

2015



Image manipulation using Open CV on Visual Studio 2013



Author: Palani K

Introduction:

Open CV is a open source computer vision library and their source codes are written in C/C++ language. Open CV was designed for computational efficiency and with a strong focus on real-time applications. Open CV goals is to provide a simple-to-use computer vision infrastructure that helps people build fairly sophisticated vision applications quickly .

Getting started with Open CV on Visual studio 2013:

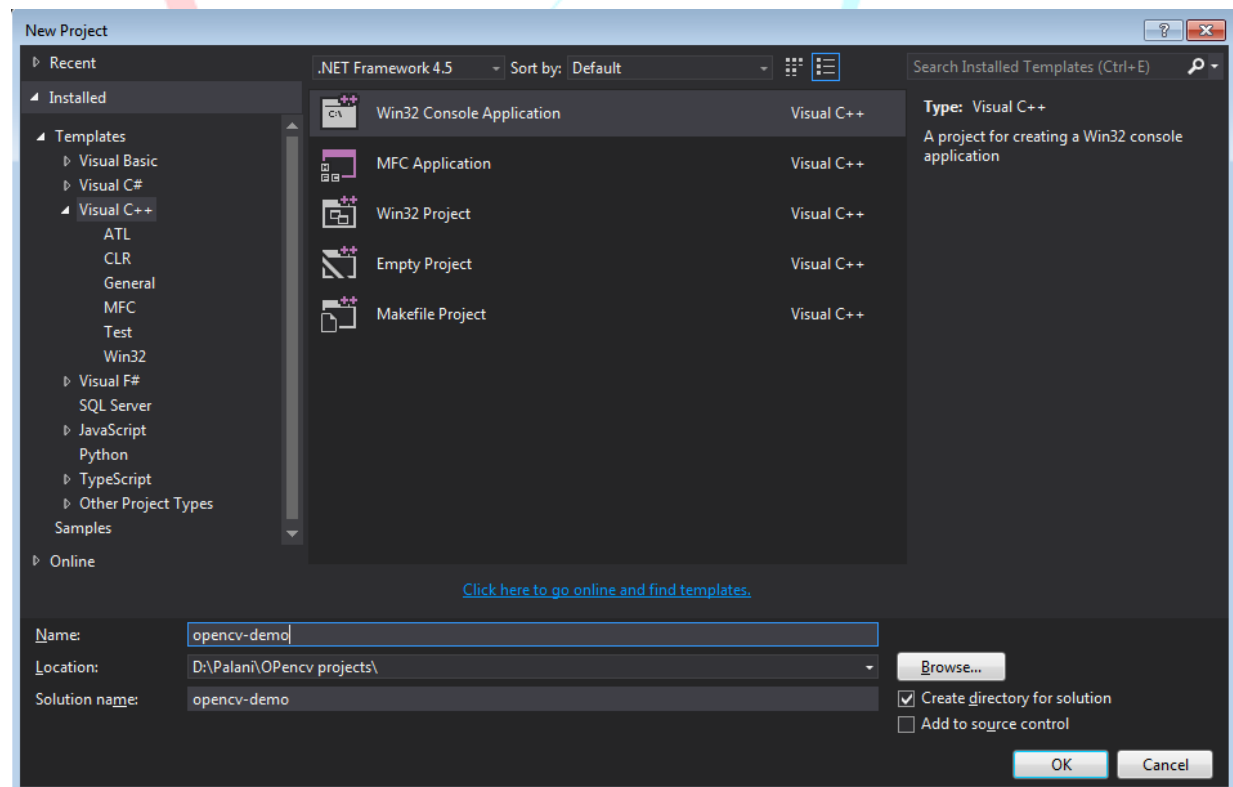
Step 1: Download the Open CV latest version from <http://opencv.org/downloads.html>

Step 2: Once downloaded extract the file and save it to the preferred location.

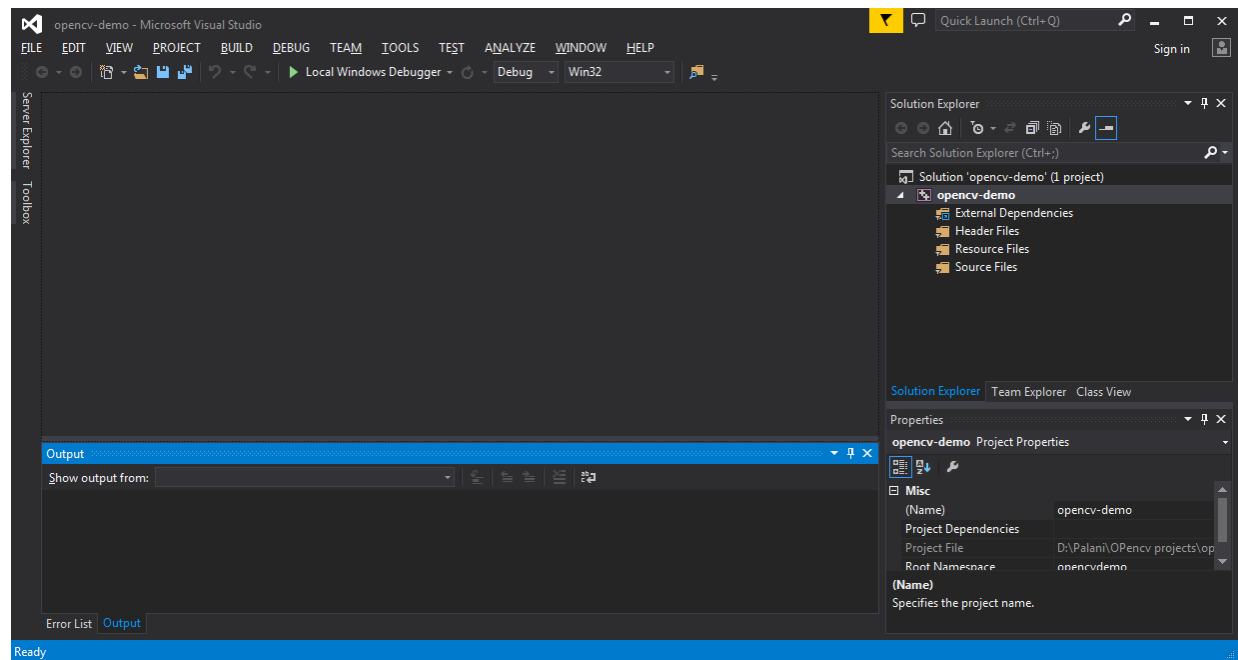
Step 3: Follow the steps to set the environmental variable by using below links.

<http://opencv-srf.blogspot.in/2013/05/installing-configuring-opencv-with-vs.html?showComment=1453528819540#c404425627273676327>

Step 4: Open Visual studio 2013 and open File→New→Project. And name it your project and set the location of project to be saved. Select the OK button and it will take you to the another window, mark empty project and finish it.



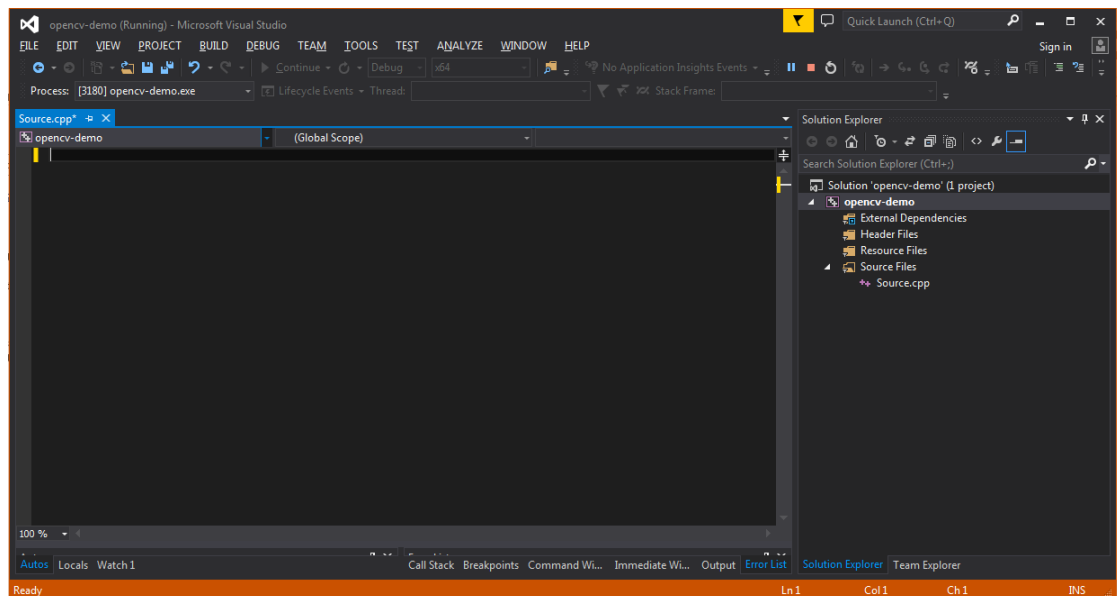
Step 5: Once finished the above step, you will be getting window like this.



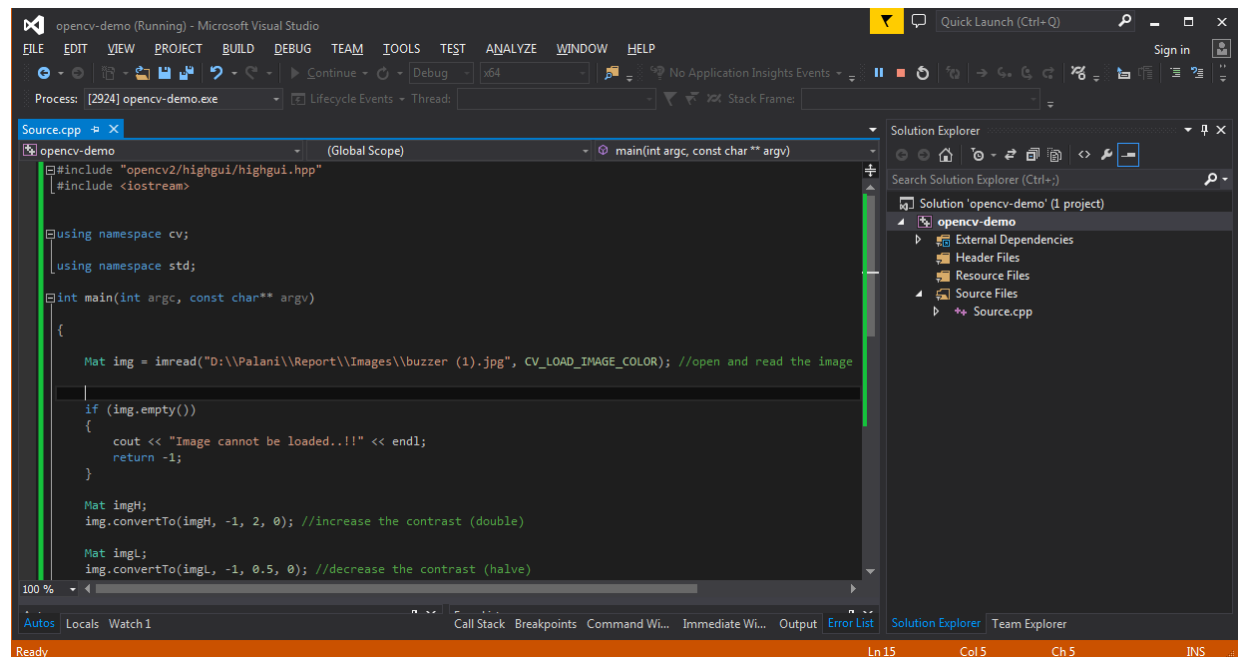
Step 6: Find the link and follow the same procedure.

<https://www.youtube.com/watch?v=tHX3MLzwF6Q>

Step 7: Once finished the above step, you will be getting window like this.



Step 7: Enter your code in prescribed window. Use F5 key to run the program.



Coding:

```
#include "opencv2/highgui/highgui.hpp"
```

```
#include <iostream>
```

```
using namespace cv;
```

```
using namespace std;
```

```
int main( int argc, const char** argv )
```

```
{
```

```
    Mat img = imread("MyPic.JPG", CV_LOAD_IMAGE_COLOR);    //open and read the image
```

```
    if (img.empty())
```

9/3, 2nd floor, SreeLaksmi Complex, opp, to Vivekananda Park, Girinagar, Bangalore - 560085,

Email: info@tenettech.com, Phone: 080 - 26722726

```
{cout << "Image cannot be loaded...!!" << endl;

    return -1;

}

Mat imgH;

img.convertTo(imgH, -1, 2, 0);                //increase the contrast (double)

Mat imgL;

img.convertTo(imgL, -1, 0.5, 0); //decrease the contrast (halve)

namedWindow("Original Image", CV_WINDOW_AUTOSIZE);    //Create window
namedWindow("High Contrast", CV_WINDOW_AUTOSIZE);
namedWindow("Low Contrast", CV_WINDOW_AUTOSIZE);

imshow("Original Image", img);                //Displaying images
imshow("High Contrast", imgH);q
imshow("Low Contrast", imgL);

waitKey(0);                                //wait for key press

destroyAllWindows();                        //destroy all open window

return 0;

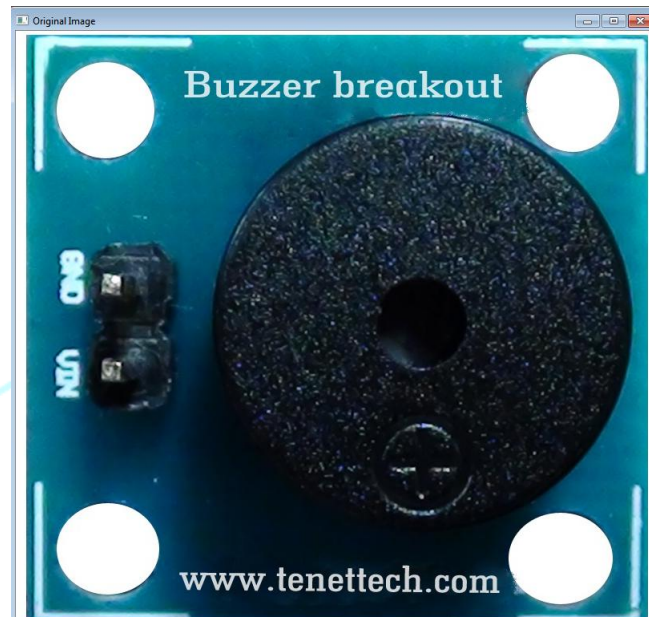
}
```

TENET
TECHNETRONICS

Output:

After running the program, you will be getting three images as followed original image, High contrast image, Low contrast image.

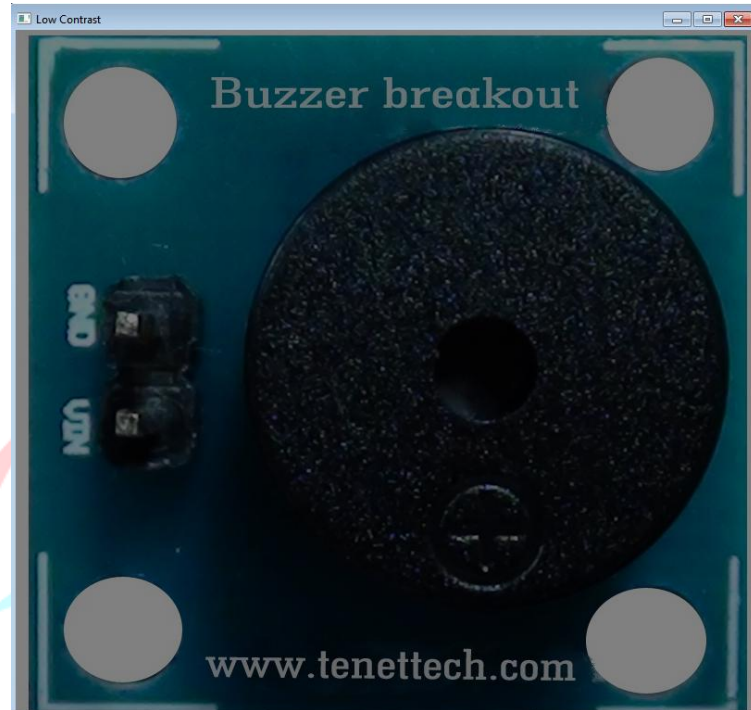
Original image:



High contrast image:



Low contrast image:



For more information please visit: www.tenettech.com

For technical query please send an e-mail: info@tenettech.com

TENET
TECHNETRONICS