Report-Image Morphing

1. Image_Morphing (Affine-Part-1)

In this part I used my previous lab affine transformation function which take cares of **exact size**.
Firstly, I find tie points(corner) for each transition image using linear approximation between final image points. Then calculated its transformation matrix. And then used my affine function.

Taken Output:
Using [0 -1 0, 1 0 0, 0 0 1]

Output Part-1

https://drive.google.com/open?id=1NwXP46lk95wWGTxsUcXCcDG3zq0D9mgI

2. Image Morphing

For this I made morphing function which takes initial & final image, alpha(transition level/Total transitions) and tie points.

Then I calculated corresponding points for intermediate image using linear averaging.

Then I did triangulation and find triangle points using Subdiv2D::getTriangleList on initial image.

Then find corresponding triangle points in both initial and final (using same relation given as input tie points).

Then find transformation matrices for both between intermediate image-initial image and intermediate-final image.

And finally cross dissolving.

Output(Image Morphing)

https://drive.google.com/open?id=14MD4jdsp2MP0oFap_TSixVtpq9K0P6jX

Images and tie point source: learnopencv.com

Output(for different image sizes)

https://drive.google.com/open?id=1NnWHX6mRUxrTa6rxCo5CgOtqI4mnFS4J

Image and tie point source: learnopencv.com

All Output Images

https://drive.google.com/open?id=1fPcdDQe2HteHFjEx1s1x0FNZZgcyFil5

Image and tie point source: learnopencv.com