Automatic 2D to 3D image conversion

-Initial report-

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Group: 1309B

1. Project description:

The main goal of our project is to convert a simple image into an 3D image visible with special glasses. We will provide to the user an interface where he can upload an image and also he can set the intensity of 3D effect.

In the first step, the primary image will pass through some noise reduction and contrast increasing to make sure that our future operations will have the desired effect. After that, the image will be taken by a segmentation algorithm to put in evidence the different zones in our image. After our user will set the 3D intensity of each zone, the image will be pass to an algorithm which will increase the level of blue and red of image to make the 3D effect that we are looking for.

1. The main technologies that we are use:

We will use C++ for developing our application and the IDE will be Microsoft Visual Studio. For our graphical interface we will use QT, because is a library that can be use in C++ and it is know from this course. The noise reduction will be applied with a specific filter and the increase in contrast will use some methods like histogram equalization and so on.

The segmentation algorithm (\*\*\* To do \*\*\*)

The 3D effect is hard to explain right now, but our main idea is to change the values of pixels from the edges of our regions obtained at segmentation step to obtain a red and blue effect. The intensity of this effect will be represented by a small or large area of pixels whose values was changed.

1. Tasks:

**Andrei Stefan:**

* He will take care of the segmentation algorithm
* He will also make test on project to check if it is work fine.

**Bacica Florin:**

* Will make the algorithm which will apply the 3D effect
* Will take care of the project reports and will monitor the project and the given requirements.

**Corban Sergiu:**

* He will make the user interface.
* He will make also the algorithms that will reduce the noise in image and will increase the contrast if it is necessary.