

# CS3200 HW1

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1. Discuss the differences between DDL and DML. What operations would you typically expect to be available in each language?
2. Describe the difference between data security and data integrity.
3. What advantages do databases provide over early file-based approaches? Give at least three examples.
4. What is concurrency control and why does a DBMS need a concurrency control facility?
5. What is a transaction? Give an example of a transaction.
6. What is meant by the term 'client-server architecture' and what are the advantages of this approach? Compare the client-server architecture with two other architectures.
7. In the 2016 InfoWorld article "What eBay looks like under the hood" what problem did eBay have with their product catalog? How is this a database design problem? Compare eBay's approach to the way in which Amazon allows third-party vendors to sell used books.
8. The two assigned articles from the February issue of The Scientist both mention the building of Databases. How do these databases facilitate the scientific research discussed in each article? Is the rationale for building a database in each case similar? Justify your answer.