

## Artist Guideline

This is the demand document of our region composition creation task. Please follow this document to create your region compositions.

*Note that this document is originally written in Japanese. We have translated it into English for the ECCV reviewing. Some translations may not be absolutely accurate.*

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## 1. Introduction of the web user interface

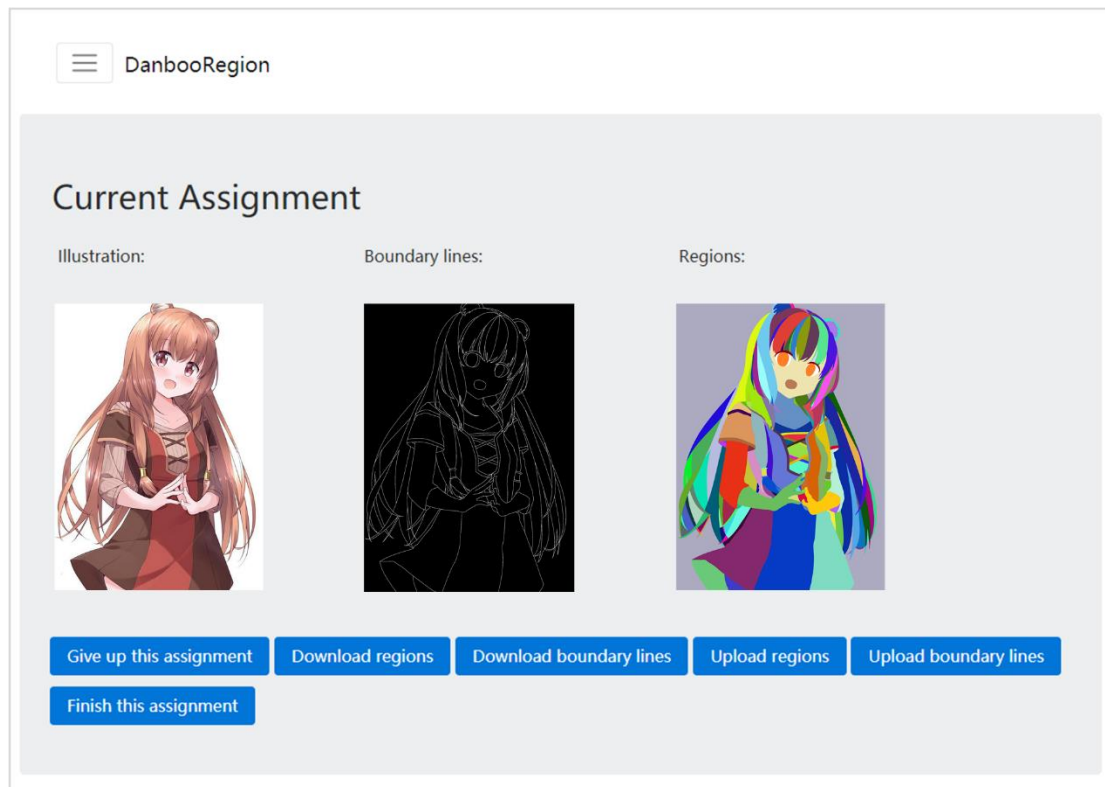


Figure 1. The web user interface of your current assignment.

Each time when you open this website, you will be recommended with one assignment. You will be able to download coarse regions (or coarse region boundary) and then upload your retouched ones. Note that in *Figure 1*, we have already uploaded the retouched regions. You are able to click the buttons to manipulate your assignment statues:

- **Give up this assignment** – give up this image and query a new one.
- **Download regions** – download the coarse regions (or your previous uploaded regions)
- **Download boundary lines** - download the coarse boundary lines (or your previous uploaded boundary lines)
- **Upload regions** – upload your retouched regions
- **Upload boundary lines** – upload your retouched boundary lines (if exists)
- **Finish this assignment** – finish this image and query a new one

## 2. Major principles in region compositing assignments

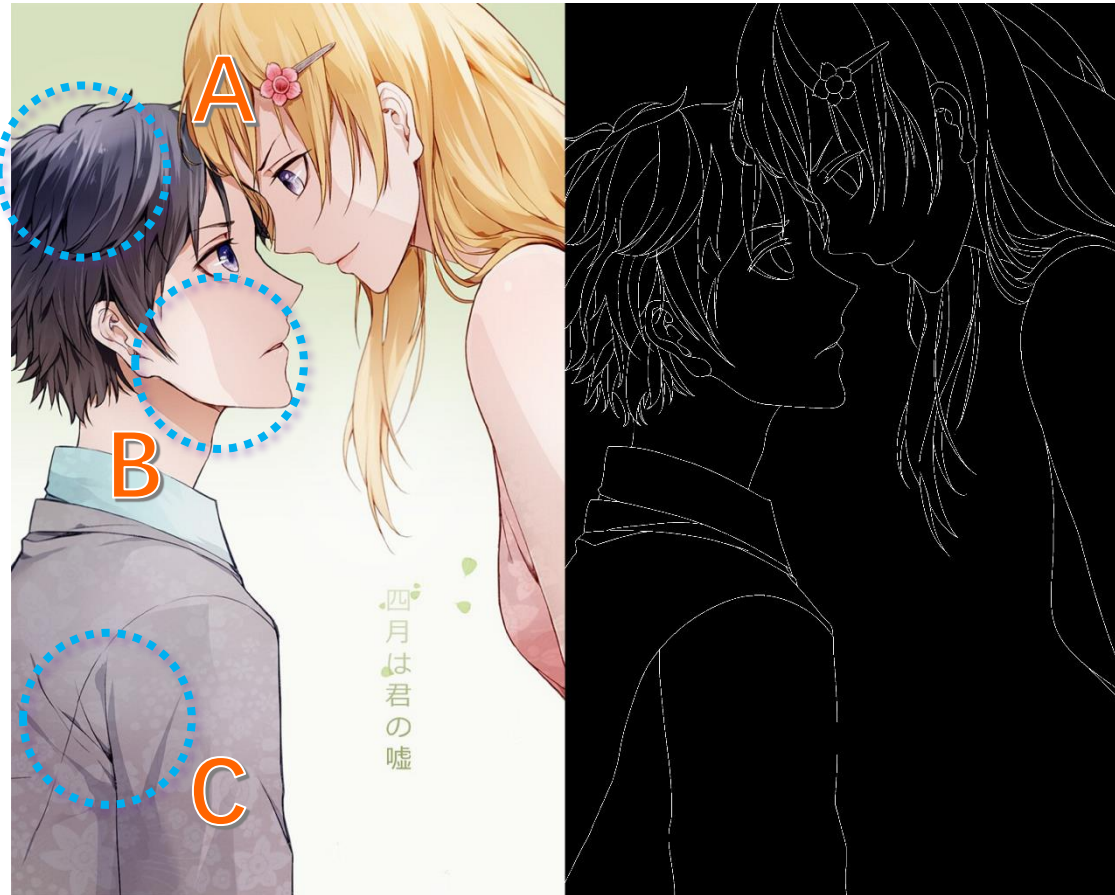
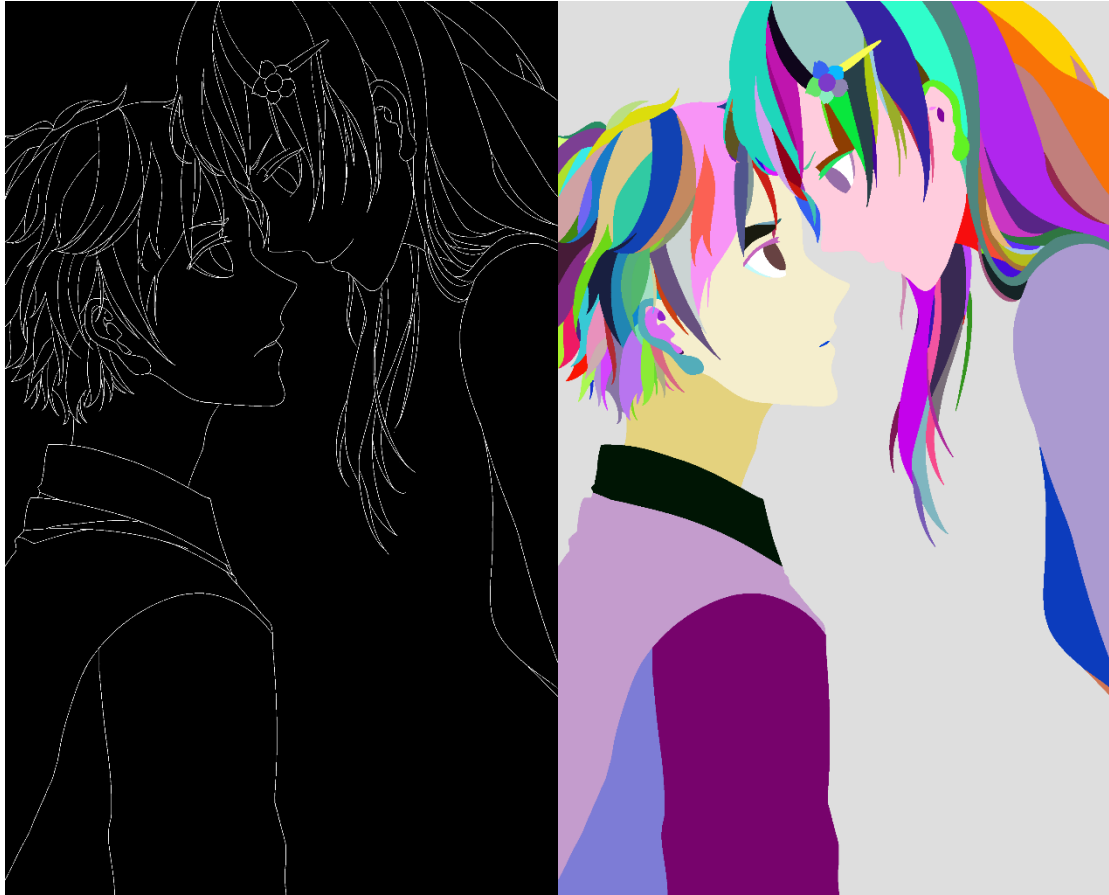


Figure 2. The three principles during your region creation. On the left is one sample illustration. On the right is some "correct" boundaries.

When you create the region boundaries (or the regions), you have to follow the following three principles, corresponding the *Figure 2*.

- ✧ **A: Reorganize ambiguous regions** – For example, the boy hair is vague and ambiguous, and you need to use your region boundaries to make its structure clear.
- ✧ **B: Outline objects and eliminate lighting and shadow edges** – For example, there is a shadow edge on the boy face, and you need to erase that edge.
- ✧ **C: Clean up texture and avoid other interferences** – For example, the boy cloth is folded with many textures, and you should prevent from outline those textures and cloth folding.

### 3. The closure checking step



*Figure 2. One example of the closure checking result. On the left is the boundaries. On the right is the closed regions from one artist.*

After you upload the region boundaries, we will automatically run a closure check. One example result is presented in *Figure 2*. These regions will appear on your user interface. You can download these regions by clicking the “download regions” button.

One important thing is that we require all regions to be closed. Therefore, if you are using boundary lines to edit the regions, you will have to check the region closure before you upload your boundaries.

## 4. Do not handle all assignments - You can give up some images!

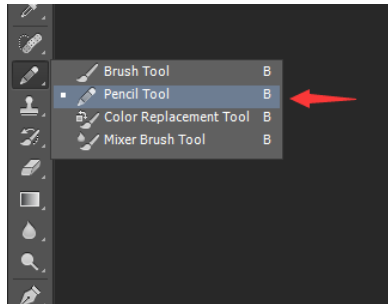
We allow you to give up any image in the following conditions:

- ✧ You find the image is of **low quality** and you do not want to outline the objects on it.
- ✧ You find the image is **not related to cartoon** and anime.
- ✧ You find the image has **too much regions**, and it is not practical for you to outline the regions or it requires too long time for you to finish the assignment.

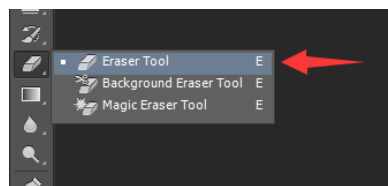
## 5. PhotoShop workflow with line-drawing-based composition

You can manipulate regions by only editing its boundary. Note that if you use this method, you skip Section 6.

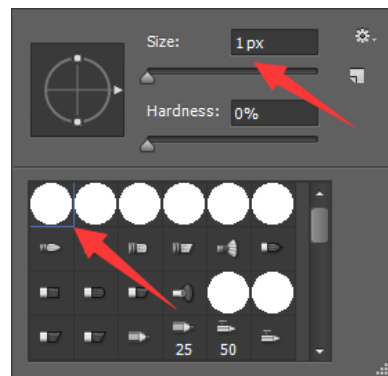
Firstly, you have to use two tools, one is the “pencil” tool:



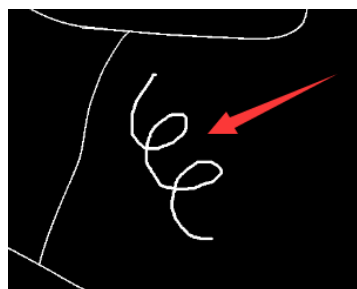
And, another is the “eraser” tool:



Note that you need to set the width of your “pencil” to one, and use the aliased mode:

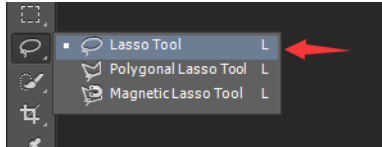


After that, you can draw new boundary in a boundary map:



Or you can erase any boundary using the eraser.

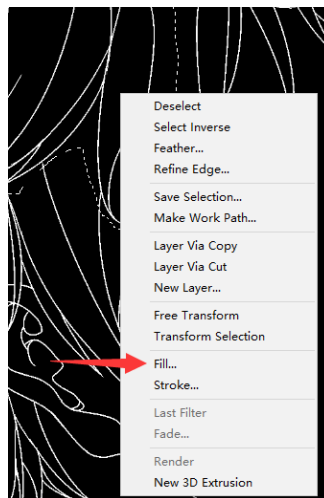
In many cases, you will need to erase a large number of boundaries, and it is not very flexible to use the eraser to erase boundaries one-by-one. In these conditions, we recommend you to use the Lasso tool:



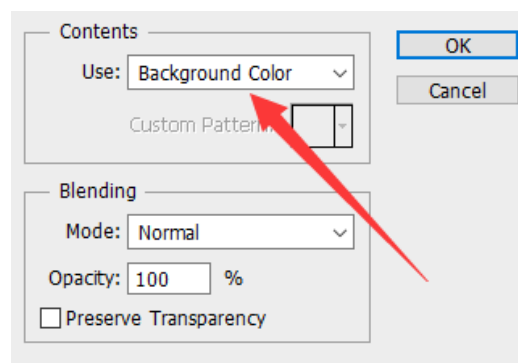
And, you can use this tool to arbitrarily select the unwanted boundaries:



To remove them flexibly, you can use the filler:



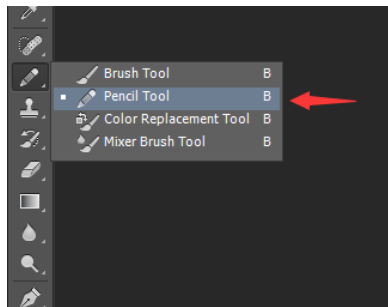
And, select the "background color":



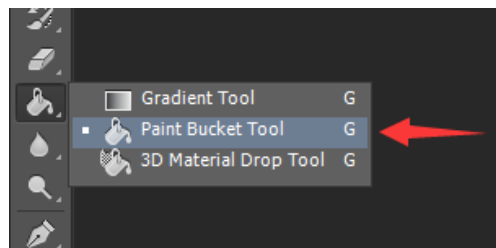
## 6. PhotoShop workflow with region-based composition

You can manipulate regions by only editing its region colors. Note that if you use this method, you skip Section 5.

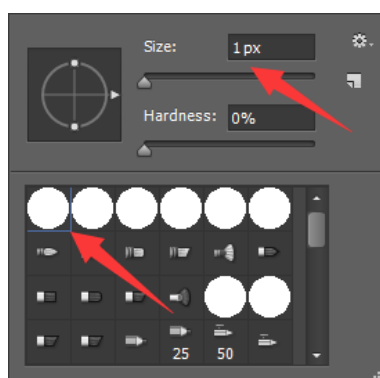
Firstly, you have to use two tools, one is the “pencil” tool:



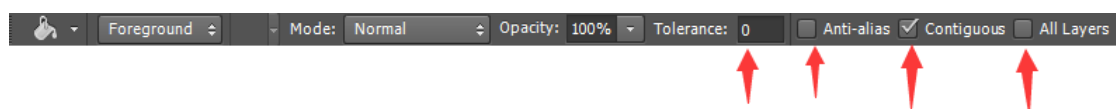
And, another is the “paint bucket” tool:



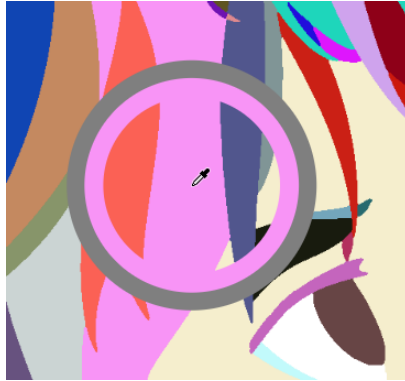
Note that you need to set the width of your “pencil” to one, and use the aliased mode:



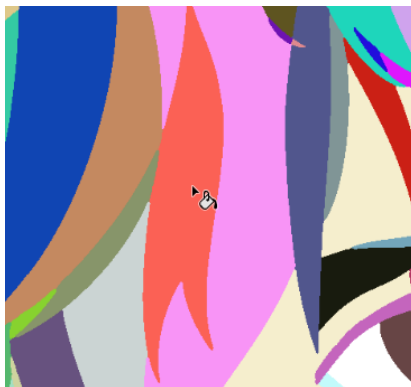
And, you need to set your “paint bucket” to the aliased mode:



When you want to merge two regions, you can first press your “Alt” key to pick one color:



And, then use the “paint bucket” to fill a nearby region:



The result will be:



When you want to create new regions, you can use the pencil tool to paint a boundary:



And, then fill it with that color:

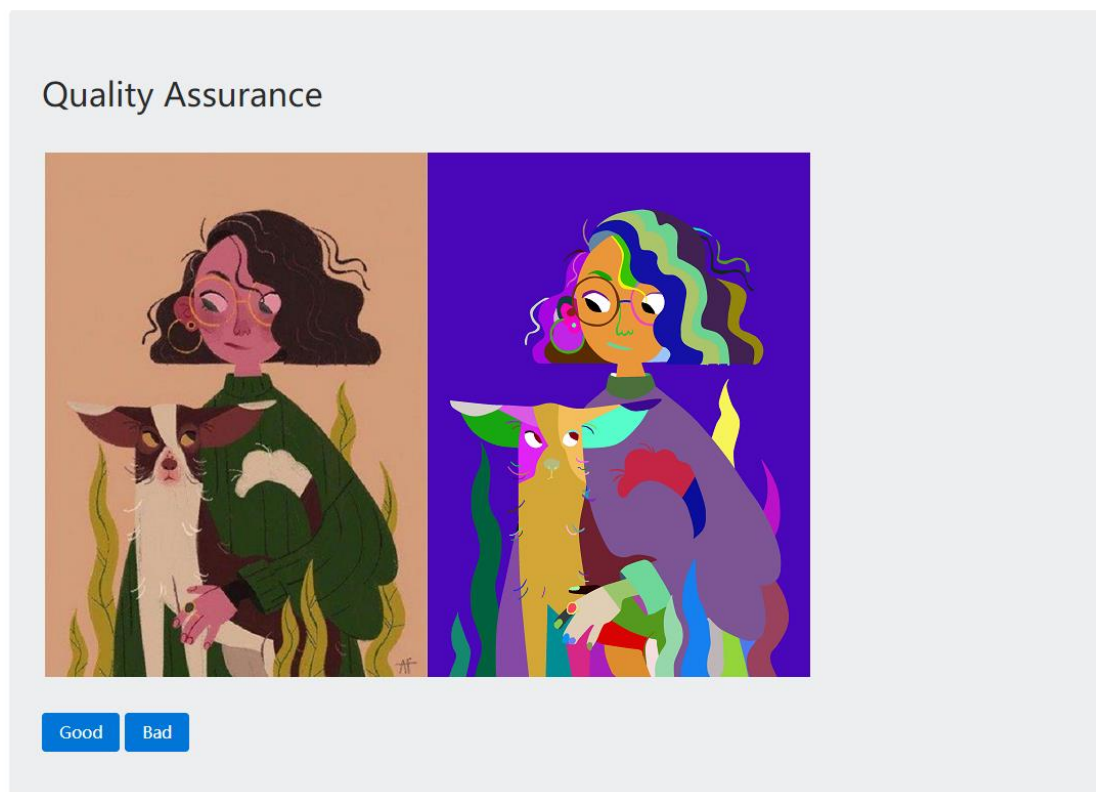


## 7. Thing to do when you finish

When you finish an assignment, please make sure that you have passed the closure test (if you are using boundary methods). You can upload your regions (or boundaries), and click the “finish the assignment” button.

One trick is that you may upload your boundaries to the user interface, and then download the translated regions to continue your editing, but with region filling tools.

Note that we have a quality assurance stage, you will be asked to assure the quality of some regions if necessary. Each time you will be asked to check the quality of about 20 images. Please click “good” if you think the quality is good, otherwise please click “bad”.



*One example of the quality assurance stage.*

## 8. Frequently asked questions

Q: Can I use SAI or Clip Studio to manage the regions?

A: Yes, you can, if you are able to manage the same workflows.

Q: I am confused and I do not know what is texture edge and what is object edge. Some times it seems that texture edge can not be telling apart from objects because they are intertwined.

For example, what should I do on the monkey's facial fur?

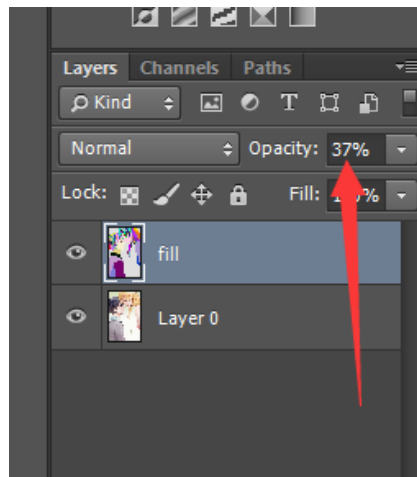


A: Although black fur and white fur might be considered as textural difference, you may still think of it as different objects. It is clear that black fur and white fur can be seen as two different objects. Therefore, the following regions are correct:

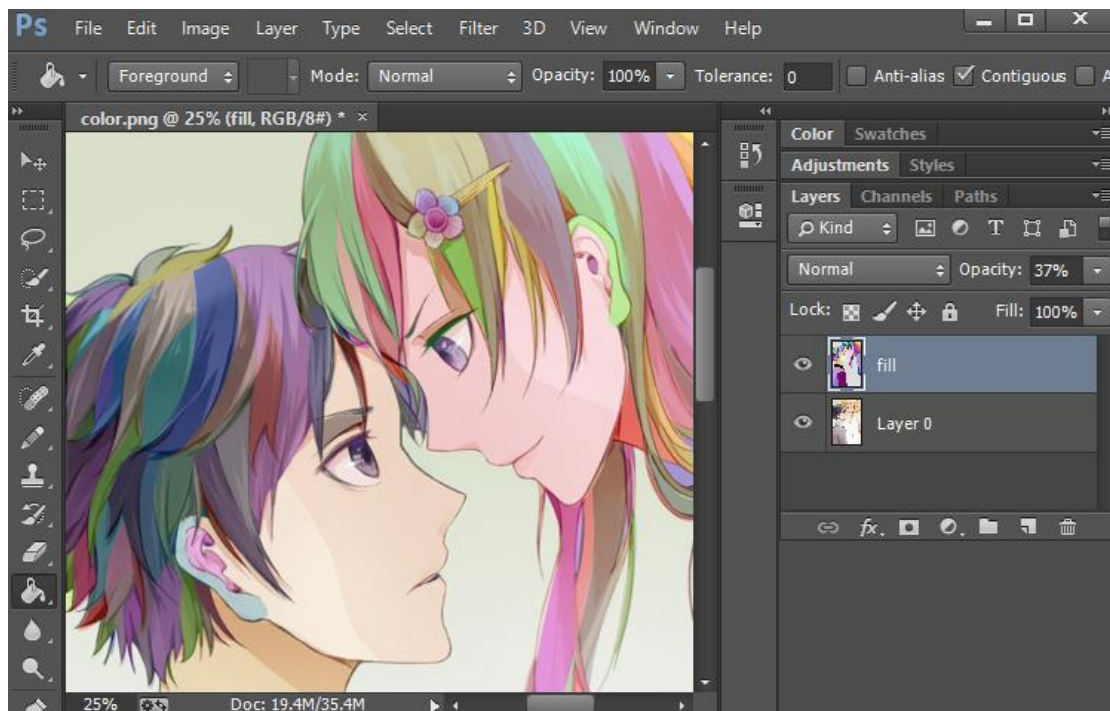


Q: I find it difficult to accurately align my regions with the image, what can I do to ease the composition process?

A: You can use the “alpha blending” tool in PhotoShop to accurately align your canvas. In particular, you can organize your layers in this way:



And you will be able to accurately edit the regions by making the original image visible:



And, the same method can be used in the boundary line workflow.