## APPLICATIONS OF GIS

In a GIS the common purpose is decision making to manage:

- Lands
- Resources
- Transportations
- Retailing
- OR any other spatially distributed activity

## COMPONETNS OF GIS

**Hardware:** A computer on which GIS operates. May be a server, a standalone desktop or a notebook computer.

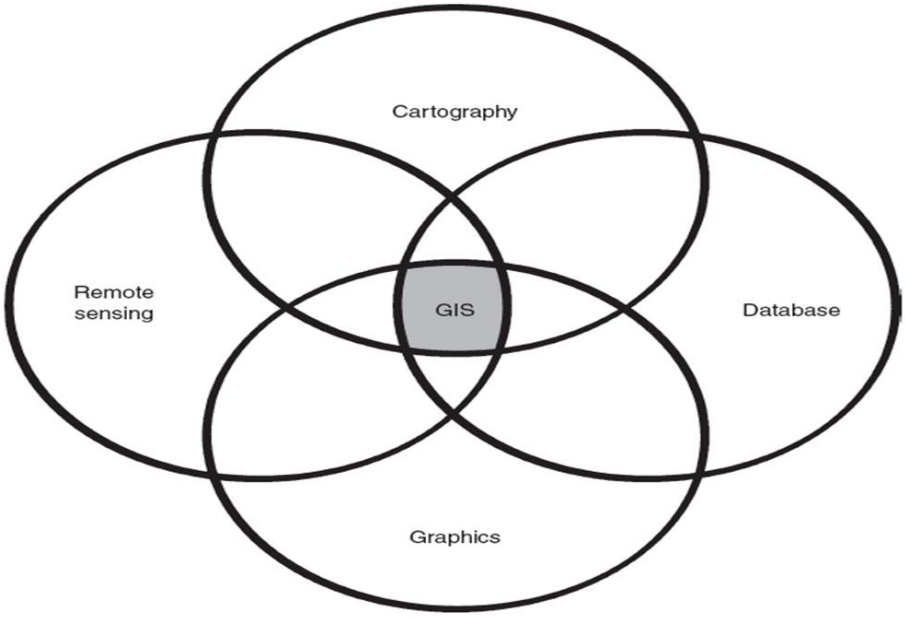
**Software:** Database management system (DBMS), tools for the input and manipulation of geographic information, tools that support geographic query, analysis, and visualization, A graphical user interface (GUI) for easy access to tools.

**Data:** Geodatabases and other useful data used in the processes.

**People:** Operators, engineers, programmers etc.

**Methods:** A successful GIS operates according to a well-designed plan and business rules, which are the models and operating practices unique to each organization.

**The study of GIS is a multidisciplinary or interdisciplinary field.**



**Functional subsystems of GIS**

According to Marble (1990), following are the four functional subsystems of any GIS.

**Data input system:** collects and/or processes spatial data from existing sources, such as maps, remote sensing data, images, etc. Data can be "collected" through digitizing, scanning, interactive entry, etc.

**Data storage and retrieval:** organizes spatial data and allows for quick retrieval and updates (i.e., editing).

**Data analysis and manipulation:** allows for changing form of data, simulation modeling, spatial-temporal comparison, etc.

**Output:** displays spatial database and analysis in graphic (i.e., map) or tabular form.