a. What is a Decision Support System (DSS)?

A Decision Support System (DSS) is a computer-based information system designed to assist decision-makers in making informed and effective decisions. It combines data, analytical tools, and models to support semi-structured or unstructured decision-making processes. DSS is not meant to replace human judgment but to enhance it by providing relevant information and analysis.

b. What are the main components of a DSS?

The main components of a DSS include:

Data Management Module

User Interface (UI)

Knowledge Base

User/Decision-Maker

c. How does a DSS differ from a traditional information system?

Purpose: A DSS is specifically designed to support decision-making, while traditional information systems focus on data processing and routine tasks (e.g., transaction processing).

Flexibility: DSS is more flexible and adaptable to unstructured or semi-structured problems, whereas traditional systems are often rigid and designed for structured tasks.

User Interaction: DSS emphasizes user interaction and exploration of data, while traditional systems typically automate predefined processes.

Output: DSS provides analytical insights and recommendations, while traditional systems generate reports or process transactions.

d. What types of decisions can a DSS assist with?

A DSS can assist with:

1.Managerial Decision

2.Operational Decision

3.Strategical Decision

e. Give an example of a DSS application.

An example of a DSS application is a sales forecasting system used by a retail company. It analyzes historical sales data, market trends, and external factors (e.g., weather, holidays) to predict future sales. This helps managers make informed decisions about inventory levels, staffing, and marketing strategies.

f. What are the benefits of using a DSS?

Improved Decision-Making: Provides accurate, timely, and relevant information.

Efficiency: Reduces the time and effort required to analyze data.

Flexibility: Adapts to different types of decisions and user needs.

Risk Reduction: Helps identify risks and evaluate alternatives before making decisions.

Cost Savings: Optimizes resource allocation and reduces operational costs.