



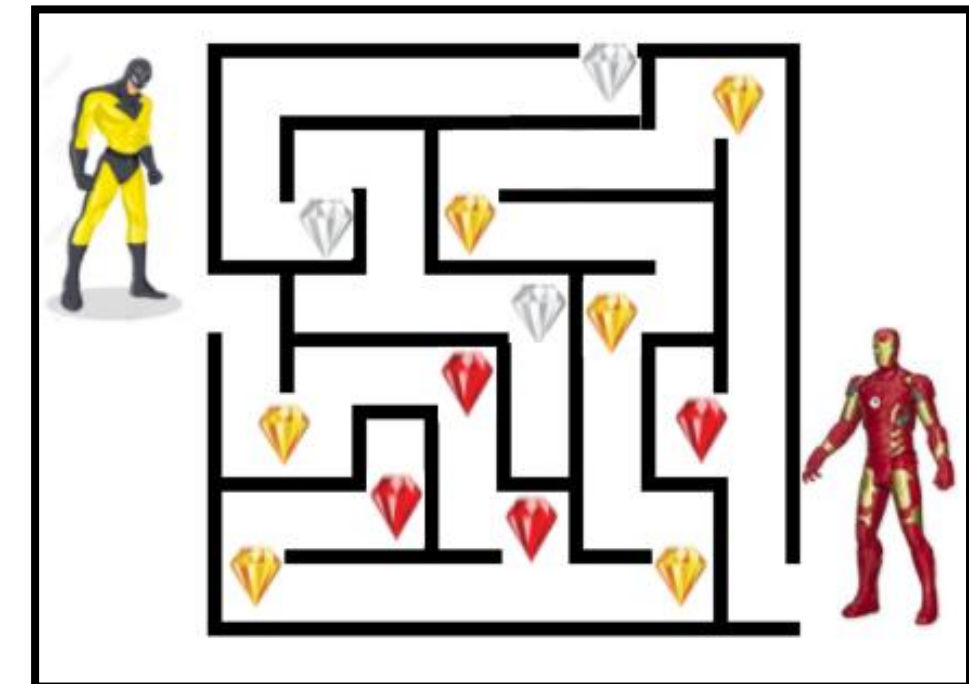
Authors

Arbia JELASSI
Hamza HASSINE

Context and Problematic

Treasure Rush Game

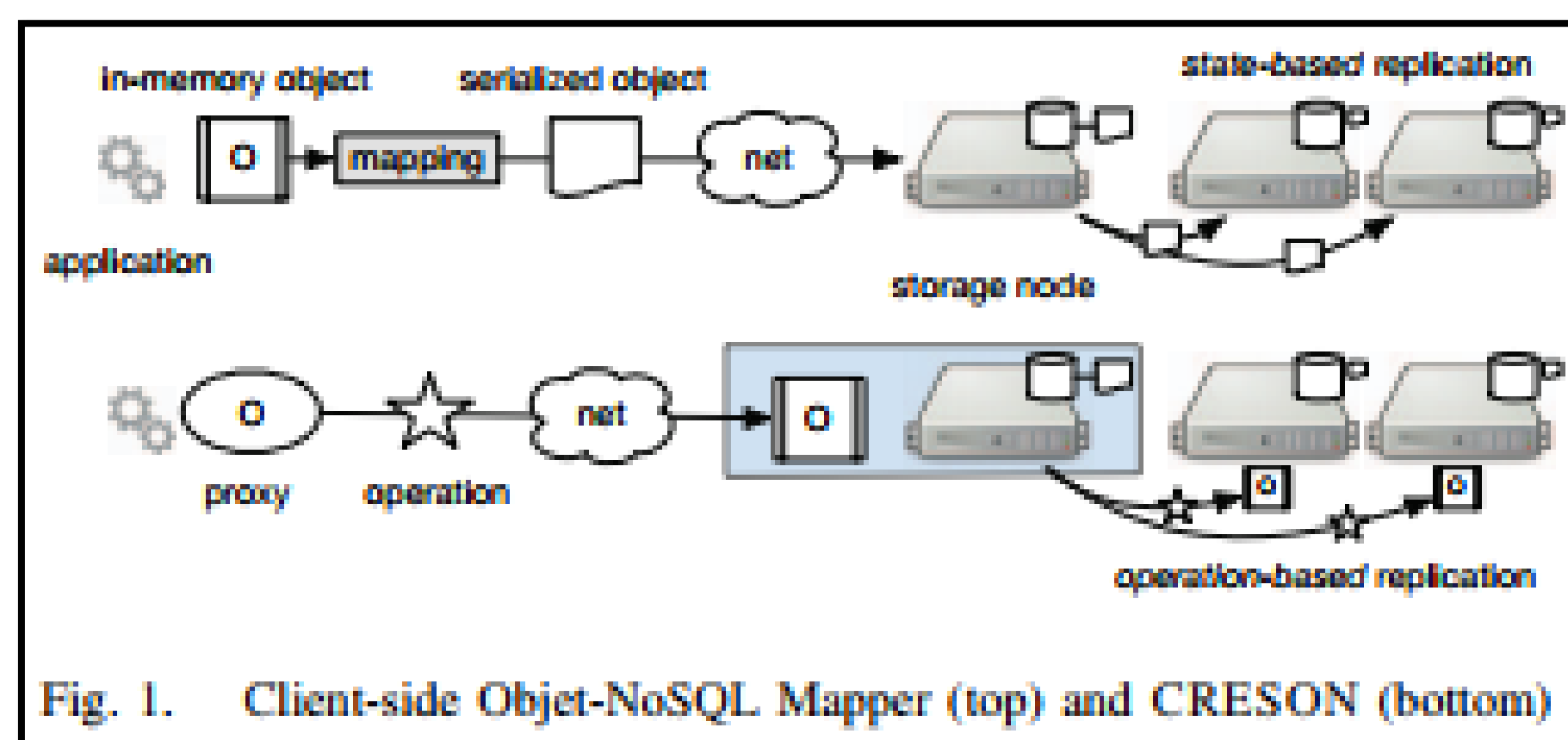
- *Aspect of the game* : a maze where heroes go through different shared rooms and compete in order to collect Treasures .
- Handling concurrency and critical sections using « **Synchronized** »
 - How can we easily port a shared memory in a distributed settings ?
 - How can we query shared objects ?



Supervisor

M.Pierre SUTRA

State of the art



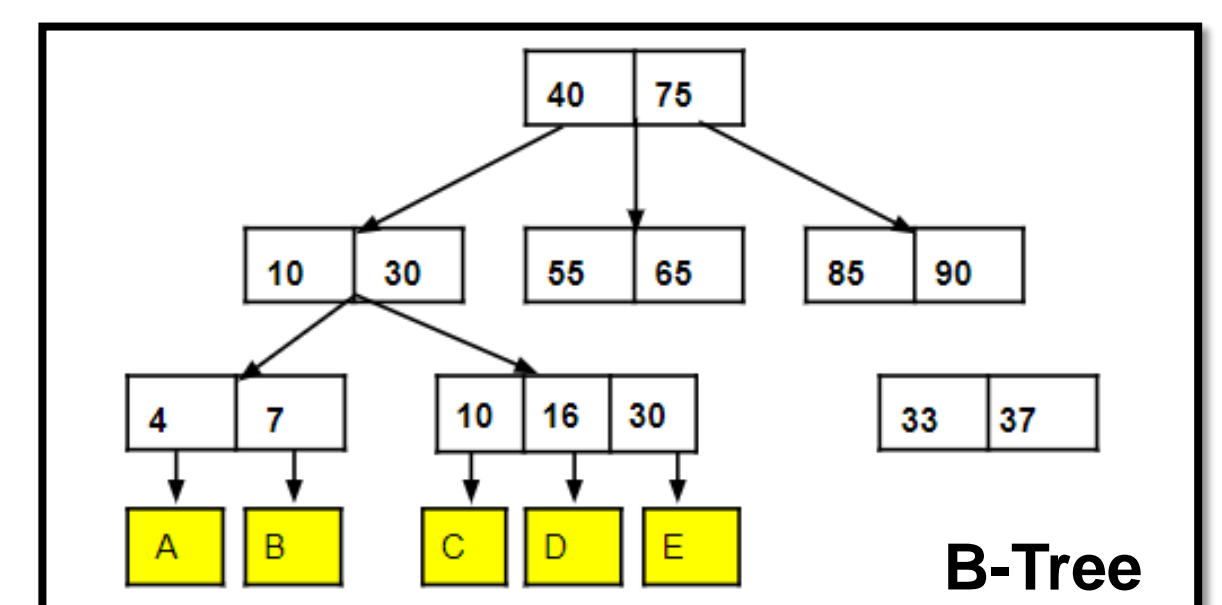
CRESON : Callable and Replicated Objects over NoSQL

- Synchronization framework :
 - No Further action required from the developer to guarantee synchronization
 - Using annotations **@Shared**
- Based on Infinispan:
 - Distributed Key-value Store
 - Remote Server
 - Fluent programmatic configuration API
- Remote callable objects :
 - No need for ORM and serialization to send objects over the network

Solution Design

Indexing :

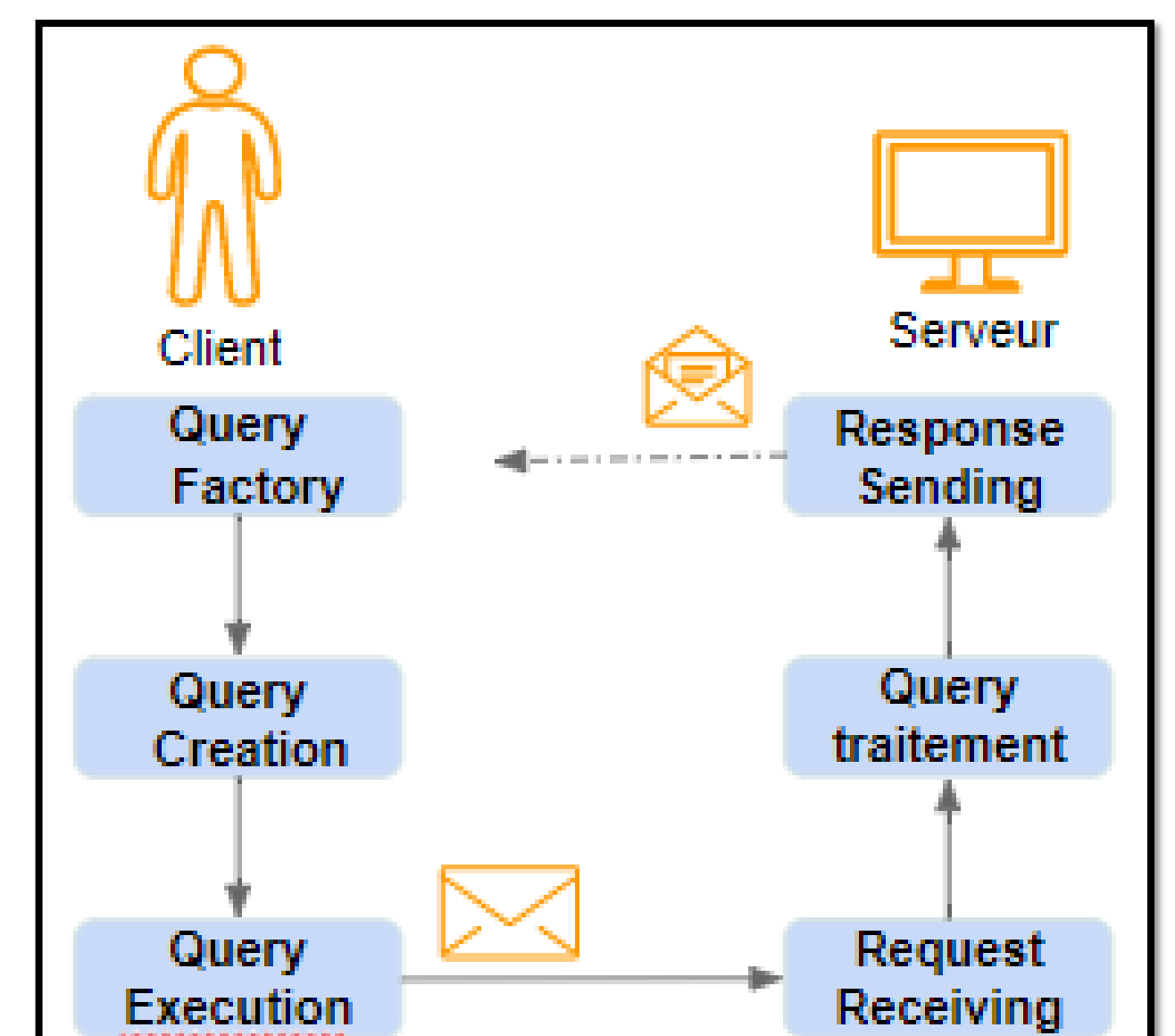
- Accelerating the fetch of objects from the store
- Using a specific data structure (B-Tree) to reduce the query response time
- Annotating indexed classes using Hibernate Search



Querying :

- Implementing an API :
 - based on Java Objects
 - supporting lcke query Language
- Querying Creson Objects in a simple way

```
Query q = qf.create("from org.example.Room room" +
    " where room.treasure = 0");
```



Technologies

