

① Explain the database utilities which help the DBA in managing the DB system.

> ① Loading: A loading utility is used to load existing data files such as text files or sequential files into the data base. usually, the current format of the data and desired database file structure are specified to the utility.

② Backup: creates a backup of the DB, usually by dumping the entire database onto tape. Backup copy can be used to restore the database in case of catastrophic failure.

③ File reorganization: used to reorganize a data base file into a different file organization to improve performance.

④ Performance monitoring: Monitors DB usage & provides statistics to the DBA. The DBA uses the statistics in making decisions such as whether or not to reorganize files to improve performance.

② what is meant by persistent storage system, Explain.

> DB can be used to provide persistent storage for program objects and data structures. This is one of the main reasons for the emergence of the object oriented DB system. programming languages typically have complex data structures, such as record types in PASCAL or class definitions in C++. The values of program variables are discarded once a program terminates.

The persistent storage of program objects and data structures is an important function of Data base system. Traditional data base system often suffered from the so-called impedance mismatch problems, ~~and~~ since the data structures provided by the DBMS were incompatible with the programming language's data structures. Object oriented Data Base Systems typically offer data structure compatibility with one or more object oriented programming languages.