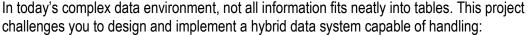
## **Fundamentals of Data Management**

Project Phase-05- D and HD Project

## **Project Overview**



- Structured data (e.g., relational tables)
- Semi-structured data (e.g., JSON, XML)
- Unstructured data (e.g., text files, notes, images)

This project is an extension of all previous project phases you have completed. You are now tasked with transforming your prior work into a full-featured smart data system. This final stage should demonstrate your capacity to design and build an advanced, hybrid data solution suitable for real-world deployment.

In this phase, you must extend it by integrating semi-structured (e.g., JSON/XML) and unstructured (e.g., text, image) data and advanced query processing.

- I. Design a basic interface for interacting with your database:
  - a) Role-based access (admin/user)
  - b) Connect to your MySQL database as well as unstructured and semi-structured data storage.
- II. Design a reporting module that summarizes key metrics from your database:
  - a) Prepare at least three reports (e.g., joining at least three entities, usage trends, summary statistics) containing data from a variety of sources (unstructured, semistructured and structured). It is important that your reports reflect the requirements of your domain.
  - b) Include filtering and sorting options.
  - c) Implement export functionality (CSV or PDF).
  - d) Automate report generation using stored procedures or scheduling tools.

Note: In order to create a single report, you must combine the outputs of MySQL, text files, and JSON files. In the context of data integration, this is a common requirement.





## Submission

Presentation Slides	Slide deck summarizing your approach, architecture, file structure, queries, and results/outputs
Code as a Zip file	.sql / .json / .xml + .txt+
Final Video (for D students)	10-min walkthrough with real data and slides.
Live Interview (for HD students)	Live Presentation + Justify and demonstrate work during evaluation

