6.849: GEOMETRIC FOLDING ALGORITHMS, FALL 2020 Prof. Erik Demaine, Martin Demaine, Yevhenii Diomidov, Klara Mundilova

Problem Set 5: Project Preproposal

Due: Thursday, October 8, 2020

Problem 5.1 [**Project Preproposal**]. Start thinking about what your final project might entail. Specifically:

- (a) Read the course website,¹ which describes the possible types of projects and lists some (old) project ideas.
- (b) Look at the class problems and work you've done during class, both for suitable problems/results and to understand what types of problems you enjoyed.
- (c) Talk to your fellow students, in the Project Discussion Comingle room or the corresponding Coauthor thread.² Also feel free to talk to staff during class or office hours or over email.
- (d) Look ahead at future lecture topics to see whether there's something there you'd like to explore deeper. (You can always watch the videos early.)
- (e) Read Problem Set 6^{3} , which gives the exact specification for a project proposal.

Submit your preliminary ideas or directions for your final project by posting a message in the Coauthor preproposal thread, 4 not via Gradescope.

Problem 5.2 [Skeletal Reconstruction]. Draw a polygon, or a set of disjoint polygons, whose straight skeleton is given by the black lines in the following diagram:



¹http://courses.csail.mit.edu/6.849/fall20/project/

²https://coauthor.csail.mit.edu/6.849-2020/m/dnKgGCah5qvcBjAi6

³http://courses.csail.mit.edu/6.849/fall20/psets/ps6.pdf

⁴https://coauthor.csail.mit.edu/6.849-2020/m/8wtt9snQtxMwApwDg