What is DSS DBMS?

A decision support system (DSS) is a computerized program used to support determinations, judgments, and courses of action in an organization or a business. A DSS sifts through and analyzes massive amounts of data, compiling comprehensive information that can be used to solve problems and in decision-making.

Example

For example, one of the DSS applications is the management and development of complex anti-terrorism systems. Other examples include a bank loan officer verifying the credit of a loan applicant or an engineering firm that has bids on several projects and wants to know if they can be competitive with their costs.

Attributes of a DSS

- Adaptability and flexibility
- High level of Interactivity
- Ease of use
- Efficiency and effectiveness
- Complete control by decision-makers
- Ease of development
- Extendibility
- Support for modeling and analysis
- Support for data access
- Standalone, integrated, and Web-based

Characteristics of a DSS:

- Support for decision-makers in semi-structured and unstructured problems.
- Support for managers at various managerial levels, ranging from top executive to line managers.
- Support for individuals and groups. Less structured problems often requires the involvement of several individuals from different departments and organization level.
- Support for interdependent or sequential decisions.
- Support for intelligence, design, choice, and implementation.
- Support for variety of decision processes and styles.
- DSSs are adaptive over time.

Benefits of DSS

Improves efficiency and speed of decision-making activities.

Increases the control, competitiveness and capability of futuristic decision-making of the organization.

Facilitates interpersonal communication.

Encourages learning or training.

Since it is mostly used in non-programmed decisions, it reveals new approaches and sets up new evidences for an unusual decision.

Helps automate managerial processes.

Components of a DSS

Following are the components of the Decision Support System –

Database Management System (DBMS) –

To solve a problem the necessary data may come from internal or external database. In an organization, internal data are generated by a system such as TPS and MIS. External data come from a variety of sources such as newspapers, online data services, databases (financial, marketing, human resources).

Model Management System –

It stores and accesses models that managers use to make decisions. Such models are used for designing manufacturing facility, analyzing the financial health of an organization, forecasting demand of a product or service, etc.

Support Tools –

Support tools like online help; pulls down menus, user interfaces, graphical analysis, error correction mechanism, facilitates the user interactions with the system.

Types of DSS

Following are some typical DSSs −

Status Inquiry System − It helps in taking operational, management level, or middle level management decisions, for example daily schedules of jobs to machines or machines to operators.

Data Analysis System − It needs comparative analysis and makes use of formula or an algorithm, for example cash flow analysis, inventory analysis etc.

Information Analysis System − In this system data is analyzed and the information report is generated. For example, sales analysis, accounts receivable systems, market analysis etc.

Accounting System − It keeps track of accounting and finance related information, for example, final account, accounts receivables, accounts payables, etc. that keep track of the major aspects of the business.

Model Based System − Simulation models or optimization models used for decision-making are used infrequently and creates general guidelines for operation or management.