**Comments on final Python code (from Mahdi)**

* Read inputs from text file, write outputs to text file (optimised results as well as table)
* Make thickness multiplier (0.3) a user-input variable
* Make concrete density and water density user-input variables
* A general comment is that it seems there is no conclusion at the end of designer. Foundation\_A.design\_check() checks many different dimensions, and marks all of them. Would suggest returning the best output that passes all criteria.
* Would suggest writing the inputs and outputs in separate files.
* And seems it is forgotten to convert l^' and b^' to l and b at the end of Foundation\_A.design\_check().
* Some comments on “Eccentricity.py”:
  + Line 36, 37, 38, 39: Ix\_min has been written I rather L. I assume it is lowercase L not I. Same for Iy\_min.
  + Line 53, 56: You assumed that “steps” is always 40. No need to write a formula for that.
  + Line 66: the number 24 is concrete density. Would suggest setting a name for it and moving it to the inputs.
  + Line 67: Same as concrete density, this water density could be moved to the inputs.
  + Line 57, 58: Suppose L\_comma=9 and B\_comma=8. The current version of code produces non-integer and impractical values for L\_vect and B\_vect.
* A general comment: You have tried to avoid “for loop”, but numpy is doing the loop for you in the background. Nevertheless, you are calculating all checks for 40\*40=1600 foundations which might not be needed. After that you should make a survey on these 1600 foundations and return the optimized one. Using “for loop” you can set a dimension, check it, and break the loop if it is fine.