

Geographical And Engineering DBMS

An in depth presentation

SUMMARY OF TOPICS

MAIN POINTS COVERED

What is Geo DBMS?

GIS (Geographic Information System)

Characteristics of Geo DBMS

Advantages and Disadvantages of Geo DBMS

Engineering DBMS

DBMS in CAD, CAE, CAM, CIM, CASE

WHAT IS GEO DBMS?

A geodatabase (also geographical database) is a database of geographic data, such as countries, cities, and related information.

Such databases can be useful for websites that wish to identify the locations of their visitors for customization purposes

GEOGRAPHIC INFORMATION SYSTEM

WHAT IS GIS?

A geographic information system (GIS) is a system that creates, manages, analyzes, and maps all types of data.

GIS connects data to a map, integrating location data (where things are) with all types of descriptive information

GEOGRAPHIC INFORMATION SYSTEM

CHARACTERISTICS :-

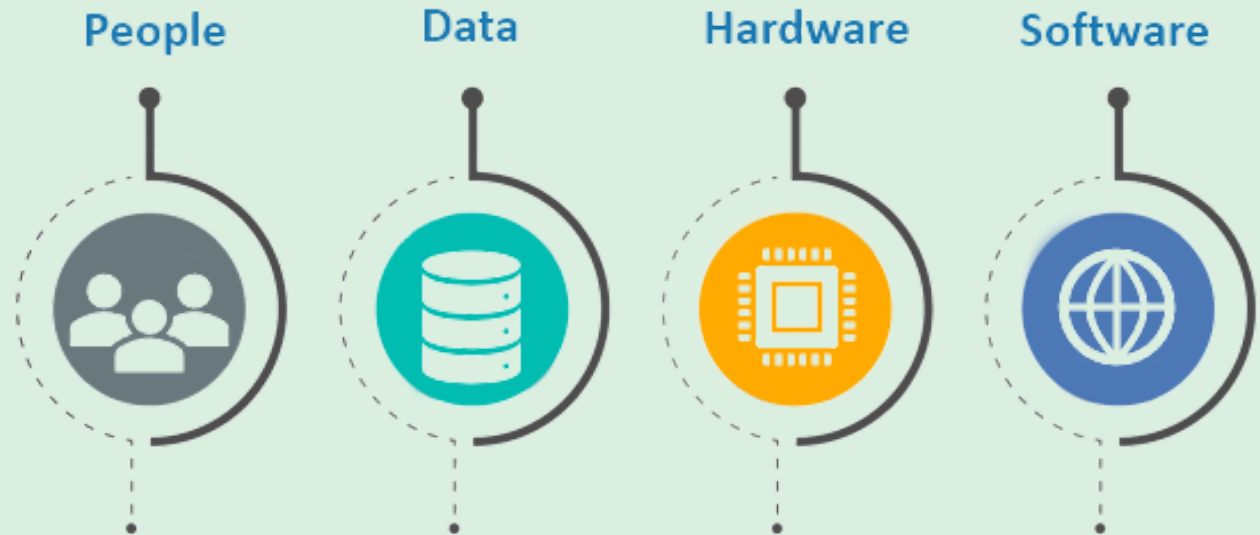
A normal Database systems use indexes to quickly look up values. But GeoDatabase uses a spatial index to speed up database operations.

In addition to typical SQL queries such as SELECT statements, geographic databases can perform a wide variety of spatial operations.

GEOGRAPHICAL INFORMATION SYSTEM



Components of GIS :



PEOPLE

People are involved in all phases of development of a GIS system and in collecting data. They include cartographers and surveyors who create the maps and survey the land and the geographical features.

DATA

- Vector data refers to discrete objects represented by points, lines and polygons
- Raster data is a continuous grid of cells in two dimension or the equivalent of cubic cells in three dimension.

HARDWARE

Hardware relates to device used by end users such as graphic devices or plotters and scanners. Data storage and manipulation is done using a range of processor.

SOFTWARE

Software parts relates to the processes used to define, store and manipulate the data and hence it is akin to DBMS.

ADVANTAGES:

- It has the ability of improving the organizational integration
- GIS would also allow viewing, questioning, understanding, visualizing and interpreting the data into numbers of ways
- Geographic Information System provides a help in answering questions through looking at the data in a way which is easily and quickly shared
- GIS technology could also be integrated into framework of any enterprise information system...



DISADVANTAGES:

- GIS technology is considered as an expensive software
- It requires enormous data inputs amount that are needed to be practical for some other tasks and so the more data that is to put in.
- GIS layers might lead to some costly mistakes
- There might be failures in initiating or initiating additional effort in order to fully implement the GIS

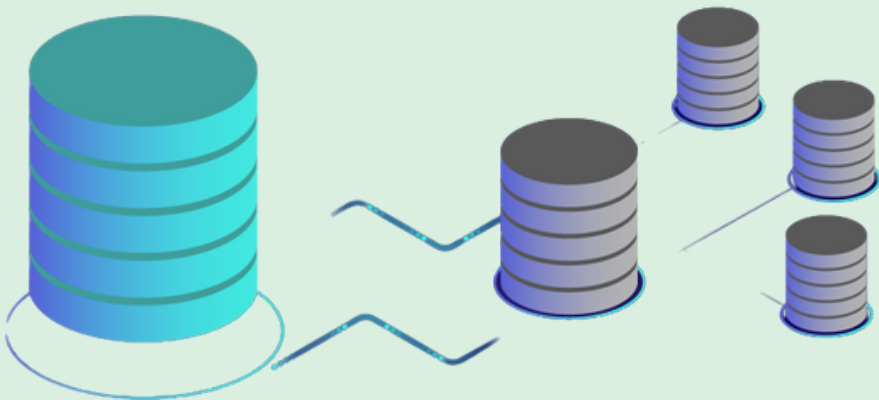


ENGINEERING DBMS:

What is Engineering
DBMS?

Applications of
Engineering DBMS :

Types of Engineering
DBMS :



What is Engineering DBMS?

Engineering databases are comprehensive databases which branch to more than one database or resource to learn and calculate

The sole purpose of an engineering database is to extract information and data from any possible and related resource to build the data for future references, to help study trends, and to help for more accurate and reliable calculations.

APPLICATIONS :

- ENGINEERING DBMS' ARE USED IN HEAVY DUTY FIELDS. SINCE THE PRODUCED DATA AND INFORMATION IS SUPPOSED TO BE RELEVANT IN EVERY ASPECT POSSIBLE, THE DATA IS TAKEN FROM A LOT OF PLACES(DATABASES).
- ENGINEERING DBMS' ARE USED IN FIELDS LIKE ENGINEERING SYSTEMS, MANAGEMENT SYSTEMS, CIVIL SYSTEMS CHEMICAL AND COMPUTER SYSTEMS, ET CETERA, JUST BECAUSE THE DERIVED DATA NEEDS TO BE ROBUST AND RELIABLE.

TYPES OF EDBMS



COMPUTER AIDED MANUFACTURING

Databases used in production processes.

COMPUTER INTEGRATED MANUFACTURING

Manufacturing approach of using computers to control entire production process.

COMPUTER AIDED DESIGN

Databases made with the purpose of designing applications in mind.

COMPUTER AIDED ENGINEERING

Databases used in engineering processes.

COMPUTER AIDED SOFTWARE ENGINEERING

stores data required to assist software developers, like source codes, user experience



THANK YOU!

C02-AKSHAT GANDHI

C43-DHAIRYA MEHTA

C46-NISHI MORABIA

C51-AAHANA PATEL

C75-BHAVYA SHAH