

UNIT - 1

Business Intelligence and Business Decisions

* Business Intelligence :- Business intelligence is a variety of software applications used to analysis and organisation of raw data like sale revenue, product cost, income, wastage material and human resources etc.

Business Intelligence is a discipline made up of several related activities including data mining, online analytical processing, query and reporting.

Company use business intelligence to improve decision making, cut cost and identify new business opportunity.

BI technology provide current, historical and predictive views of internally structured data for product and department by establishing more effective decision making and strategy operational inside organization through function like online, data mining, bench marking and business performance management (BPM). These technology and function are often referred to an information management.

Business intelligence is used for multiple business purpose including -

Measurement of performance and progress towards business goals.

Quantitative analysis of business process modelling and statistical analysis.

Collect the internal and external business entities progress through EDI (Electronic Data Interchange) and data sharing.

4. Use the knowledge management system program to identify and create new opportunities for the business using learning management, training staff and regularly complains.

Imp.

* DSS (Digital Support System) :- A decision support system is a computer based information system that support business and organisational decision making activities.

DSS serve the management, operation and planning level of an organisation (usually mid and higher level management) and help people make decisions about the problem that may be rapidly changing and not easily specified in advance.

For example - Unstructured and semi-structured problems.

DSS can be either fully computerised, human powered or a combination of both. DSS is used as a tool to support decision making process. DSS users see the drawbacks in business or product and provide facility of DSS tools for particular organisation.

● Characteristics of DSS -

- 1- DSS aimed to be well-structured under specified problem that upper level managers face them.
- 2- DSS attempt to combine the use of model or structure techniques with traditional data and retrieval function.
- 3- DSS specify focus on features which make them easy to use by non-computer user in an interactive mode.
- 4- DSS provide the facility to the upper-level of flexibility and adaptivity.

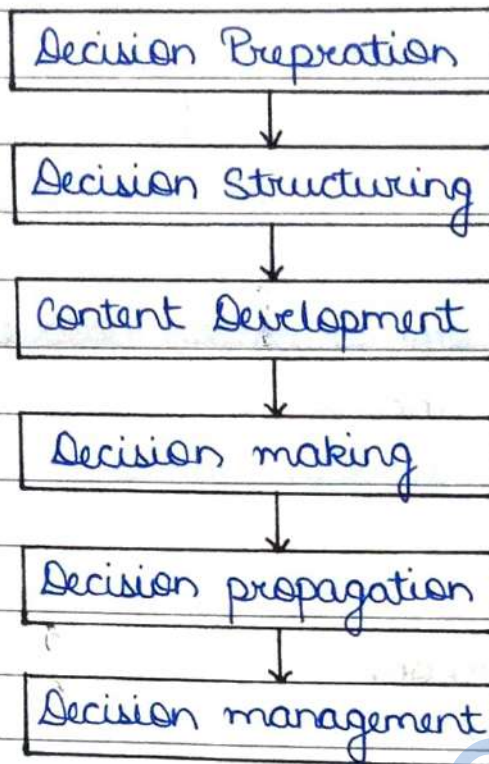
- Advantages of DSS - A Decision Support System or DSS is helpful for an organisation in various way. It improve the efficiency of the whole organisation. Following are five major points to understand it -
 - 1- Improve personal efficiency
 - 2- Improving problem solving concept
 - 3- Facilitating communication
 - 4- Promoting learning and training techniques
 - 5- Increasing organisational control

- 1- Improves personal efficiency - One of the advantage of DSS is efficient decision making, resulting in better decisions. This is because use of DSS result in quick transfer of information, better data analyses, thus resulting in efficient decisions.
- 2- Facilitating communication - Use of DSS in an organisation helps to improve interpersonal communication between same level of employees and between management and employees.
- 3- Promoting learning and training techniques - The use of DSS in an organisation results in two type of learning. First managers themselves learn new concepts. Secondly, there is better factual understanding of business as well as the decision making environment.
- 4- Increasing organisational control - Due to the use of DSS business transaction data is easily available for monitoring the performance of employees and querying. It thus leads to enhanced understanding of business operations for the management.

• Types of DSS - There are five types of DSS -

- 1- Model driven DSS - It emphasizes access and manipulation of financial, optimization and simulation model. Model driven DSS use limited data and parameters which are provided by decision-maker.
- 2- Data driven DSS - Data driven DSS emphasizes access and manipulation of a time series of internal company data and sometimes external or real-time data. Simple file system accessed by query and retrieval tools provide the most elementary level of functionality on the bases of individual and particular data.
- 3- Communication driven DSS - It uses network and communication technologies to facilitate decision support collaboration.
- 4- Document driven DSS - It uses computer storage and processing technologies to provide document retrieval and analysis. Large document database may include scan documents, hypertext document, images, sound and videos.
- 5- Knowledge driven DSS - It suggest or recommends action to manage the expertise consist of knowledge about the particular domain, understanding of problems with that domain and skill for solving some of these problems.
For example - Expert System.

* Decision structure of DSS -



* Multi participants Decision Making (MDM) :-

Multiparticipants decision making can be define as a collection of entities of more than one individual participants in decision making process.

It also refer as a group which is independent of the characteristics of particular object, software or members.

Functions of MDM -

- 1- Electronic brain-storming
- 2- Topic commentry
- 3- Issues analysis
- 4- Voting and preference indication
- 5- Policy formation
- 6- Stake-holder analysis
- 7- Ideas of organisation
- 8- Evaluation of alternatives
- 9- Survey and feedback creation

• Classification of MDM - Basically there are two types of MDM -

- 1- By feature
- 2- By technology

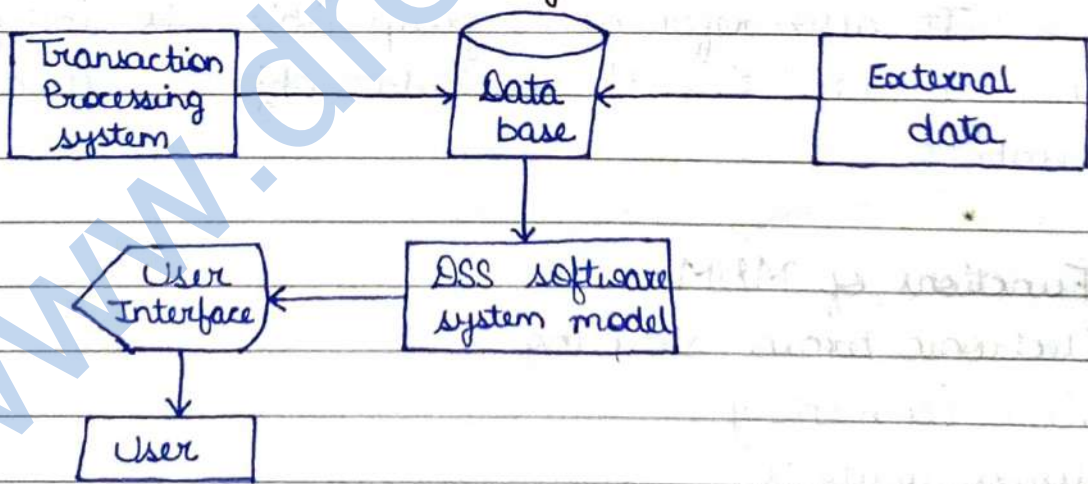
1- By feature -

- (a) Level 1 : Reduce communication barriers
- (b) Level 2 : Reduce uncertainty
- (c) Level 3 : Regulate decision process

2- By Technology

- (a) Electronic board room -
- (b) Tele conference room
- (c) Group network
- (d) Information centre
- (e) Decision room

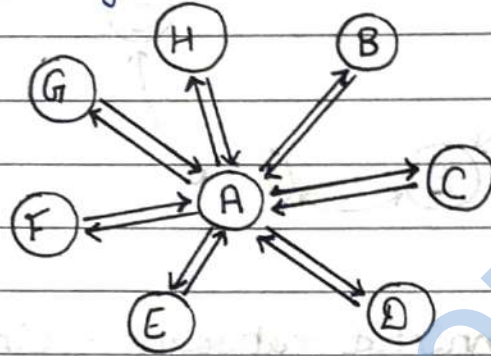
* DBMS Structure Processing -



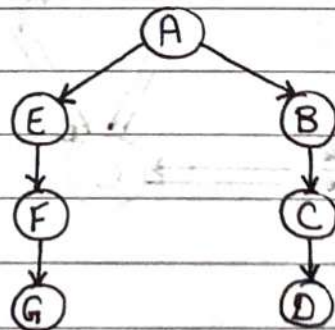
* Group communication network type -

- 1. The wheel network
- 2. The chain network
- 3. The circle network
- 4. The completely connected network

1. The wheel network — Here all subordinates receive commands from one superior. This is highly centralized type of communication network where each subordinate receives instructions from a single authority or superior 'A' and wants the immediate feedback. The senior communicates the information to employees while the employees do not communicate amongst themselves.



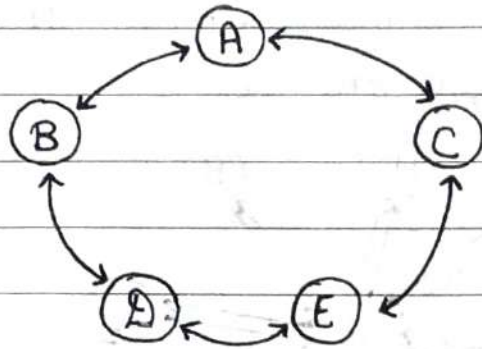
2. The chain network — This network of communication follows the organisational hierarchy and chain of command. All subordinates receive commands or instructions from their superior. B, C, D and E, F, G are the subordinates to A in the organisational hierarchy and receive commands from 'A'. A manager and employee communicate with each other through the vertical chain of authority, both upwards and downwards.



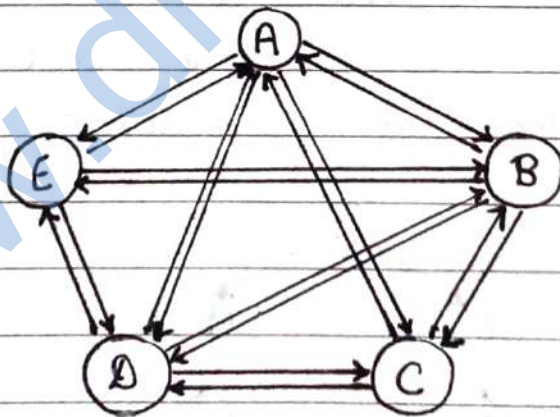
3. The circle network — The circle network is similar to a chain network except that information flows in a circular form rather than vertical form or direction. A can communicate simultaneously with two different persons, B and C.

but to communicate with D, he has to pass the information with through B or C, and E.

All five individuals cannot directly communicate with each-other. In a circle network, the lowest level worker can communicate with the top manager.



- 4- The completely connected network — Under this communication network all members of the group communicate with each other and exchange information. This network is must for group communication or where teamwork is involved. This network channel of communication is open to all members of the group.



Components & Tools like

GDSS (Group Decision Support System) :- A GDSS, Group Decision Support System is an interactive computer based system facilitates a number of decision maker (working together in a group) finding solutions to problems.

They are designed in such a way that they take

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input from multiple choices (user interacting simultaneously). The system to arrive at a decision as a group.

The tools and techniques ^{are} provided by group decision support system to improve the quality and effectiveness of the group meeting.

• Components of GDSS :- There are basically three components -

1. Hardware
2. Software
3. People

* Groupware technologies :-

Groupware is a term that refers to technology designed to help people collaborate and includes a wide range of applications.

Groupware is a class of technologies (software and hardware) that helps groups of colleagues to communicate, collaborate and organize their activities via communication networks. "Technology that supports the intersection of electronic communication, information management and group processes is called groupware."

The three categories of groupware are -

- Communication tools - Tools for sending messages and files, including email, web publishing, file sharing etc.
- Conferencing tools - Video / Audio conferencing, forums etc.
- Collaborative management tools - Tools for managing group activities, e.g. project management systems, workflow systems, information management system etc.

The best known groupware system is Lotus Notes. If designed and implemented properly, groupware systems are very useful in supporting knowledge management (KM).

Characteristics :-

1. It permits people to communicate electronically, predominantly via electronic mail.
2. It facilitates the management of the information they use in common.
3. It has woven throughput, it will be used by a group to support collaboration.

Objectives :-

1. Document management
2. Business Intelligence
3. Electronic publishing
4. Group scheduling
5. Forum processing
6. Project - task management
7. Computer conferencing
8. Electronic newsletters

Technologies :-

Telephone

Fax

Teleconferencing, videoconferencing

Instant messaging

E-mail

Discussion forums

Internet telephone