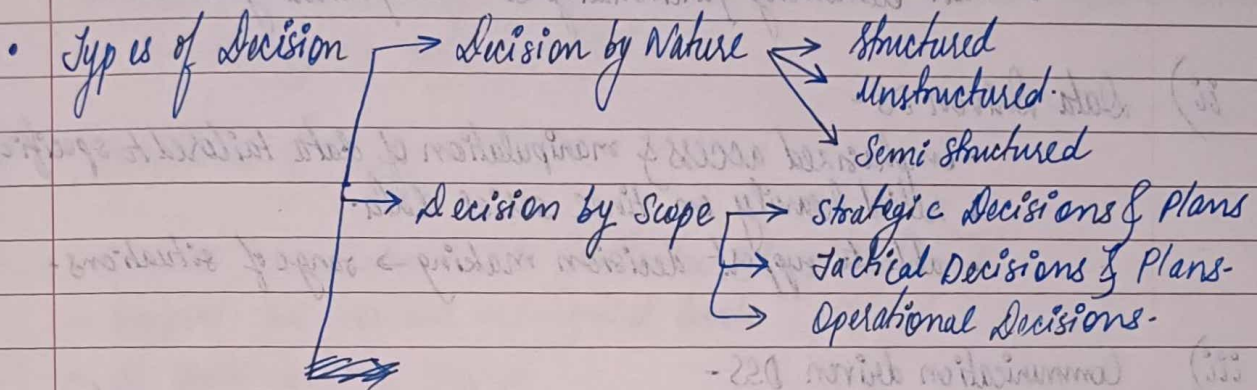


# U1-(Business Intelligence)

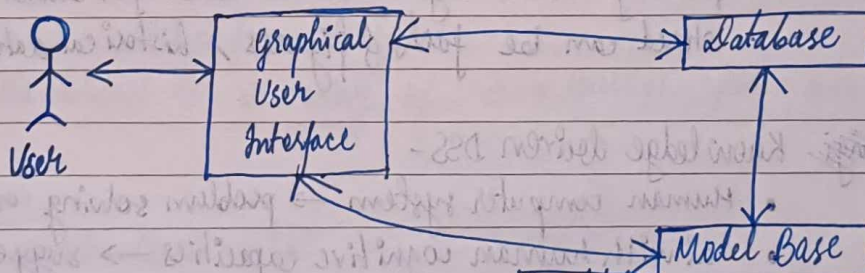
## Intro to Decision Support System & BI.

- Decision making process →
  - 1) Rationality & Problem Solving
  - 2) The decision making process
  - 3) Types of decision
  - 4) Approaches to decision making process.

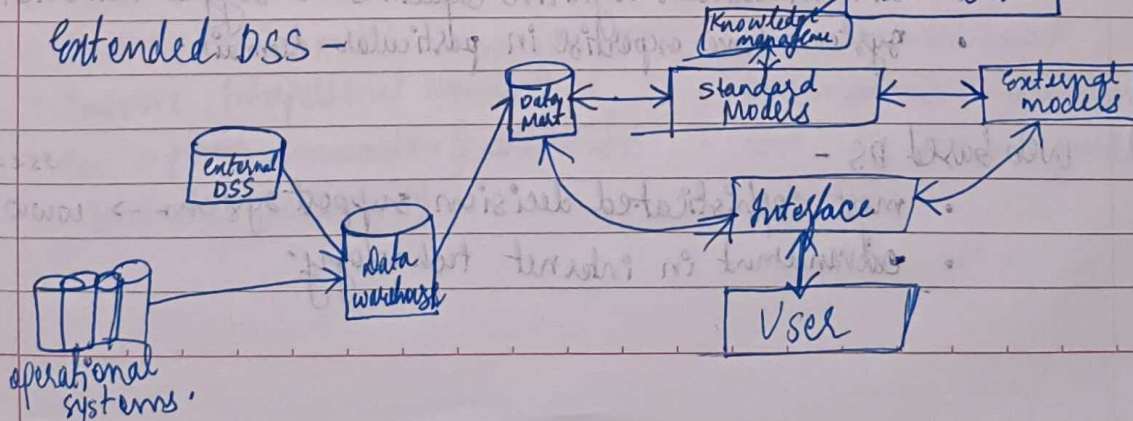


### \* Decision Support System (DSS) -

→ Interactive computer-based appl<sup>n</sup> that combines data & mathematical models to help decision makers solve complex problem faced in managing public & private enterprises & organization



### \* Extended DSS -





## \* Categories of DSS -

### i) Model Driven DSS -

- simple quantitative models
- used limited data & emphasized manipulation of simple quantitative
- used in production planning, scheduling & management.
- most elementary functionality to manufacturing concerns.

### ii) Data Driven DS -

- emphasized access & manipulation of data tailored to specific tasks.
- relied heavily on time series data.
- able to support decision making → range of situations.

### iii) Communication driven DSS -

- uses communication & network technologies to facilitate decision.
- It supports collaboration & communication.
- Use of variety of tools including audio & video, boards etc

### iv) Document driven DSS -

- uses large document databases that stores documents, images.
- primary search engine tool associated for searching data.
- stored can be facts & figures, historical data, minute of meeting etc

### v) ~~Knowledge~~ Knowledge driven DSS -

- Human computer system → problem solving expertise.
- ai with human cognitive capabilities → suggest action to user
- systems have expertise in particular domain.

### vi) Web based DS -

- most sophisticated decision support system → use of.
- advancement in internet technology → www & internet



## \* Characteristics & capabilities of DSS -

- uses underlying data & model
- handles large amt. of data & from diff sources
- provide report & presentation flexibility.
- offers both textual & graphical orientation.
- problem structure, use in semi structured & unstructured decision context.
- uses underlying data & model.

## \* Appl<sup>n</sup>

- Agriculture
- Medicine
- Weather forecasting
- Real estate
- Education

## \* Capabilities of DSS -

- support semi structured & unstructured situations.
- support for various managerial levels
- to individuals & groups
- to interdependent & or sequential decisions.
- all phases of decision making process
- support variety of decision making processes & styles.
- Have user friendly interfaces.
- Goal: Improve effectiveness of decision making
- user friendly interfaces.
- end users can build simple systems.
- utilizes models for analysis
- provide access to a variety of data sources, formats & types.

## \* Advantages

- Increase organizational control
- Increase decision maker satisfaction
- Improve interpersonal commun<sup>n</sup>.
- Can improve communication & collaboration
- Increasing productivity

## \* Disadv -

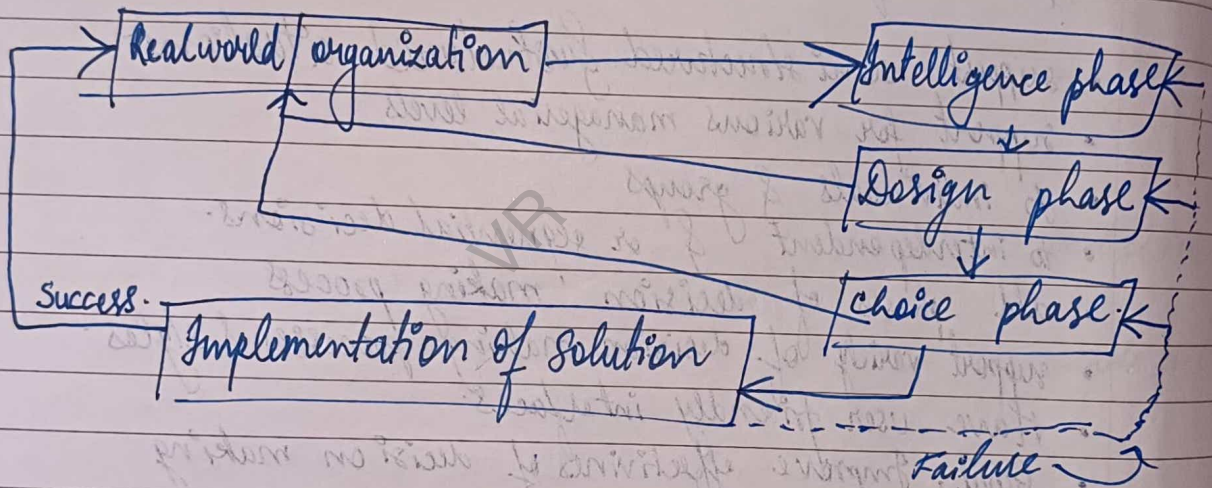
- Information overload
- overemphasis on decision making
- cost of Development



## \* Development of a Decision Support System.

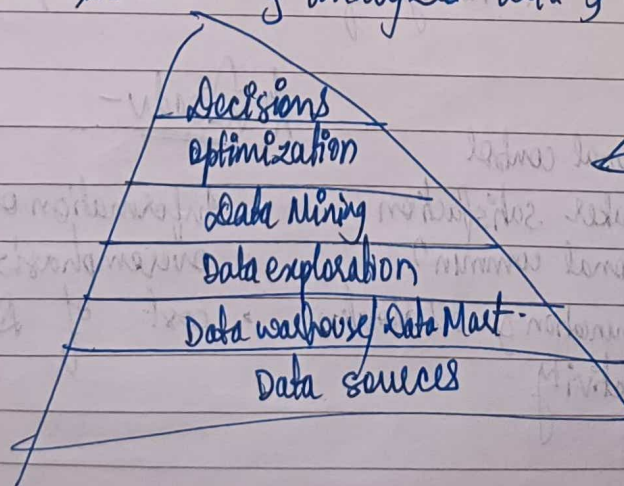
- Planning
- Analysis
- Design
- Implementation
- System

## \* Four Stages of Simon's Decision Making Process—



## Business Intelligence—

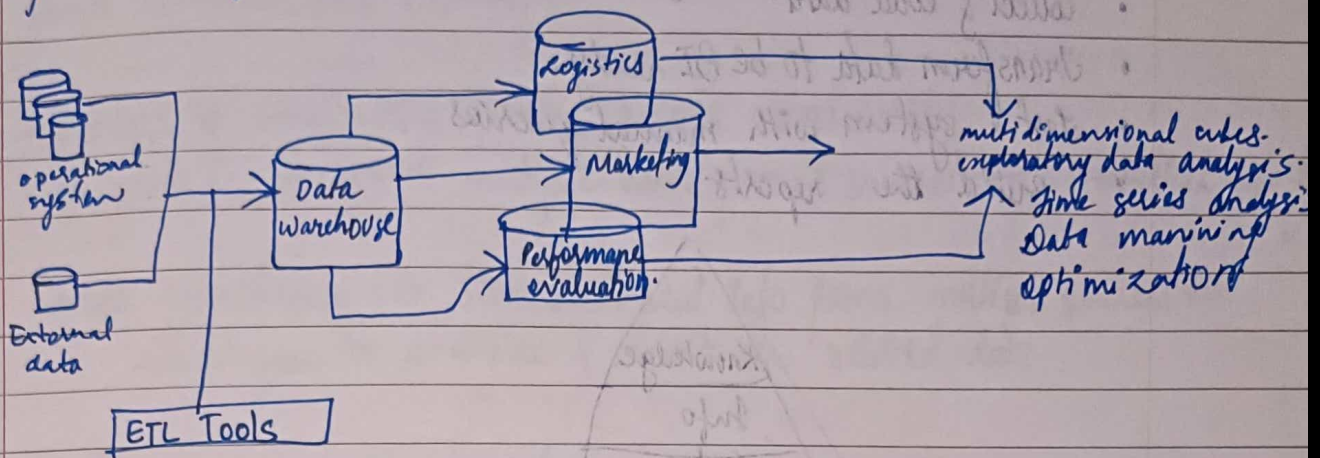
• Business management term → refers to app<sup>n</sup> & technologies to gather, provide access to & analyzed data & information about company operations.



Main components of BISystem



## \* Architecture of BI.



## \* Cycle of BI Analysis → Analysis Insight Decision Evaluation.

## \* Phases of BI → Analysis Design Planning Implementation & Control

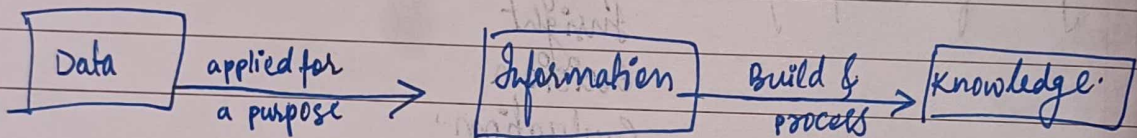
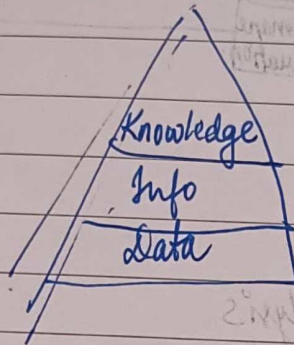
## \* Sub parts → development of data warehouses & data marts development of metadata " of ETL tools " of applications. Release & testing.

## \* Benefits of BI →

- faster & more accurate.
- efficient decision making process.
- better customer rel<sup>n</sup> management.
- profitability of company is improved.
- assessing organization readiness
- supports best practices & identifies every hidden cost.

## \* Raw data to useful analytics

- collect & load data.
- Transform data to be BI ready
- Test system with manual queries
- Build the reports



## \* Mathematical Models

key component of BI → extracting & knowledge from data

- pattern recognition, ml & data mining
- optimization → determine best sol<sup>n</sup>
- to make best decision → that moment

## \* Ethics & Business Intelligence

1) Privacy

2) Transparency

3) Bias

4) Accountability