

# Concept of GIS

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## **Geographic information system (GIS)**

- Geographic information system (GIS) is defined as a computer based information system used to input, store, retrieve, manipulate, analyze and output geographically referenced data or geospatial data, in order to support decision making process
- GIS is a tool used by individuals and organizations, schools, governments, and businesses seeking innovative ways to solve their problems
- GIS performs the tasks of map making and analysis better and faster than that of manual methods.

## **Advantages of GIS over manual works (GIS Vs traditional map)**

There are lots of advantages of GIS.....

|                  |   |
|------------------|---|
| storage          | : electronic storage media, standard, compact |
| retrieval        | : search by computer – not manual check       |
| updating         | : systematically done – not time consuming    |
| overlay          | : easy – manual method is very complicated    |
| spatial analysis | : very fast – not time and energy consuming   |
| display          | : cheap and fast – manual method is expensive |

## **General fields of GIS application:**

1. Facilities management (locating underground pipes and cables);
2. Network planning (transportation Planning);
3. Planning and Engineering (urban/regional planning);
4. Land information system (taxation, use); and
5. Environment and natural recourse management (crop suitability, land/forest/water/wetland management, disaster management, Environmental impact analysis).