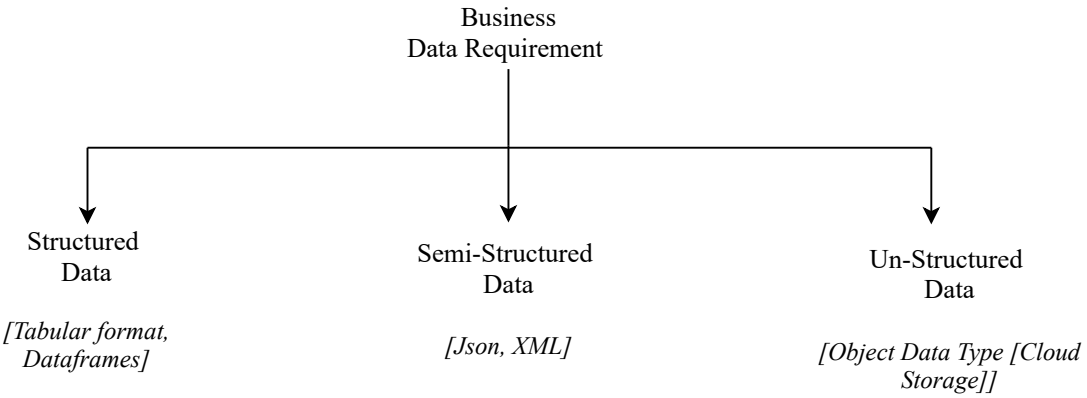
Matching Database to the workload



2. What this data represents?

Tabular Data, Entity Relationships, Spatial Data, Time-series Data, Etc..

3. Define Conceptual Data Model

Data Model is a collection of concepts describing data.
Understand query patterns.

4. Categories

RDBMS

- Strong Schema
- Relational Model
- Degree of a Relationship
- Strong ACID properties
- OLTP query patterns
- Referential Integrity

Key-Value

- Schema Free
- High Throughput
- Low Latency Reads
- Scale Horizontally

Key-Document

- Store documents and quickly access querying on any attribute.

Graph

- Quickly and easily create and navigate relationships between data
- Traversal, Paths
- Degree of a relationship > 5

In-Memory

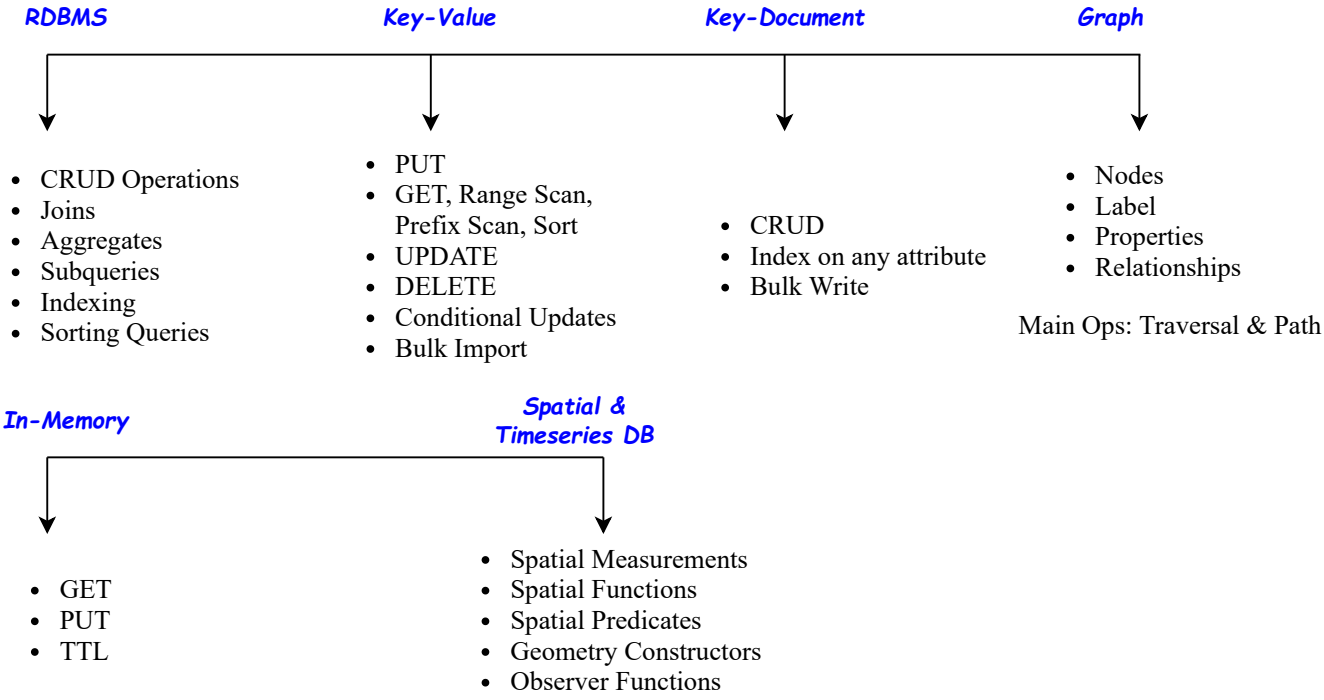
- Query by key with microsecond latency
- Use in-memory data-structures

Spatial & Timeseries DB

- Spatial Data
- Timeseries Data

Referential integrity *refers to the accuracy and consistency of data within a relationship. In relationships, data is linked between two or more tables*
Degree of a relationship *is the number of entity types that participate(associate) in a relationship*

5. Database Operations



Using this information, We can map the use-case/workload to a specific database. Now next part is how to choose specific implementation(or from specific Vendor Database).