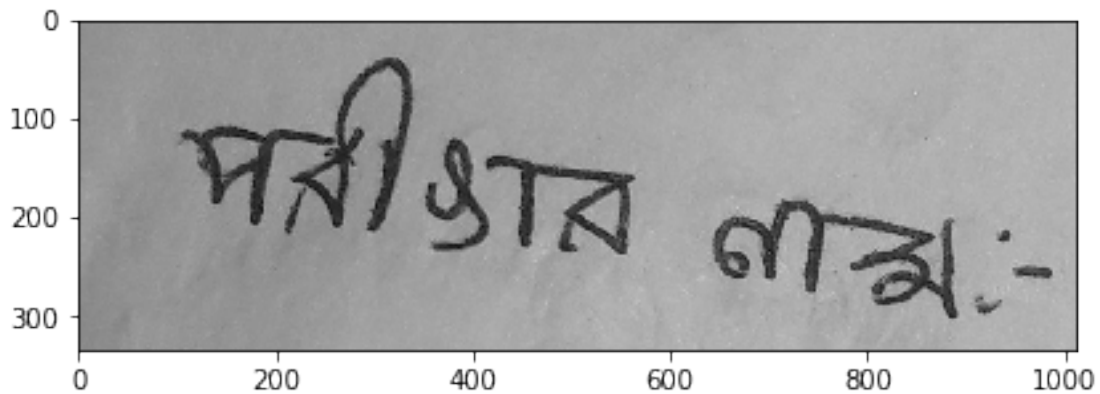


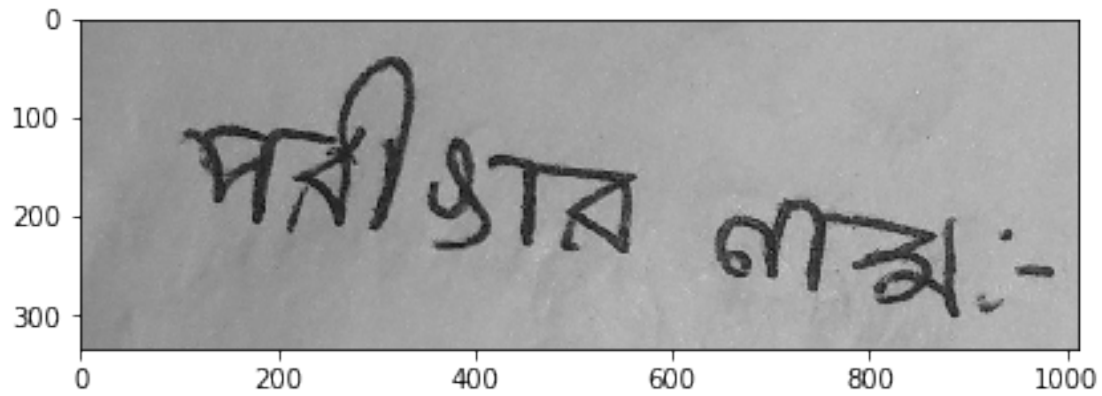
# binar

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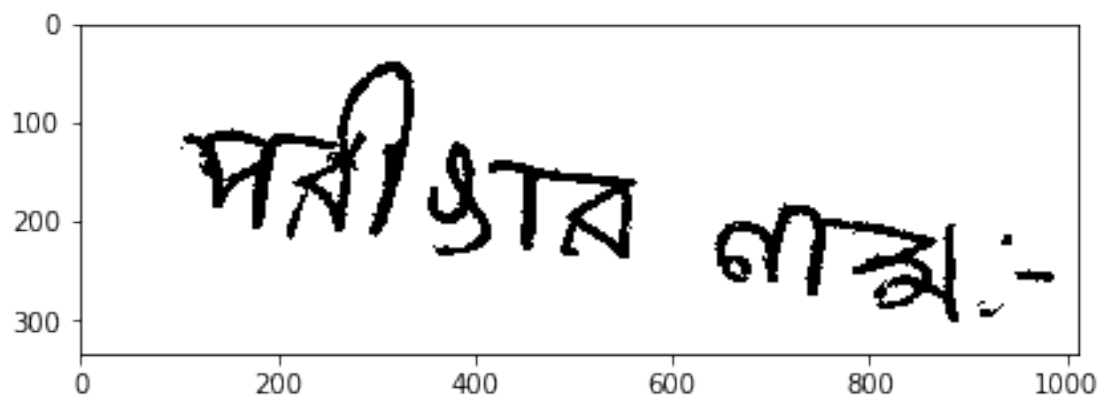
```
In [12]: # import the necessary packages
import warnings
warnings.filterwarnings("ignore")
import numpy as np
import argparse
import cv2
import os
from skimage import io, transform
# load the image from disk
lekha = cv2.imread('/home/s4k1b/Downloads/skw.jpg');
io.imshow(lekha);
```



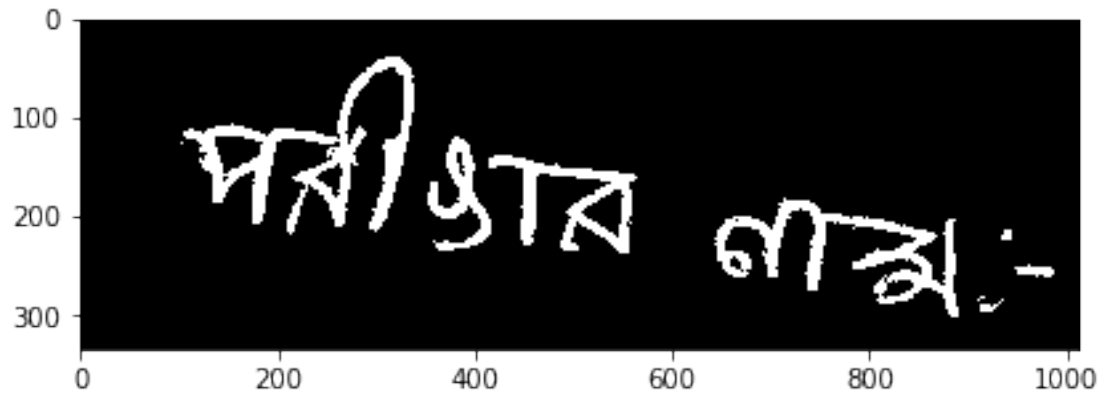
```
In [13]: from skimage import color
grey = color.rgb2gray(lekha);
io.imshow(grey);
```



```
In [14]: from skimage import filters
         threshold = filters.threshold_otsu(grey);
         binary = grey > threshold;
         io.imshow(binary);
```



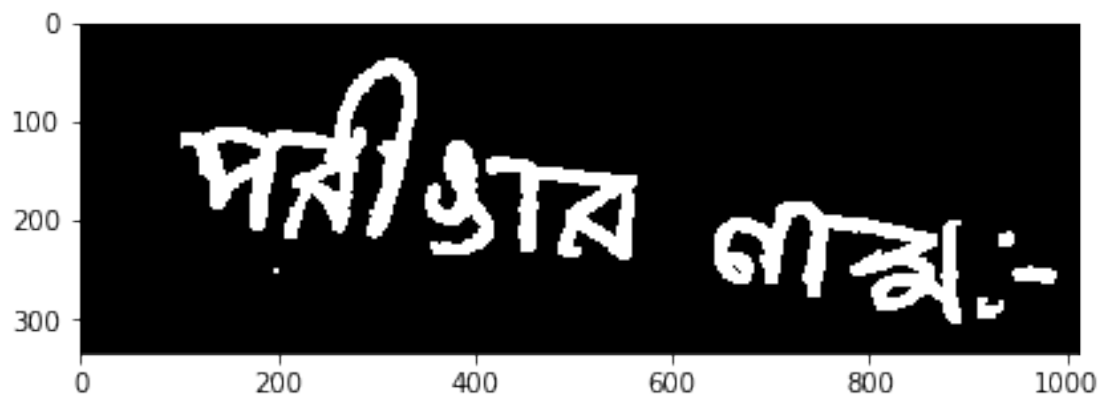
```
In [24]: from skimage import morphology, util
         inv = util.invert(binary);
         io.imshow(inv);
```



```
In [27]: kernel = np.ones((5,5),np.uint8);
         inv = np.array(inv, dtype=np.uint8)
         dilation = cv2.dilate(inv,kernel,iterations = 1)
         io.imshow(dilation);
```



```
In [28]: threshold = filters.threshold_otsu(dilation);
         binary2 = dilation > threshold;
         io.imshow(binary2);
```



```
In [29]: inv = util.invert(binary2);  
         io.imshow(inv);
```

