Write a code that compute the structure and the energy of a two dimensional H/P polymer on a two dimensional lattice.

Consider a chain of length 14-mers. Enumerate all possible configurations of the chain on the lattice. How many independent (mirror-image symmetry unrelated) conformations did you find?

Consider the following three sequence 14H, PPHHHHHHHPPPP (8H,6P) and PPPPHHHHHHPPPP (6H,8P). Find the global energy minimum for each of these sequences. Which of the sequence is more stable?