STEPS TO PROCESSING DATA AND BUILDING THE SLAB REGISTRATION:

1. Go through all images in Crack Digitizer to make sure all joints are correctly detected. Fix any errors.
2. Run CropSlabCode for each of the years in dataset.
   1. CropSlabCode outputs “slabs.csv” and a folder with the cropped images.
3. Check for cropping errors. There are multiple ways to do this:
   1. Go through all the cropped images looking for errors (double/triple slabs, crack mistaken for joint, etc...)
   2. Use the lengths in “slabs.csv” to look for outliers. Verify outliers with the images from the CropSlabCode.
4. Go back to the Crack Digitizer to fix all errors. Repeat steps 1-4 as many times as necessary.

SKIP STEPS 5, 6 IF YOU DO NOT WISH TO INCLUDE FAULTING DATA

1. Run read\_xml.py code using LcmsResult XML files and “slabs.csv” from the CropSlabCode for each of the years in the dataset.
   1. read\_xml.py will output “*year*\_Faulting\_DataExtraction.xlsx”
2. Run xmldata\_toyearlydics.py using “year\_Faulting\_DataExtraction.xlsx” from the read\_xml.py code and “slabs.csv” from the CropSlabCode for each of the years in the dataset.
   1. xmldata\_toyearlydics.py will output “*year*slabdic\_xml.xlsx”.
3. Run slabregistration.py. Read its “read me” file for detailed instructions on how to use.
   1. slabregistration.py will output “*Interstate*\_MP#\_BY*year*\_SlabClassificationInput.xlsx”
4. Run slabcategorization.py or use the executables using “*Interstate*\_MP#\_BY*year*\_SlabClassificationInput.xlsx” from slabregistration.py. Read its “read me” file for detailed instructions on how to use.
   1. Slabcategorization.py will not output any file, it will make modifications to its input file.
5. Run slabregistration.py using the “*Interstate*\_MP#\_BY*year*\_SlabClassificationInput.xlsx” file used in step 8.

*NOTE: Names mentioned in this document might defer slightly from actuality.*