

# Programming Scalable Systems Project

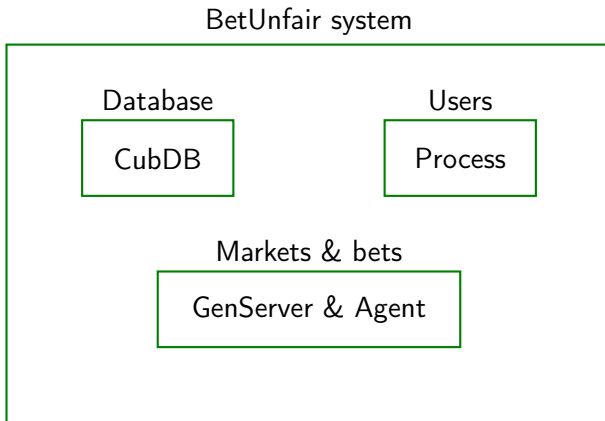
## BetUnfair (Betting exchange platform)

Alexandre Arabian    Nathan Maillet

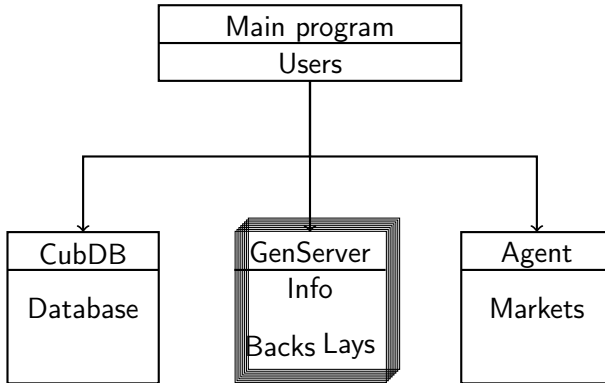
Escuela Técnica Superior de Ingenieros Informáticos  
Universidad Politécnica de Madrid

## Implementation

## Functional view



## Processes & data types



## Test & Benchmarking

# Logical tests

## Functionalities of the API

Functionality	Done/ToDo
Stop & Restart	✓
Management of users account	✓
Create multiple bets for a user	✓
Matching and settling markets	✓
Our code passes all unit tests	✓

# Test of scalability

## Scalability test

Number of users	time to run
1000	0.3 sec
10000	0.7 sec
100000	18 sec

Parameter : 50 users per markets

## Analyse

Our system runs in less than  $\mathcal{O}(n)$  with  $n$  the number of users up to 100000 users.

## Conclusion



## Challenged faced

- ▶ One of us had issues to run mix along with code from github
- ▶ Difficulties in data manipulation (use of Process, Registry, Agent. . . )
- ▶ Problems with the tester : naming conventions and logic of the betting place

## Future ideas

For a future version of our application, we could add :

- ▶ An history of bets
- ▶ Video streams to description of markets (live update about event)
- ▶ Select who can bet against you
- ▶ Making bets with multiple persons, dividing the cost and gains