# Week 2, Session 1

No unread replies.No replies.

**Sharda 3.1 - 3.4; Articles:  1) Adapting design thinking to agile/scrum DW/BI development (Note: We will discuss some of the concepts and terms covered in this article and ignore others that are beyond the scope of our course), 2) Choosing a database architecture: an essential guide for DW professionals, 3) Building the single customer view in a data warehouse**

1. What are the characteristics of a data warehouse that differentiates it from a transactional database?
2. What is metadata? Why is it important?
3. Compare and contrast data mart and data warehouse.
4. What are some factors that influence the selection of data warehouse architecture?
5. In your opinion, which data warehouse architecture is best? Why?
6. What is Scrum development? Discuss the key arguments in support of this approach to developing software.
7. Explain any one of these terms in the context of scrum development: user story, sprint, product owner.
8. Explain any of these terms in the context of DW design: fact table, dimension table, referential integrity,  domain integrity, natural key vs. surrogate key, change data capture, slowly changing dimension.
9. Research a column-oriented database (e.g., SAP IQ, Google BigTable, Teradata Columnar, Vertica). Provide a brief synopsis of the product’s key features and distinctiveness as claimed by its vendor.
10. Research an in-memory database (e.g., Oracle TimesTen, Unicom solidDB, SAP HANA). Provide a brief synopsis of the product’s key features and distinctiveness as claimed by its vendor.
11. Discuss an Apache Software Foundation project that is related to collecting, integrating, storing, accessing or analyzing data.
12. Why is it important for companies to have a single view/profile of a customer? Explain.
13. Creating a single view/profile of a customer is a challenge for companies with multiple channels and operational systems.  Discuss.