END369E FINAL
PART I – The Backstabbers
(30 Points)

All the class will be playing the following game against each other in groups of three. So, there will be 128 results for each player. The groups will be formed after each input is sorted in an ascending manner and selection will be done by iterating one step at a time. This means for player X_i following matchups (and many more) will happen:

$$X_{i-1} \& X_i \& X_{i+1}, \qquad X_i \& X_{i+1} \& X_{i+2}, \qquad \dots$$

For all players i and j, the utility of i will be:

$$u_i(x_i, x_j, x_k) = x_i\left(100 - x_i + x_j^2 + x_k^2\right)$$

You will pick **only one** real x_i value that is between 0 and 100 and that value will be matched with all other x_i values your fellow students enter to find your total utility.

This value will be entered into google forms and the URL will be announced on Ninova. Deadline is 11.01.2022 23:59, but you can enter them before and change as many times as you want (by reentering).

You are free to cooperate with your fellow students or backstab them. Just make sure you do the math correctly before choosing either one. Note that this is the **Take Home** part of the final. Turn in will be the night (23:59) of the final exam, so depending on how your exam goes you can change your mind.

Good Luck and Happy Hunting ☺