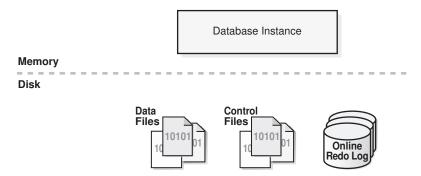
Figure 11-1 Database Instance and Database Files





- Oracle Database Administrator's Guide to learn how to create a database
- Oracle Database SQL Language Reference for CREATE DATABASE semantics and syntax

## Mechanisms for Storing Database Files

Several mechanisms are available for allocating and managing the storage of these files.

The most common mechanisms include:



Oracle Automatic Storage Management (Oracle ASM)

Oracle ASM includes a file system designed exclusively for use by Oracle Database.

Operating system file system

Most Oracle databases store files in a file system, which is a data structure built inside a contiguous disk address space. All operating systems have file managers that allocate and deallocate disk space into files within a file system.

A file system enables disk space to be allocated to many files. Each file has a name and is made to appear as a contiguous address space to applications such as Oracle Database. The database can create, read, write, resize, and delete files.

A file system is commonly built on top of a logical volume constructed by a software package called a logical volume manager (LVM). The LVM enables pieces of multiple physical disks to combine into a single contiguous address space that appears as one disk to higher layers of software.

Cluster file system

A cluster file system is a distributed file system that is a cluster of servers that collaborate to provide high performance service to their clients. In an Oracle RAC environment, a cluster file system makes shared storage appear as a file system shared by many computers in a clustered environment. With a cluster file system, the failure of a computer in the cluster does not make the file system unavailable.