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Subject Database Systems (Lab)

Client Server Architecture

The DBMS design depends upon its architecture. The basic client/server architecture is used to deal with a large number of PCs, web servers, database servers and other components that are connected with networks. The client/server architecture consists of many PCs and a workstation which are connected via the network.

Client-server systems based on open standards support interoperability. Interoperability refers to the ability of two or more systems to exchange and use computing and data.

Distributed Processing

A distributed database is a set of databases stored on multiple computers that appears to applications as a single database. Distributed processing occurs when an application system distributes its tasks among different computers in a network.

A parallel DBMS uses a collection of resources (processors, disks, and memory) to perform work in parallel. A parallel DBMS uses a high-speed network, operating system, and storage system to coordinate division of work among resources.

Parallel database processing can improve performance through scaleup and speedup. Scaleup involves additional work accomplished by increasing computing capacity while holding completion time constant.

Parallel Processing

parallel database processing divides large tasks into many smaller tasks and distributes the smaller tasks among interconnected computers.

Parallel database processing can improve performance through scaleup and speedup. Scaleup involves additional work accomplished by increasing computing capacity while holding completion time constant.

A parallel DBMS uses a collection of resources (processors, disks, and memory) to perform work in parallel. A parallel DBMS uses a high-speed network, operating system, and storage system to coordinate division of work among resources.

Cloud Computing

Cloud computing provides a new approach without initial product ploy databases with dynamic resource allocation provided by the cloud. licensing costs and hosting requirements.

Using web-based interfaces, organizations can design and deploy databases with dynamic resource allocation provided by the cloud. Cloud computing can lower costs through economies of scale and specialization achievable by deployments for large numbers of organizations.