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Section 402

Quiz 2 (due 9/07/15)

1. **a) Database application and the database** The user interacts with and application which in turn interact with the DBMS. The components of the DBMS access and retrieve the actual data in the data base.
2. **c) reports** Reports are generated for the benefit and use of the user from the data in a database. The other options are all contained within the database.
3. **b) relation** A table is a collection of relationships represented by data containing rows.
4. **d) record** A row contains the data for the given attributes (columns) for a unique object of interest.
5. **c) column** Columns are a specific attribute that is being recorded for each item. For example there may be a column for ‘grade’ in a table listing the students in a class.
6. **b) modification anomalies** If data is stored redundantly it may be changed in one location but not another leading to conflicting information.
7. **a) normal forms.** Normalization is how to create a “good” database design. For example limiting redundancies and storing data in the most efficient way.
8. **b) The logical design of the database.** The schema is a plan for how to design a database. That is how the data is stored and what the domain of each attribute can be.
9. **c) candidate keys.** All candidate keys can be used to identify a tuple but the primary key is the actual one chosen by the database designer that’s used to do so.
10. **a) Key** Keys are an attribute or combination of attributes that are unique to a single tuple and can be used to identify that tuple.
11. **c) two-dimensional table.** A one dimensional table is just a column and a three dimensional table is built off a two dimensional table.
12. **d) foreign keys.** A foreign key is an attribute in one relation that is the primary key for another relation.
13. **b) metadata** These results are data about the data stored in the database.
14. **b) multiuser database application** ERP is used to track various business activities like logistics, inventory, sales, etc. They span more or less the whole enterprise and as such are used by many people within the organization.
15. **a) creating and processing forms.** The DBMS runs between the user’s application and the actual database. The other three options are all ways that the DBMS does this while answer ‘a’ is more of a function of the application.