Programming Scalable Systems Project
BetUnfair (Betting exchange platform)

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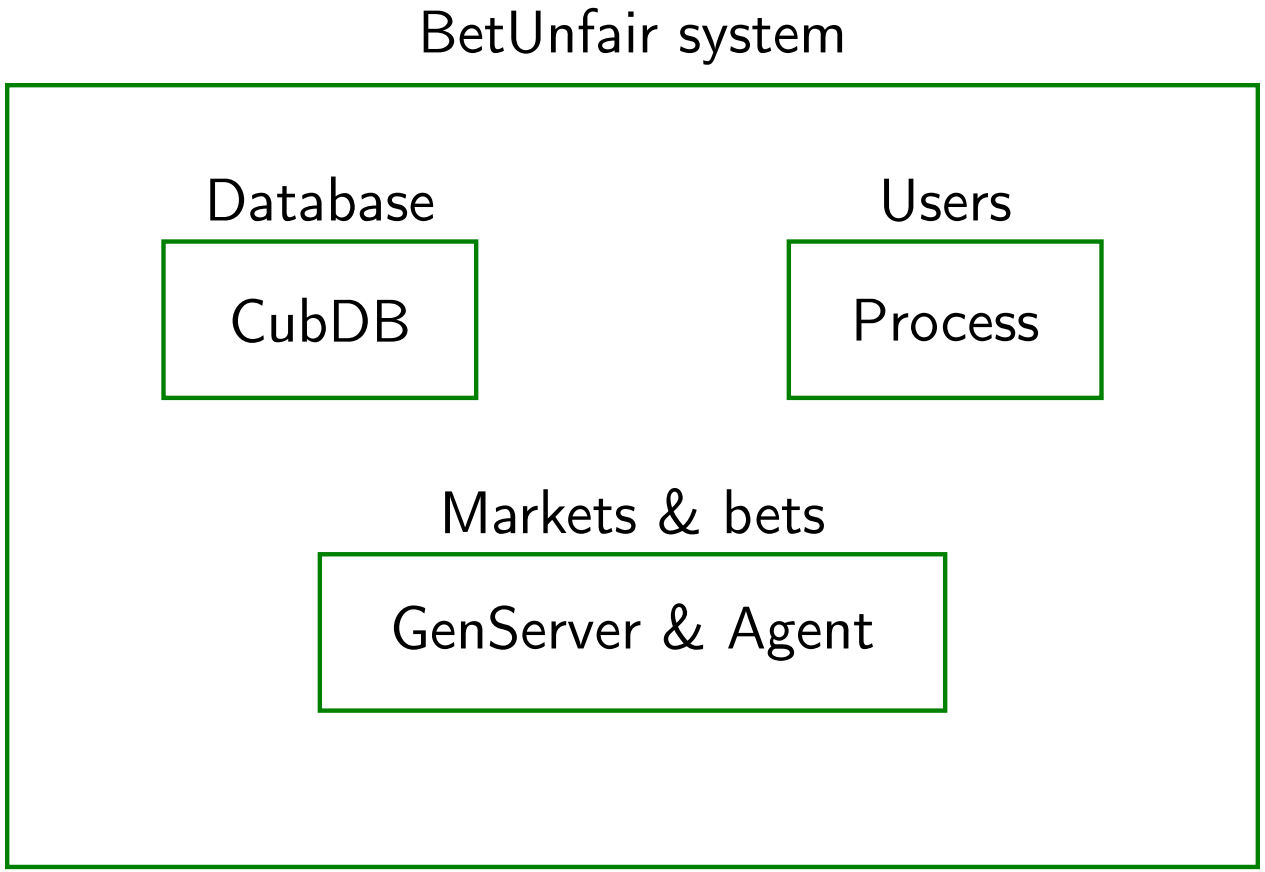
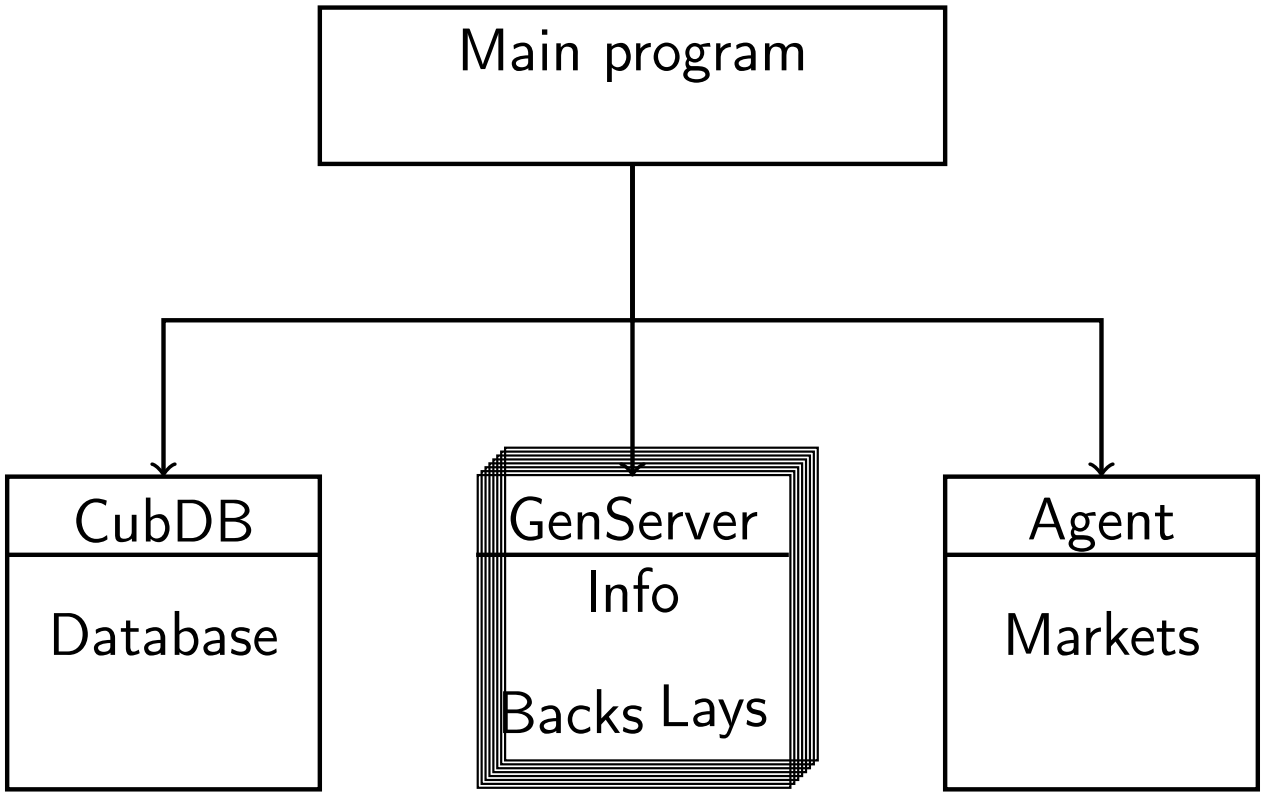
Implementation

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

As we have : $\frac{18}{0.7} = 25.7$ and $\frac{0.7}{0.3} = 2.3$, our system runs in $\mathcal{O}(n^2)$ with n the number of 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 : namming 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