



B.Com Honours

Semester V

Calicut University

BUSINESS INFORMATION SYSTEM

Course Code: COM5EJ308 • Module 2 Notes

Module II: Types of Information Systems & Decision Support

Covers Transaction Processing Systems (TPS), Decision Support Systems (DSS), Group Decision Support Systems (GDSS), Executive Information Systems (EIS), Expert Systems, and Management Reporting Systems (MRS).

Unit 4: Transaction Processing Systems (TPS)

TPS: Computerized system that performs and records daily routine transactions necessary to conduct business (e.g. ATM withdrawals, sales orders). Key Characteristics: ACID Properties (Atomicity, Consistency, Isolation, Durability), high volume processing, & low failure tolerance.

Unit 5: Decision Support Systems (DSS) & GDSS

DSS: Interactive information system assisting decision-makers in solving semi-structured and unstructured problems. Components: Database, Model Base (what-if analysis, goal-seeking), & Dialogue/UI Subsystem. Group Decision Support Systems (GDSS) for collaborative decision-making (Delphi method, Brainstorming).

Unit 6: Executive Systems (ESS), Expert Systems, & Reporting Systems

- 1. Executive Information System (EIS/ESS):** Customized high-level dashboard with drill-down capabilities for top executives.
- 2. Expert Systems (ES):** AI-based system mimicking human expert decisions using Knowledge Base & Inference Engine.
- 3. Management Reporting System (MRS):** Produces Scheduled, Exception, & On-Demand reports.

Practical Case Framework (Information Systems Classification Matrix): Compare target users, problem domain, data sources, and analytical capabilities across enterprise IS types.

Enterprise Information Systems Classification Table:

Information System Type	Primary Target Users	Problem Domain Structure	Core Analytical Tool / Model
TPS (Transaction Processing)	Operational Staff & Clerks	Structured Routine Transactions	Batch & Real-time OLTP Engine
MIS (Management Info System)	Middle Managers	Structured Functional Control	Aggregated Periodic Summary Reports
DSS (Decision Support)	Business Analysts & Managers	Semi-Structured Analytical Problems	What-If & Sensitivity Analysis Models
ESS (Executive Support)	C-Suite Executive Leadership	Unstructured Strategic Choices	KPI Dashboards & Drill-Down OLAP
Expert System (AI-ES)	Domain Specialists	Complex Knowledge Domains	Inference Engine & Rule-Based Logic

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