UNIVERSIDADE AUTÓNOMA DE LISBOA LUÍS DE CAMÕES
Department of Engineering and Computer Science
Distributed and Parallel Systems 2023/2024

Final Project - Assignment

Notlar: Advanced Distributed Note System

Description: Develop "Notlar", an advanced distributed system for managing text notes. The objective is to allow users to store, access, and retrieve text notes on distributed servers, potentially located in different parts of the world.

Specifications:

- Students are responsible for defining and justifying the chosen architecture, considering the outlined objectives.
- Implement an efficient mechanism for naming and locating resources.
- Regarding security, user authentication is required. Moreover, notes must be encrypted both in transit and at rest.
- Fault recovery is essential. Develop mechanisms that allow the system to recover from failures, including note loss.
- The distributed file system is a critical component; thus, students should explore approaches to optimize data access and persistence.
- The system should support parallel operations to maximize performance, especially in high-demand scenarios.
- Implement algorithms for object distribution that ensure an equitable and efficient distribution of notes across servers.

Tools:

- For the implementation of this project, students should choose the programming language and tools with which they are most comfortable and that they deem suitable to meet the established specifications.

Evaluation:

- Proposed architecture and justification.
- Functionality and robustness of the system.
- Efficiency in distributing, accessing, and retrieving notes.
- Implementation and application of distributed systems and parallel computing concepts.
- Security approaches, including authentication and encryption.
- Code clarity and provided justifications for decision-making.