Instructions to run the preprocessing steps -

1. Upload the image to google colab or have it in your directory. Change the path name mentioned inside the notebook to the name of your file and then run the whole notebook.
2. You will notice that the segmented sentences will appear in your directory which have to be passed into word_seg notebook

Use the code from the word segmentation notebook to generate word segments. Run this on the output images obtained from the sentence segmentation notebook.

Once the segmented words have been generated, input these words into the deep learning model using the instructions provided to generate the predictions.

Instructions to run the deep learning model -
Download the model trained on the IAM dataset. Put the contents of the downloaded file `model.zip` into the `model` directory of the repository. Afterwards, go to the `src` directory and run `python main.py`.

These are the command line arguments -

- `--train`: train the NN on 95% of the dataset samples and validate on the remaining 5%
- `--validate`: validate the trained NN
- `--decoder`: select from CTC decoders "bestpath", "beamsearch", and "wordbeamsearch". Defaults to "bestpath". For option "wordbeamsearch" see details below
- `--batch_size`: batch size
- `--data_dir`: directory containing IAM dataset (with subdirectories `img` and `gt`)
- `--fast`: use LMDB to load images (faster than loading image files from disk)
- `--dump`: dumps the output of the NN to CSV file(s) saved in the `dump` folder. Can be used as input for the CTCDecoder

If neither `--train` nor `--validate` is specified, the NN infers the text from the test image (`data/test.png`).