Polyglot Persistence

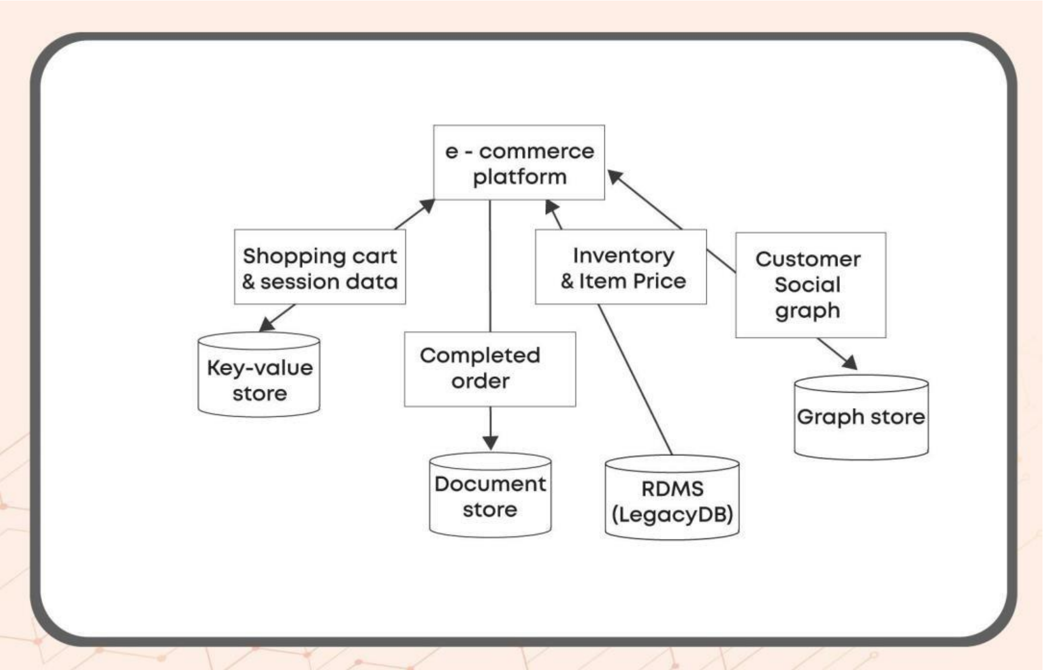
Polyglot persistence refers to the use of different data storage technologies across an application or within smaller components of an application to meet varying data storage demands.

Polyglot persistence occurs when one particular application or project uses multiple databases depending on varied data requirements. Different databases can be used for various components of the single application to meet the individual requirements best. Because of varying needs and increasing competition, most of the applications use polyglot persistence these days.

Example: Let's take the example of an e-commerce website like Flipkart. It has multiple functions like inventory management, shopping cart management, payments etc. For better performance, it uses different databases instead of storing all the information in a single database.

It uses different databases like:

1. Oracle for payments: We will need ACID(Atomicity, Consistency, Isolation, Durability) properties here provided by SQL database. It will provide lightning-fast transactions, easy horizontal scaling, and support for JSON documents within records as well as JSON queries.
2. MongoDB for storing data of the product: Flexibility of MongoDB documents can be used here. Each MongoDB document can store data in the form of sophisticated JSON constructs. MongoDB is therefore perfect for storing almost anything, including very big catalogues with thousands of versions per item.
3. Redis(key-value database) for shopping e-cart content: The key-value database can be used for storing cart content. If we wanted to store user session data, shopping cart information, and user preferences, we could just store all of them in the same bucket with a single key and single value for all of these objects.
4. ES(Document DB) for text-based search functions: Structured search is available in NoSQL databases that use document stores, and it preserves the best capabilities of Boolean and full-text keyword search.
5. Cassandra (Document Database) for the data warehouse: A columnar database stores data by columns rather than by rows, which makes it suitable for analytical query processing, and thus for data warehouses.


e - commerce platform
Shopping cart & session data
Inventory & Item Price
Customer Social graph
Key-value store
Completed order
Graph store
Document store
RDMS (LegacyDB)