Laboratory 3.1

1. NoSQL DB Key-value: A key-value database (sometimes called a key-value store) uses a simple key-value method to store data. These databases contain a set of **unique identifiers**, each of which have an associated value. This data pairing is known as a “key-value pair.” The unique identifier is the “key” for an item of data, and a value is either the data being identified or the location of that data. They are easy to design and implement.

2. Chosen DBMS: Redis
Advantages:

- Very fast for read and write operations because all data is stored in the **memory**
- Rich data structures. Redis offers five possible data options for the values. These are hashes, lists, sets, strings, and sorted sets.
- Redis **allows** réplica (CAP Theorem)

Redis is used for storing basic information, such as customer details; storing web pages with the URL as the key and the webpage as the value; storing shopping-cart contents, product categories, e-commerce product details
More use cases:

- Session management on a large scale.
- Using cache to accelerate application responses.
- Storing personal data on specific users.
- Product recommendations, storing personalized lists of items for individual customers.
- Managing each player’s session in massive multiplayer online games.