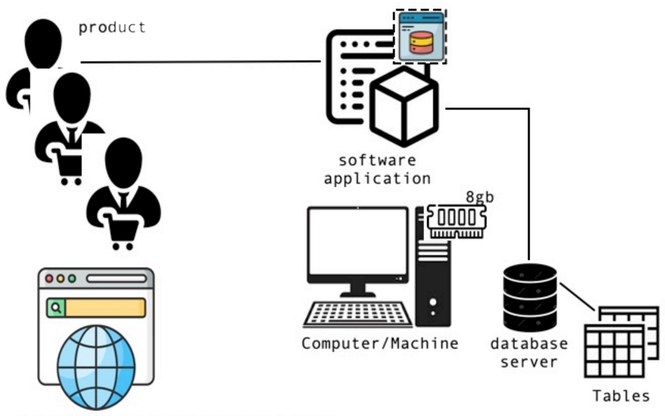
Let us understand how does an typical software application handles in processing the data from an persistence storage system (like database) irrespective of the nature/type of data by taking an usecase.
There are different sellers in an e-commerce platform has stored/published their products data into the system by storing it into the database management system. There are various different customers around the world browsing these products information for purchasing them. Let us understand how does the software application handles and process the request pertaining to browsing these products by the customers.



www.amazon.com/electronics/p0384
p0385 = is the product code of an iphone15

When the customer sends a request to the software application in browsing or accessing the product data of a specific productno: p0384, the application performs the operations as below
1. The software application reads the productno that is send aspart of the request by the customer
2. inorder get the information about the product, the application has query the data from the database management system, so inorder to talk to the database, it needs to open connection over the network to the database management system server
3. upon establishing the connection, it has pass the sql query asking the database server to fetch the data based on the query
 select * from product where product_no = ? (p0384)

4. The database server upon receiving the sql query request, it has to execute the query on the underlying data and compute and fetch the data
5. transfer the data over the network to the software application
6. upon receiving the data, the software application has to close the connection and use the data for applying the processing like
  1. computing the shipping charges based on the zipcode of the user
  2. calculating the taxes on the product
  3. deriving the final product price and days of shipping/delivery
then display the data to the enduser.

Customer#1
www.amazon.com/electronics/p0384 (iphone15) => Application, upon receiving the request
1. opens an connection to the database server over the network
2. passes the sql query to the database server over the network asking to perform operation in returning the data
3. database server performs the operation in computing the data requested
4. database server transfers the data back over the network to the application
5. application upon receiving the data closes/terminates the connection, then performs further operation on the data and returns the data to the customer.

Customer#2
www.amazon.com/electronics/p0384 (iphone15) => Application, upon receiving the request
1. opens an connection to the database server over the network
2. passes the sql query to the database server over the network asking to perform operation in returning the data
3. database server performs the operation in computing the data requested
4. database server transfers the data back over the network to the application
5. application upon receiving the data closes/terminates the connection, then performs further operation on the data and returns the data to the customer.

The product information that is returned to the Customer#1 and Customer#2 would be same, since the product data will not be changed and remained constant for most of the time.

(?) = When the data doesnt seems to be changed, why do we query and frequently access the same data from the underlying database management system.
No matter how many times we requested the product information from the database server, always it returns the same data as the products information will not change frequently, in such case if we repeatedly query the data from the software application, then we run into several problems as below
problems:
1. opening an database connection and closing an database connection over the network is an:
  1.1 very costly operation and requires huge amount of system resources
  1.2 The time it takes in establishing and releasing the connections to the database will be more
  due to which the performance and the scalability (no of user requests to handle) of the application goes down.
10000 requests per second based on the system computing capacity, but the application is taking 10 milli-seconds of time to open and close a connection per each request, then in 1 second we can handle only 100 requests

2. The application is passing the sql query to the database server asking him to repeatedly execute it for fetching same data, this endsup in wasting the computing capacity of the database in re-performing the same operation.

3. since the application is trying to talk the database server over the network repeatedly in fetching the same data, the network traffic between the database and application increases and that results in latency in communication

4. the bandwidth consumption in repeatedly transferring the same data would be high, that results in more cost of usage of the network.

By considering the above all aspects into account, we can understand the performance and the scalability of the software applications drastically goes down, if we are repeatedly querying and fetching the static/moderately modified data from the database management system.