Advanced data management topics: current trends in technologies and management practices

• Emerging document format - XML
  – XML documents and data interchange
  – XML with Web services and ontology (interoperability, EAI, metadata and semantics for exchanged information)
  – XML database

• Broad-sense KM and data management technologies
  – KM with AM and PM in KII
  – Dealing with all kinds of data/information contents including databases, documents, activity/workflow data, project data, etc.

• Business data processing for decision support and knowledge discovery
  – Data warehousing, data mining techniques including NN/GA
  – Creation of KII - bioinformatics
1. Compressing XML documents
   a. Cite two or more applications where XML document compression may be applicable.
   b. Look up references on this subject.
   c. Propose a compression technique to deal with this problem.
      – Examples include storing and extending a shared document, document revision and configuration, etc.

2. PM/KM in knowledge intensive industry (KII)
   a. What characteristics of PM that makes it an important management practice in KII?
   b. Describe potential KM supports in PM.
   c. Propose a model for “project ERP” system.

3. Design a data warehouse for the KII work environment (e.g., on employee performance)
   a. Cover dimensions, facts, concept hierarchies, and star schemas, …
   b. Cite a few typical queries.
      – (Optional) Implement your DW in MS OLAP server or any other tools.