IEOR E4601: Group Project
Due on April 27 (Sunday by 11:59PM ET)

Each team is a seller with infinite inventory of a product facing an unknown demand. The functional form of the demand is also not known. There are T periods. At the beginning of each period t, each team i must set the price p_{it} for that period. At the end of period t, each team team i observes its demand d_{it} in period t and the prices p_{jt} of all other teams. The demands $(d_{1t}, \ldots, d_{Nt})$ depend on the prices of all the teams: $(p_{1t}, \ldots, p_{Nt})$. The price should be in the range of 1 to 100.

Each team needs to write a Python function `strategy` that does not take any input and outputs a price when queried. The historical prices of all teams are available in the file `historical_prices.csv` in the directory one level above your home directory that all teams can read, where each line corresponds to a period and contains a comma separated list of prices of all teams in order. Also, each team can observe only their own historical demand and is available in the file `historical_demands.csv` in your own home directory. This is private information to each team, so you should not share with other teams. See Instructions to learn more details.

The function strategy can read files `historical_prices.csv` and `historical_demands.csv` and output a price that we will use for the current period. The goal for each team is to maximize their expected revenue. In addition, each team should submit a **brief write-up by April 27 (Sunday)** summarizing their algorithm and reasoning behind the approach on Gradescope.

We will start the simulation game on April 28 and the game will run for 7 days. You will be able to observe the data and change your code for the function during the simulation. We will query your function in the first half of every hour (i.e. 12-12:30, 1-1:30 and so on...), so make sure you have a working code saved in the directory during that time.