

04

SATURDAY JANUARY

Unit - I (Continued)

JAN • 2020

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WK 01 • 004-362

Characteristics of the Database

The characteristics of the database approach are

- i) Self describing nature of a database system :-
The fundamental characteristics of the database approach is that the database system contains not only the database itself but description of the database structure and constraint.
- ii) Insulation between Program, Data & Data Abstraction :-
The structure of Datafile is stored in the DBMS Catalog separately from the access program.
- iii) Support of multiple views of the data :- DBMS whose user have a variety of application must provide facilities for defining multiple views.
- iv) Sharing of Data & Multiuser Transaction Processing :-
A ~~DB~~ DBMS must include concurrency control software to ensure that several users trying to update the same data do so in controlled manner so that the result of the update is correct.

05 SUNDAY

Advantages of a Database System

following are the advantages of a Database System

- i) Control of Data Redundancy :- The database approach attempts to eliminate the

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Redundancy by integrating the files so that multiple copies of the same data are not stored

(ii) Data Consistency! → By eliminating or controlling redundancy Reducing the risk of inconsistencies occurring.

(iii) More Information from Same amount of Data! → with the integration of the operational data to derive additional information from the same data.

(iv) Sharing of Data! → Existing & New Application can share the data in Database

(v) Improved data Integrity! → it refers to the validity and consistency of stored data.

(vi) Privacy & Security! → Data Security Refers to protection of data against accidents & Privacy refers to the right of individual and organization to determine for themselves.

(vii) Improved backup and recovery Services! - a database system provide facilities of Recovery from Hardware and software failure. the backup and Recovery subsystem of the DBMS is responsible for the Recovery.

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TUESDAY JANUARY

WK 02 • 007-359

JAN • 2020

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Disadvantages of Database System

Following are the disadvantages of a database system

- (I) Complexity :- DBMS an extremely complex of software.
- (II) Size :- Large size of S/W occupying space in Disk & requiring a amount of memory.
- (III) DBMS Software is very costly.
- (IV) High Hardware Cost
- (V) Higher Programming Cost
- (VI) Backup and Recovery are more difficult.

Actors on the scene :-

For a small personal database one person typically defines, constructs and manipulates the database. However many person are involved in the design, use and maintenance of a large database with many users. Then Identify the users whose jobs involves the day-to-day use of a large database. they are called "Actors on the scene".

Classification of DBMS Users

The Various Users of a database are -

- (I) Database Administrator (DBA)
- (II) Database Designer
- (III) End-Users
- (IV) System Analysts and Application Programmer

(I) Database Administrator (DBA) :- The DBA is responsible for authorizing access to the database, for co-ordinating and monitoring its use, and for acquiring software & hardware resources as needed.

(II) Database Designer :- Database designer are responsible for identifying the data to be stored in the database and for choosing appropriate structures to represent & store this data.

(III) End Users :- End users are the user whos jobs require access to the database for querying, updating & generating reports. their are several type of end users:

- (I) Casual End user
- (II) Parametric End user
- (III) Sophisticated End user
- (IV) Stand alone user

(IV) System analyst & Application programmers :- Determine the requirement of end user and develop specification Application programmer impliment these specification as Programs (Testing & debugging)

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THURSDAY JANUARY

WK 02 • 009-357

JAN • 2020

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Worker behind the Scene

Behind the scene, workers are not interested in the database, these are associated with the design, development and operation of the DBMS Software and System Environment. These include

1) DBMS system designer and implementers :- ~~the person~~
 The person who design and implement the DBMS modules and interfaces as a software package.

2) Tool Developers :- the person who design and implement tools - the software package that facilitate data system design and use and help improve performance.

3) operators and maintenance Personnel :- these are the system administration personnel who are responsible for the actual running and maintenance of the hardware and software environment for the database system.