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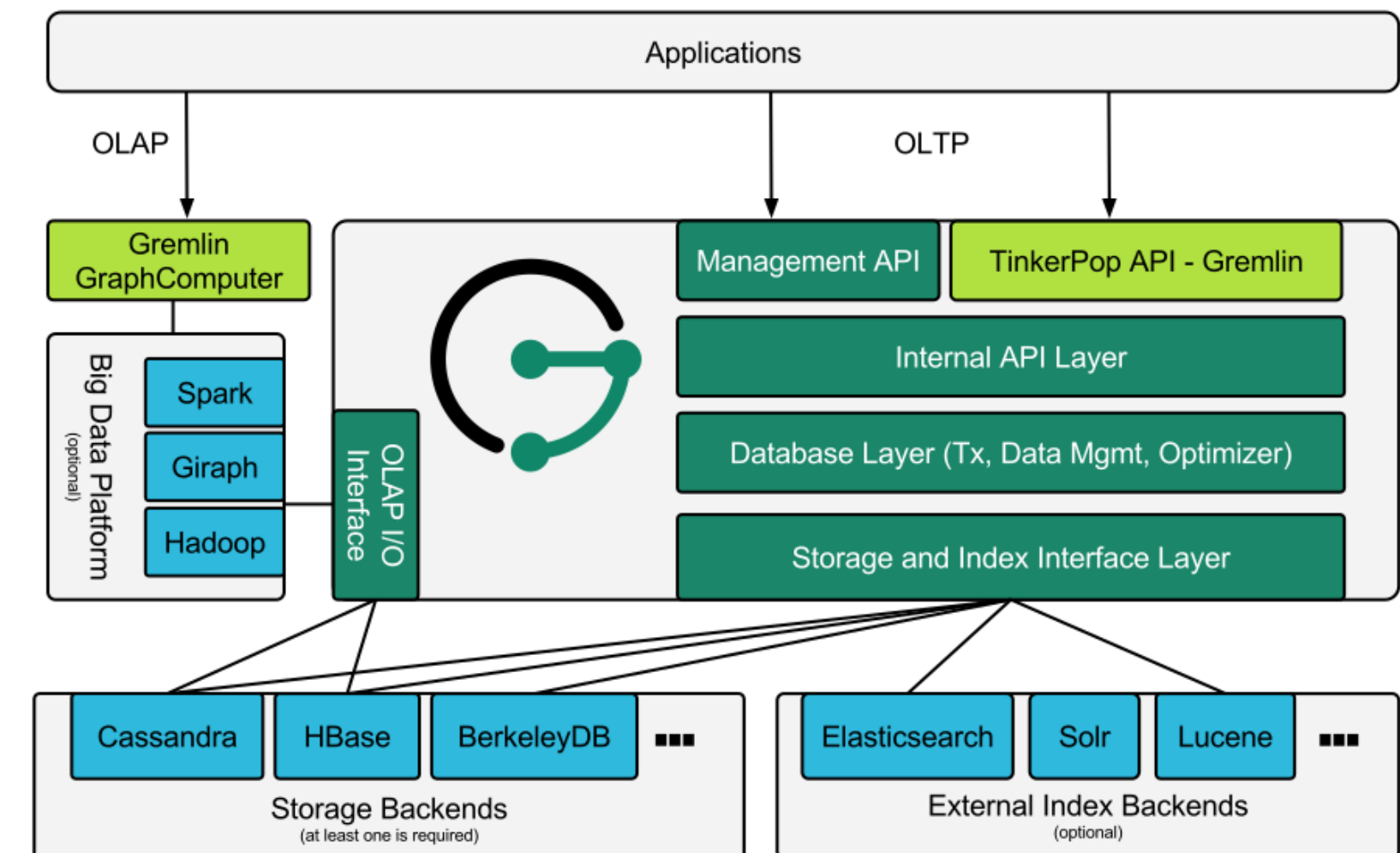UNIVERSIDADE DO PORTO

JanusGraph

M.EIC - Non-Relational Databases 2022/2023

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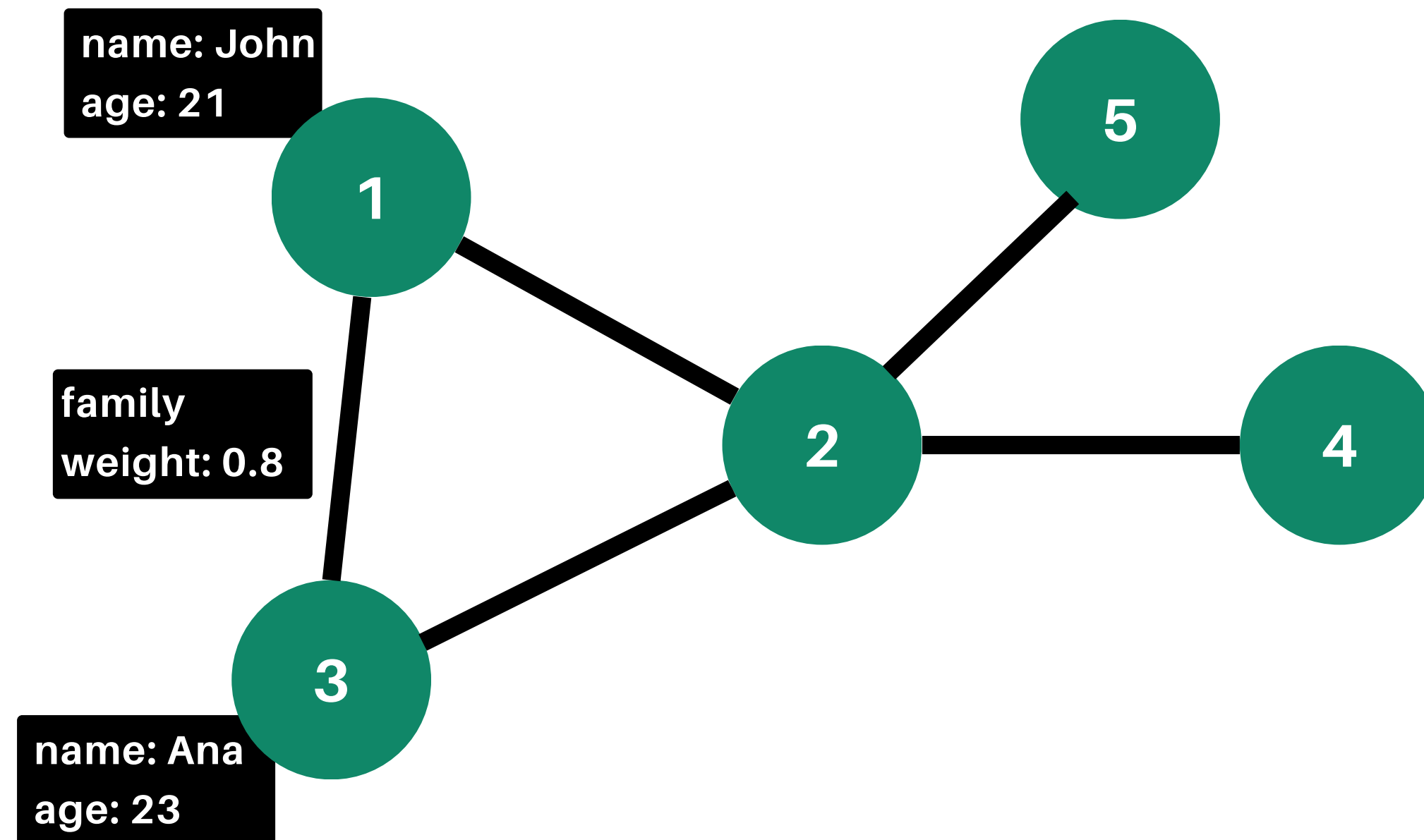
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What is JanusGraph?

JanusGraph is a **scalable** and **distributed** graph database optimized for storing and querying graphs.

It is **transactional** and **open source**.

The graph data can be stored mainly using Apache Cassandra, Apache HBase, and Oracle BerkeleyDB.

It supports advanced search functionalities, 3rd party storage adapters, and integration with visualization tools, as well as global graph analytics.

What is JanusGraph?

Benefits and Limitations

✓ **Benefits**

- Support for very large graphs.
- Support for many concurrent transactions and operational graph processing.
- Support for geo, numeric range, and full text search for vertices and edges on very large graphs.
- Easy integration with the Gremlin Server for programming language agnostic connectivity.

⚠ **Limitations**

- Size Limitations (2^{60} Edges and $2^{60}/2$ Vertices)
- DataType definitions
- Edge Retrievals are $O(\log(n))$
- Type definition cannot be changed (The definition of an edge label, property key or vertex label)
- Reserved Keywords

Applications