

Q3

Explain the distributed database architecture.

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A distributed database is basically a database that is not limited to one system, it is spread over different sites.

A distributed database system is located on various sites that don't share physical components.

This may be required when a particular database needs to be accessed by various users globally.

It needs to be managed such that for the users it looks like one single database.

In this, storage devices are not connected to a common processing unit.

It is a loosely coupled system shared nothing architecture is used.

Types

Homogeneous Database -

§ In a homogeneous database, all different sites store database identically. They have same operating system, database management system and the data structures used.

Hence, they are easy to manage.

Heterogeneous Database -

In a heterogeneous distributed database, different sites can use different schemas and software, which can lead to problems in query processing and transactions.

Different computers may use different operating system, different database management system. They may use different data models as well.