For the final project in Game Theory, the class will be playing the game described below. The game will be played in teams of two. Each team should write a computer code to simulate the game and develop a strategy. The game will be played 20 times with each team being player 1 ten times.

The Game:

Play begins by a number between 1-9 and randomly being chosen. Team 1 will go first and can ask if the number that was chosen is either low (1-4), middle (5-7), or high (8-9). They will then be given a yes/no answer. They then decide if they are in or out. Team 2 will then be told whether the number chosen was either prime or composite. They will also be told if team 1 chose in or out. Team 2 will then choose in or out. The resulting payoff tables are as follows.

Number is 1-3:

		Pl. 2 In	Pl. 2 Out
Pl. 1	In	3,3	1,2
	Out	0,2	2,1

Number is 4-6:

		Pl. 2 In	Pl. 2 Out
Pl. 1	In	0,5	2,2
	Out	1,1	5,3

Number is 7-9:

		Pl. 2 In	Pl. 2 Out
Pl. 1	In	1,1	7,2
	Out	2,5	3,3

You will submit both a copy of your code and a paper outlining how you chose your strategy. You should consider at least one mixed strategy for each role.

Your grade will be based on four factors:

1. (30%) Quality of code used to simulate the game
2. (50%) Paper on justification of strategy - please include simulation results
3. (10%) Total score over the 20 games
4. (10%) Score compared to other team

All items are due at the start of the exam period which is Monday, May 1, at 12:45 p.m. At that point, I will run the game and let each team know the results of each game.