

Explanation

Title: OpenCV C++ Program to create a single colored blank image.

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The following is the explanation to the **C++** code to create an Image in C++ using the tool **OpenCV**.

Things to know:

- (1) The code will only compile in Linux environment.
- (2) To run in windows, please use the executable file.
- (3) Compile command: `g++ -w blank.cpp -o blank `pkg-config --libs opencv``
- (4) Run command: `./blank`

Before you run the code, please make sure that you have OpenCV installed on your // system.

Code area:

```
// Author: Aditya Prakash
```

```
// Title: Create a coloured image in C++ using OpenCV.
```

(1)

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

```
// highgui - an easy-to-use interface for image and video capturing.
```

(2)

```
#include <iostream>
```

```
// For basic input / output operations.
```

(3)

```
using namespace cv;
```

```
// Namespace where all the C++ OpenCV functionality resides.
```

(4)

```
using namespace std;
```

```
// For basic input / output operations. Else use macro 'std::' everywhere.
```

(5)

```
int main()
```

```
{
```

```
    Mat img(500, 1000, CV_8UC3, Scalar(0,0, 100));
```

```
    // To create an image
```

```
    // CV_8UC3 depicts : (3 channels, 8 bit image depth
```

```
    // Height = 500 pixels, Width = 1000 pixels
```

```
    // (0, 0, 100) assigned for Blue, Green and Red plane respectively. So the
```

```
    //image will appear red as the red component is set to a 100 out of a possible 255.
```

(6)

```
    if (img.empty()) //check whether the image is loaded or not
```

```
    {
```

```
        cout<<"\n Image not created. You have done something wrong. \n";
```

```
        return -1; // Unsuccessful.
```

```
    }
```

```

(7)   namedWindow("A_good_name", CV_WINDOW_AUTOSIZE);
      // first argument: name of the window
      // second argument: flag- types:
      // WINDOW_NORMAL If this is set, the user can resize the window.
      // WINDOW_AUTOSIZE If this is set, the window size is automatically adjusted
      // to fit the displayed image, and you cannot change the window size
      manually.
      // WINDOW_OPENGL If this is set, the window will be created with OpenGL
      // support.

(8)   imshow("A_good_name", img);
      // first argument: name of the window
      // second argument: image to be shown(Mat object)

(9)   waitKey(0);                               //wait infinite time for a keypress

(10)  destroyWindow("A_good_name"); //destroy the window with the name, "MyWindow"

      return 0;
}

```

End of explanation.