photo310 \\  
libopencv\_shape310 \\  
libopencv\_stitching310 \\  
libopencv\_superres310 \\  
libopencv\_video310 \\  
libopencv\_videoio310 \\  
libopencv\_videostab310

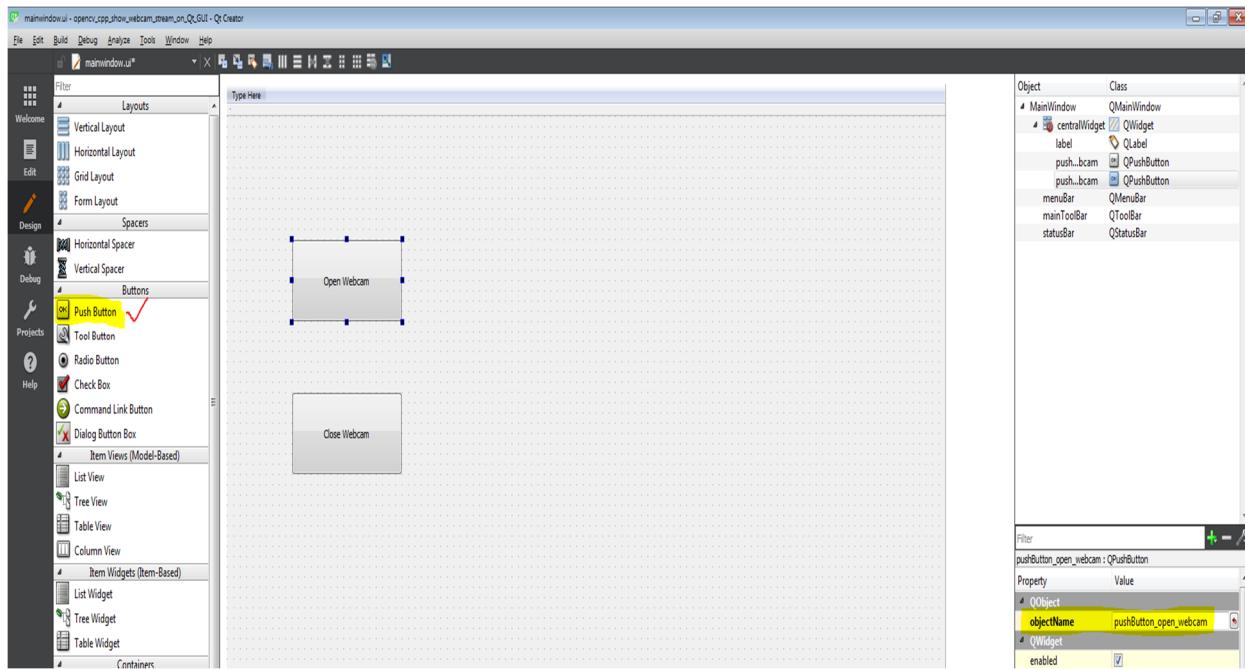
```
openvc_cpp_show_webcam_stream_on_Qt_GUI.pro - opencv_cpp_show_webcam_stream_on_Qt_GUI - Qt Creator
File Edit Build Debug Analyze Tools Window Help
Projects
opencv_cpp_show_webcam_stream_on_Qt_GUI
  opencv_cpp_show_webcam_stream_on_Qt_GUI.pro
    Headers
      mainwindow.h
    Sources
      main.cpp
      mainwindow.cpp
    Forms
      mainwindow.ui
4 #
5 #-----
6
7 QT      += core gui
8
9 greaterThan(QT_MAJOR_VERSION, 4): QT += widgets
10
11 TARGET = opencv_cpp_show_webcam_stream_on_Qt_GUI
12 TEMPLATE = app
13
14 # The following define makes your compiler emit warnings if you use
15 # any feature of Qt which has been marked as deprecated (the exact warnings
16 # depend on your compiler). Please consult the documentation of the
17 # deprecated API in order to know how to port your code away from it.
18 DEFINES += QT_DEPRECATED_WARNINGS
19
20 # You can also make your code fail to compile if you use deprecated APIs.
21 # In order to do so, uncomment the following line.
22 # You can also select to disable deprecated APIs only up to a certain version of Qt.
23 #DEFINES += QT_DISABLE_DEPRECATED_BEFORE=0x060000    # disables all the APIs deprecated before Qt 6.0.0
24
25
26 SOURCES += main.cpp \
              mainwindow.cpp
27
28 HEADERS += mainwindow.h
29
30 FORMS += mainwindow.ui
31
32
33 INCLUDEPATH += G:\\opencv\\build\\include \
34
35 LIBS += -LG:\\opencv\\build\\bin \
libopencv_calib3d310 \
libopencv_core310 \
libopencv_features2d310 \
libopencv_flann310 \
libopencv_highgui310 \
libopencv_imgcodecs310 \
libopencv_imgproc310 \
libopencv_ml310 \
libopencv_objdetect310 \
libopencv_photo310 \
libopencv_shape310 \
libopencv_stitching310 \
libopencv_superres310 \
libopencv_video310 \
libopencv_videio310 \
libopencv_videostab310
36
37
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45
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47
48
49
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51
52
```

## 8. Click "mainwindow.ui"

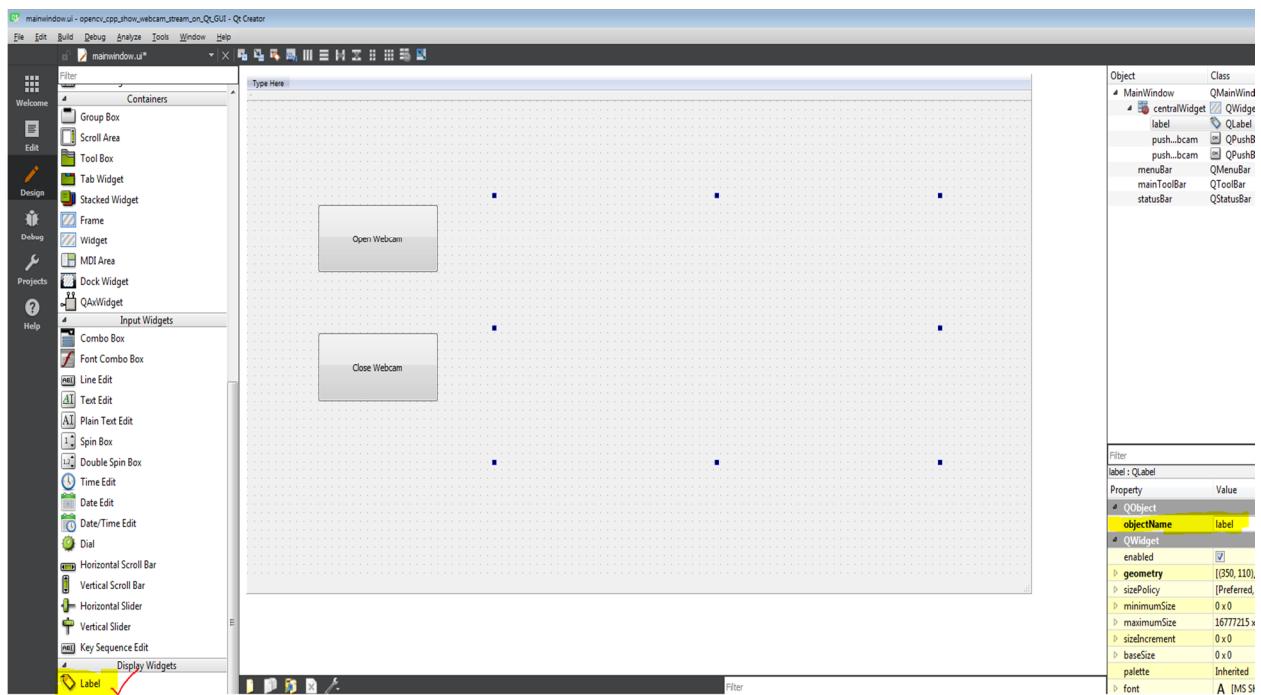


## 9. Drag and Drop 2 “Push Button”

Give Object name as “pushButton\_open\_webcam” and “pushButton\_close\_webcam”

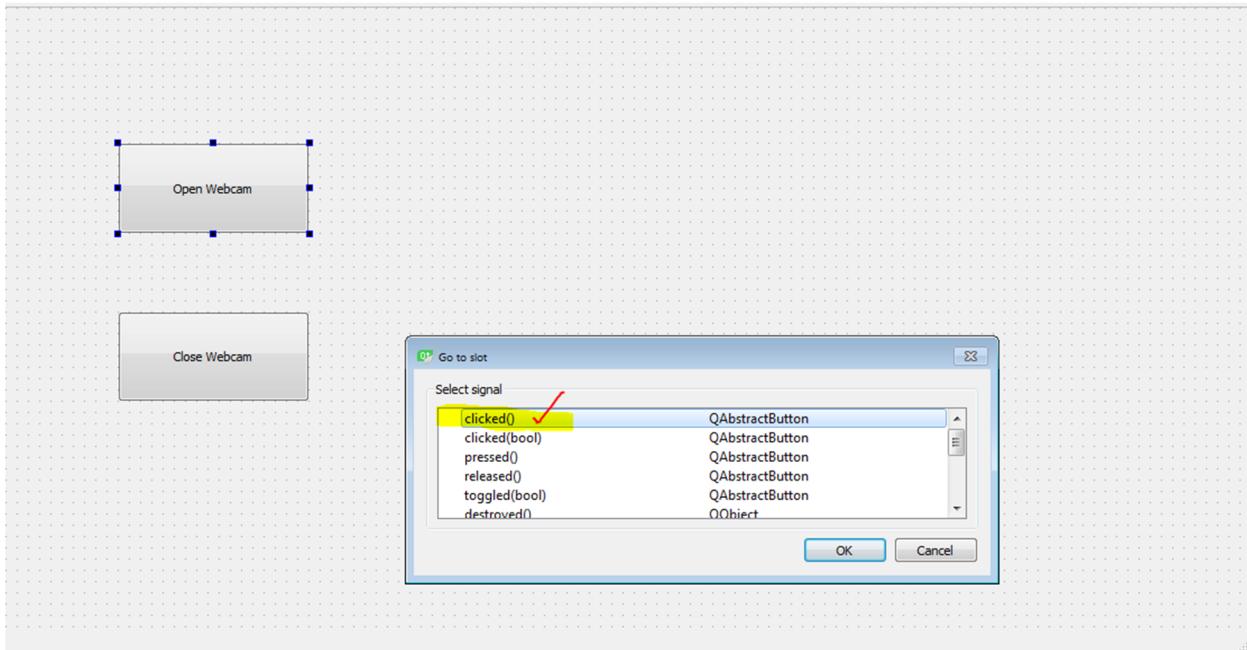


## 10. Drag and Drop “Label” to show webcam stream



**11. Click right button of your mouse and select “Go to slot” and select “clicked()” signal**

Do same thing for “Close Webcam” button



## 12. Make these changes to “mainwindow.h”

---

```
1  #ifndef MAINWINDOW_H
2  #define MAINWINDOW_H
3
4  #include <QMainWindow>
5  #include <QTimer>
6  #include <opencv2/highgui.hpp>
7  #include <opencv2/imgproc.hpp>
8  using namespace cv;
9
10 #include <iostream>
11 using namespace std;
12
13 ▾ namespace Ui {
14     class MainWindow;
15 }
16
17 ▾ class MainWindow : public QMainWindow
18 {
19     Q_OBJECT
20
21     public:
22         explicit MainWindow(QWidget *parent = 0);
23         ~MainWindow();
24
25     private slots:
26         void on_pushButton_open_webcam_clicked();
27
28         void on_pushButton_close_webcam_clicked();
29
30         void update_window();
31
32     private:
33         Ui::MainWindow *ui;
34
35         QTimer *timer;
36         VideoCapture cap;
37
38         Mat frame;
39         QImage qt_image;
40     };
41
42 #endif // MAINWINDOW_H
43
```

### 13. Make these changes to “mainwindow.cpp”

```
1 #include "mainwindow.h"
2 #include "ui_mainwindow.h"
3
4 MainWindow::MainWindow(QWidget *parent) :
5     QMainWindow(parent),
6     ui(new Ui::MainWindow)
7 {
8     ui->setupUi(this);
9
10    timer = new QTimer(this);
11 }
12
13 ~MainWindow()
14 {
15     delete ui;
16 }
17
18 void MainWindow::on_pushButton_open_webcam_clicked()
19 {
20     cap.open(0);
21
22     if(!cap.isOpened()) // Check if we succeeded
23     {
24         cout << "camera is not open" << endl;
25     }
26     else
27     {
28         cout << "camera is open" << endl;
29
30         connect(timer, SIGNAL(timeout()), this, SLOT(update_window()));
31         timer->start(20);
32     }
33 }
```

```

34     void MainWindow::on_pushButton_close_webcam_clicked()
35     {
36         disconnect(timer, SIGNAL(timeout()), this, SLOT(update_window()));
37         cap.release();
38
39         Mat image = Mat::zeros(frame.size(), CV_8UC3);
40
41         qt_image = QImage((const unsigned char*) (image.data), image.cols, image.rows, QImage::Format_RGB888);
42
43         ui->label->setPixmap(QPixmap::fromImage(qt_image));
44
45         ui->label->resize(ui->label->pixmap()->size());
46
47         cout << "camera is closed" << endl;
48     }
49
50
51     void MainWindow::update_window()
52     {
53         cap >> frame;
54
55         cvtColor(frame, frame, CV_BGR2RGB);
56
57         qt_image = QImage((const unsigned char*) (frame.data), frame.cols, frame.rows, QImage::Format_RGB888);
58
59         ui->label->setPixmap(QPixmap::fromImage(qt_image));
60
61         ui->label->resize(ui->label->pixmap()->size());
62     }

```

#### 14. Your “show webcam stream on Qt GUI” application is ready

