

Relational Database Management System (RDBMS)

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Database Users

- ▶ Database Administrator (DBA) :
- ▶ Naive / Parametric End Users :
- ▶ System Analyst :
- ▶ Sophisticated Users :
- ▶ Data Base Designers :

Database Administrator

- ▶ A person who has such central control of both the data and the programs that access those data is called a database administrator (DBA).
- ▶ The functions of a DBA include:
 - ▶ Schema definition. The DBA creates the original database schema by executing a set of data definition statements in the DDL.
 - ▶ Storage structure and access-method definition.
 - ▶ Schema and physical-organization modification.
 - ▶ Granting of authorization for data access.
 - ▶ Routine maintenance. Examples of the database administrator's routine maintenance activities are:
 - ▶ Periodically backing up the database, either onto tapes or onto remote servers, to prevent loss of data in case of disasters such as flooding.
 - ▶ Ensuring that enough free disk space is available for normal operations, and upgrading disk space as required.
 - ▶ Monitoring jobs running on the database and ensuring that performance is not degraded by very expensive tasks submitted by some users.

Navie User

- ▶ Navie users are unsophisticated users who interact with the system by invoking one of the application programs that have been written previously.
- ▶ For example, a clerk in the university who needs to add a new instructor to a department.
- ▶ The typical user interface for navie users is a forms interface, where the user can fill in appropriate fields of the form.
- ▶ Navie users may also simply read reports generated from the database.

Application programmers

- ▶ Application programmers are computer professionals who write application programs.
- ▶ Application programmers can choose from many tools to develop user interfaces.
- ▶ Eg. Rapid application development (RAD) tools are tools that enable an application programmer to construct forms and reports with minimal programming effort.

Sophisticated users

- ▶ Sophisticated users interact with the system without writing programs.
- ▶ Instead, they form their requests either using a database query language or by using tools such as data analysis software.
- ▶ Analysts who submit queries to explore data in the database fall in this category
- ▶ Sophisticated users can be engineers, scientists, business analyst, who are familiar with the database

Specialized Users

- ▶ Users who write specialized database applications
- ▶ Among these applications are computer-aided design systems, knowledgebase and expert systems, systems that store data with complex data types (for example, graphics data and audio data), and environment-modeling systems

Data Base Designers

- ▶ Data Base Designers are the users who design the structure of data base which includes tables, indexes, views, constraints, triggers, stored procedures.
- ▶ He/she controls what data must be stored and how the data items to be related.