

M.Tech(IT) : Group D
Paper Code: MT31D
Paper Title: Intelligent Database

SYLLABUS

1. Introduction

How Decision Support Systems Evolved, What is a DSS? , Why Decision Support Systems Matter ,DSS Benefits

2. Human Decision-Making Processes

What is a Decision?, The Decision Process ,Types of Decisions ,How Businesspeople Make Decisions ,The Kepner-Tregoe Decision-Making Method

3. Systems, Information Quality, and Models

Information Systems, Data Flow Diagrams, DSS as Information Systems , Information and Information Quality

4. Types of Decision Support Systems

The DSS Hierarchy, Generalizing the DSS Categories ,Matching DSS to the Decision Type User Community

5. DSS Architecture, Hardware, and Operating System Platforms

Defining the DSS Architecture, DSS on the Central Corporate System, DSS and Client/Server Computing, The Internet and Client/Server Computing in DSS, Open systems and DSS, Choosing a DSS Hardware Environment, DSS Software Categories, Standard Packages, Specialized Tools and Generators, Database Management Systems, Information Retrieval Packages, Statistical Data Analysis Packages, Forecasting Packages, DSS User Interfaces

6. Building and Implementing Decision Support Systems

The DSS Development Process, System Conversion, Overcoming Resistance to Change, DSS Implementation Issues

7. Models in Decision Support Systems

Types of Models, The Concept of Discrete-Event Simulation, A Discrete-Event Simulation Example, Designing a Discrete-Event Simulation Model, Random Numbers, Pseudo-random Numbers, and Statistical Distributions, Static Simulation Models

8. Expert Systems

Artificial Intelligence, Expert Systems: The Basic Idea, Confidence Factors, Fuzzy Logic, Expert System Development Tools, Expert Systems and DSS, Pros and Cons of Expert Systems

9. The Data Warehouse Database

Content of the Data Warehouse Database, Database Structures, Getting Data Into the Data Warehouse, Metadata

10. Analyzing the Contents of the Data Warehouse

Active Analysis: User Queries, Automated Analysis: Data Mining

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11. Constructing a Data Warehouse System

Stages of the Project, The Planning Stage, Data Warehouse Design Approaches, The Architecture Stage

Reference Books:-

- a) Turban E. and Aronson J.E , “Decision Support System”, PHI
- b) Decision Support System by Savier, V.J. (John Wiley)