

Iterated Prisoner's dilemma



The Prisoners' Dilemma

		Prisoner A Choices	
		<i>Stay Silent</i>	<i>Confess and Betray</i>
Prisoner B Choices	<i>Stay Silent</i>	Each serves one month in jail	Prisoner A goes free Prisoner B serves full year in jail
	<i>Confess and Betray</i>	Prisoner A serves full year in jail Prisoner B goes free	Each serves three months in jail

Iterated Prisoners' dilemma: they play the game again and again

Assignment for the practice

- Iterated Prisoners' dilemma: they play the game again and again
- 200 iterations, history known (h1: yours, h2: opponent's)
- Tournament
 - Winner: who has the most points according to:

	0 = `Stays silent'	1 = `Betrays'
0 = `Stays silent'	3 , 3	0,5
1 = `Betrays'	5,0	1,1

$U=[[3,0],[5,1]]$

Assignment for the practice

- About the .py file to assign:
 - Create your file in ./strats
 - First row: # + Neptun codes of the team members
- You can run the gamethTournament_p3.py to evaluate the strategies in ./strats (we will do the same with your solutions)

```
# NEPTUN1 NEPTUN2

import numpy as np

def decision(h1, h2):
    if len(h2)==0:
        r=np.random.randint(2)
        return r
    else:
        avg=1.0*sum(h2)/len(h2)
        if avg<=0.5:
            return 0
        else:
            return 1
```