



# UNIVERSITÀ DI PISA

MSc Computer Engineering  
Artificial Intelligence and Data Engineering

Large-Scale and Multi-Structured Project

## **Board-Game Cafè Java Application** ***(Social Network)***

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## Introduction

### The Board-Game Cafè Application

*Board-Game Cafè* is a social networking application designed for board games enthusiasts that provides several functions for taking information about it, staying up-to-date on people's opinions about board games based on their own experiences, and much more.

**Non-registered Users** can only browse in read-only mode the contents of the application without the ability to perform actions that in any way lead to possible undesirable consequences for the purpose of respecting the content uploaded by registered users.

**Registered Users** can browse among a large number of Board Games with the possibility to read their specifications, write a review and give a rating, create posts in which a topic related to a board game can be covered and moreover they can also interact with other users by following them and commenting on their posts.

**Admins** can manage Users, Board Games, Post, Comment and Reviews with special privileges. They also have access to the usage analytics of the application and Ban Users if needed.

## Feasibility Analysis

First of all we conducted a Feasibility Analysis to well understand – To be continued

## Web Scraping for Dataset

To Write

## Data Processing

To Write

## Development

Explanation of Development Concept and its phases – To be Write

## Requirements

To Write

## Functional

To Write

## Non-Functional

To Write

## CAP Theorem

To Write

## Design

To Write

## Main Actors

To Write

## Use Case Diagram

To Write

## Class Diagram

To Write

## Data Modeling

To Write

## Document DB: Mongo DB

To Write

## Mongo Queries

To Write

## Graph DB: Neo4j DB

To Write

## Neo4j Queries

To Write

## Distributed Database

To Write

## Replica Set

To Write

## Replica Configuration

To Write

## Replica Crash

To Write

## Sharding Proposal

To Write

## Software Architecture

To Write

## Frameworks

To Write

## Implementation

In our implementation we have utilized different classes such as:

- *Class Name*
- *Class Name*

## Source Code and Package Structure

To Write

## Model Classes

To Write

## Mongo DB Management

To Write

## CRUD Operations

To Write

## Queries Implementation

To Write

## Neo4j DB Management

To Write

## CRUD Operations

To Write

## Queries Implementation

To Write

## Database Consistency Management

To Write

## Update

To Write

## Delete

To Write

## Index Analysis

To Write

## Mongo DB

To Write

## Neo4j DB

To Write



## Unit Test

This section presents – To Write

## JUnit Framework

Most used in Java application – To be continued

## Tests

Performed for – To be continued

## GUI – Graphical User Interface

This section presents – To Write

## Conclusion

To Write

## References

Our work can be found and accessed at the following GitHub link:

- [https://github.com/g-sferr/BoardGame-Cafe\\_App/tree/master](https://github.com/g-sferr/BoardGame-Cafe_App/tree/master)